



March 25, 2025

California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

*Submitted online via comment submission portal.*

**RE: California Environmental Justice Alliance Comments on Senate Bill 1075 Technical Analysis Workshop**

CEJA is a statewide coalition of grassroots environmental justice [organizations](#) representing communities on the frontlines of climate change and environmental degradation. We are submitting these comments in response to the SB 1075 Technical Analysis Workshop and providing recommendations to ensure California's hydrogen buildout meets the needs of the frontline communities we serve. These recommendations are informed by [CEJA's Equity Principles for Hydrogen](#), developed in ten workshops with environmental justice partners across the state in 2023.

In addition to our recommendations, CEJA also supports the SB1075 technical analysis and recommendations provided by Earthjustice.

California's hydrogen buildout must not repeat the injustices that our current energy system inflicts on low income communities and communities of color. Instead, the state's approach to hydrogen production, distribution, storage, and end-use must ensure the health, safety, and well-being of environmental justice communities.

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**I: SUMMARY OF CONCERNS AND RECOMMENDATIONS**

1. **Embed Environmental Justice:** The Project needs to better incorporate environmental justice throughout all phases of analysis, not just in end-use discussions.

2. **Engage Communities:** Community input should be facilitated early and often, with meaningful Tribal consultation and consent.
  3. **Evaluate Cumulative Impacts:** cumulative environmental and health impacts must be a central factor in project siting decisions.
  4. **Ensure Cost Transparency:** the cost of hydrogen must be transparent to ensure public accountability, particularly as Californians experience an affordability crisis.
  5. **Limit Production to Green Hydrogen:** Any hydrogen produced in California should be green hydrogen produced using renewable energy and surplus water.
  6. **Protect Water Access:** Hydrogen production must not compromise access to clean potable water especially in communities already struggling with water scarcity.
  7. **Implement Comprehensive Safety and Leakage Measures:** Hydrogen pipelines and storage infrastructure projects should be equipped with strictly monitored safety and leak detection technologies.
  8. **Avoid Using Existing Methane Infrastructure:** Hydrogen has a high risk of leakage; existing methane infrastructure is not equipped to deliver hydrogen safely and should not be repurposed for hydrogen transport.
  9. **Prioritize Electrification:** If an end-use can be electrified, hydrogen should not be used.
  10. **Transition Away from Harmful End-Uses:** Hydrogen end-uses which perpetuate environmental injustices, such as within refineries, should be studied for managed decline and transition.
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## **II: OVERARCHING RECOMMENDATIONS**

### **1: Embed Environmental Justice**

E3's analysis and recommendations (the Project) must study environmental justice impacts throughout all phases of hydrogen development, not pick and choose where environmental justice is incorporated into analysis.

The Project is intended to provide technical policy, and market analyses that will inform or be included in the report directed by SB 1075. The Technical Analysis Workshop featured a preview of study and "topics covered" in three areas of hydrogen study; hydrogen production,

transportation and distribution, and end-uses. Based on the information presented, E3's current plans are to cover the topic of "environmental justice" only in its end-use analysis. As residents in oil or gas extraction areas and biomass facilities know well environmental injustices do occur at the point of energy resource production. So too for energy transportation corridors.<sup>1</sup> So too for the production of biomethane from livestock manure. Therefore, the project should analyze and discuss environmental justice in each section, production, delivery and storage, and end-uses.

E3's end-uses Environmental Justice analysis is a strong first step towards the necessary, systemwide Environmental Justice analysis. The E3 presentation begins to outline a systemwide environmental justice analysis, pointing out the overlap between disadvantaged communities and pipelines, gas storage, renewable generation resources, and gas-fired power stations. The presentation slide 29 shows how Environmental Justice is germane to E3's technical work, but must expand to analyze environmental justice at each point in the hydrogen value chain.

The agencies subject to SB 1075, CARB, CPUC, and CEC (the Agencies) each recognize a need to prioritize environmental justice in their work. Each agency has promulgated a commitment to advancing environmental justice.<sup>2</sup> The Project must better integrate these critical State environmental justice policies into its analysis to align with State agency commitments.

The CEC's Justice Access Equity Diversity Inclusion Framework ("Framework") explains energy equity and environmental justice:

- a. "Energy Equity recognizes the historical and cumulative burdens of the energy system borne by Tribes and Justice Communities and by Black, Brown, and Native people in particular. Energy Equity includes multiple dimensions; the four key dimensions to

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<sup>1</sup> California is third in the Nation for pipeline incidents, and second in the Nation for pipeline incident fatalities. ProPublica, Pipeline Safety Tracker, <https://projects.propublica.org/pipelines/> (last visited Mar. 12, 2025).

<sup>2</sup> "CARB is committed to racial equity and environmental justice as a fundamental part of all it does, including programs that reduce exposure to pollutants and improve the quality of life in California communities facing environmental and economic challenges." CARB, *Environmental Justice*, <https://ww2.arb.ca.gov/our-work/topics/environmental-justice> (last accessed Mar. 12, 2025).

The Public Utilities Commission's ESJ Action Plan 2.0 Goal 2 is to increase investment in clean energy sources to benefit ESJ communities. Goal 2.2 is "Research & Analysis to Understand Impact: Further research and analytical opportunities to understand impacts in ESJ communities." CPUC, *Environmental & Social Justice Action Plan Version 2.0*, at p. 23 (Apr. 7, 2022) <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/key-issues/esj/esj-action-plan-v2jw.pdf>.

"This framework outlines the California Energy Commission's (CEC's) commitment to embedding energy equity and environmental justice in our energy future." CEC, *Justice Access Equity Diversity Inclusion (JAEDI) Framework*, Appendix A, at p. 1 (Feb. 2023) [https://www.energy.ca.gov/sites/default/files/2023-11/CEC-JAEDI-Framework\\_ada.pdf](https://www.energy.ca.gov/sites/default/files/2023-11/CEC-JAEDI-Framework_ada.pdf).

consider are: Recognitional Equity, Procedural Equity, Distributional Equity, and Restorative Equity.”

- b. “Restorative equity aims to remedy past harms from the energy system and prevent future harms from occurring.”<sup>3</sup>

Remediating past harms and preventing future harms involves understanding the problem. In this case, it is critical to examine how major energy project development could entrench existing environmental injustices and create new harms.

Under the Production discussion E3’s technical analysis slideshow identified land requirements and availability, as well as permitting and local requirements for hydrogen. Under transmission and distribution, E3 identified likely locations in California for hydrogen production and end-use and identified the need for transportation corridors between these locations. Such discussions are logical places to root environmental justice analysis, forwarding State policy.

Questions E3 might consider in performing this work could include: Do identified hydrogen production areas overlap with environmental justice communities? Do industries and locations anticipated for feedstock production overlap with environmental justice communities? What impacts are those EJ communities facing? How would hydrogen production’s impacts improve or worsen those conditions? Is it likely that hydrogen transmission, distribution, and storage infrastructure will impact the same communities as methane infrastructure? Is there overlap between these production or transportation projects and historically redlined communities?<sup>4</sup> Will remediating past harms from the energy system and preventing future harms cost more than perpetuating environmental injustices?

## **2: Engage Communities**

Community input from those on the frontlines of projects must be centered early and often. Including conducting additional steps such as cultural resource assessments to ensure meaningful Tribal consultation and consent.

E3’s workshop identified Tulare County as a region with hydrogen supply potential, a community where there is recent precedent for inadequate public engagement around proposed hydrogen infrastructure. Last year, Tulare County discussed and advanced a proposal for a hydrogen production, distribution, and storage project without the community’s knowledge. This threatened to undermine the ability of potentially impacted residents to understand and respond to a harmful plan within the timeline for decisionmaking. All hydrogen production, delivery, storage, and use should obtain prior and informed consent required for communities where infrastructure is built or hydrogen is introduced. Information about project plans, meetings, and

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<sup>3</sup> JAEDI Framework at p. A-3.

<sup>4</sup> For more information see the CalEPA’s Pollution and Prejudice report, <https://storymaps.arcgis.com/stories/f167b251809c43778a2f9f040f43d2f5>.

proceedings must be clearly communicated in advance, with language access provided for non-English speakers.

### **3: Evaluate Cumulative Impacts**

Cumulative impacts should determine where hydrogen infrastructure is sited. Communities in the areas E3 indicated – such as Fresno County, Kern County, Contra Costa County, and LA County – already are burdened by the cumulative impacts of polluting facilities and face disproportionately high rates of illnesses such as cancers and respiratory diseases. We are concerned that the workshop failed to recognize this legacy of pollution in the communities targeted in the presentation. In order to provide informed consent, communities must understand how proposed hydrogen infrastructure will interact with existing environmental justice impacts from polluting facilities in their area.

### **4: Ensure Cost Transparency**

The cost of building and maintaining hydrogen infrastructure should be transparent to Californians, particularly as the State faces an energy affordability crisis. According to the Legislative Analyst's Office<sup>5</sup> California ratepayers already pay double the rest of the nation for essential utilities, and 1 in 5 state households behind on their utility bills. Already, California utility companies are seeking to recover hundreds of millions of dollars from ratepayers for unproven hydrogen projects which would not even serve those households.<sup>6</sup> California energy rates are recovered on a regressive basis. Pushing exploratory technology costs onto households who can least afford it, and will bear the brunt of hydrogen impacts will only advance injustices.

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## **III: PRODUCTION**

### **1: Limit Hydrogen Production to Green Hydrogen**

Any hydrogen produced in California should be green hydrogen generated through electrolysis using clean, renewable energy that does not create pollution in its production or deployment and surplus water. While E3's workshop refers to electrolysis as one of four potential production pathways, CEJA firmly opposes any hydrogen production that does not meet the standards of green hydrogen. These standards prohibit use of feedstocks and energy that are polluting, including: fossil gas, landfill gas, municipal solid waste gas, livestock biogas (factory farm gas), biomass, lignite or coal; they also prohibit electricity produced from nuclear fission or fossil, biogas, or landfill gas fuel cells.. This is essential to protect frontline communities and ensure an equitable energy transition.

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<sup>5</sup><https://www.lao.ca.gov/reports/2025/4950/Residential-Electricity-Rates-010725.pdf>

<sup>6</sup> <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M549/K795/549795620.PDF> at 1

Dirty hydrogen production methods, such as steam methane reforming (SMR), gasification, and pyrolysis, perpetuate environmental injustices and should be avoided as should technologies that rely on the production of livestock manure as an energy source. As the E3 presentation identified, SMR is the most prevalent hydrogen production method. SMR relies on methane production typically from fossil fuel exploitation or biomethane. Fossil fuel extraction is disproportionately sited in EJ communities. Truly sustainable and equitable biogenic feedstocks are very limited, with the rest fraught with potential environmental and environmental justice harms.<sup>7</sup> As an additional note of caution, fossil SMR paired with the environmental attributes is falsely classified as carbon negative, renewable hydrogen, despite the pollution it creates both at its production site and at factory farm livestock operations that produce costly biomethane. Gasification produces local air pollution emissions and pyrolysis can, dependent on fuel input.<sup>8</sup>

## **2: Protect Water Access:**

Hydrogen production must not compromise access to clean potable water especially in communities already struggling to access this basic human right. According to the California State Water Resources Control Board's annual Needs Assessment, 250 public water systems have failed to meet standards for three consecutive years, with most concentrated in Central Valley communities: Kern County (60 systems), Tulare County (32 systems), and Fresno County (31 systems)<sup>9</sup>. Residents of these counties, which are listed as likely sites for hydrogen production and infrastructure development in E3's presentation, face significant water challenges. Projects must avoid using potable water where drinking water needs are unmet, and they should include environmental justice protections for water use in production and desalination.

## **IV: STORAGE AND DELIVERY**

### **1: Implement Comprehensive Safety and Leakage Measures**

Hydrogen's leak detection response protocol should include an alert system to notify residents and workers of potential exposure, health risks, and a relocation plan until any leak is resolved. This program must include language access to all local populations and contact staff that can support coordination of leak response protocol. Projects should clearly define who is responsible for managing infrastructure leaks throughout the lifecycle of design, implementation, and

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<sup>7</sup>

<https://www.psehealthyenergy.org/wp-content/uploads/2024/05/Green-Hydrogen-Proposals-Across-California.pdf> at 86.

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<https://www.psehealthyenergy.org/wp-content/uploads/2024/05/Green-Hydrogen-Proposals-Across-California.pdf>

<sup>9</sup>[https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/documents/needs/2024/2024-needs-assessment.pdf](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2024/2024-needs-assessment.pdf)

maintenance. These are minimum protections for communities on the fence line of hazardous facilities.

The small molecular size and weight of hydrogen, as well as its high diffusivity and low viscosity, increases the risk of leaks. The E3 presentation acknowledges that the risks posed by hydrogen's physical and chemical properties are not new but generalizes existing safety measures as adequate despite significant gaps. Hydrogen leak detection is geared toward large volume leaks, and California regulations do not impose hydrogen specific leakage standards. Smaller leak sensing technologies are not available which undermines any supposed climate benefits gained from the risk of pursuing hydrogen.<sup>10</sup> As E3 indicates on workshop slide 20, there is little overlap between regions with high hydrogen production potential and high demand potential, with long transmission distances heightening the threat of leakage. Highly flammable, hydrogen raises safety concerns for workers and nearby communities, particularly in the high density locations, such as LA and the Bay Area, where E3 anticipates high demand.

## **2: Avoid Using Existing Methane Infrastructure:**

Existing methane infrastructure is not equipped to deliver hydrogen safely. Using existing pipeline infrastructure poses disproportionate risks to EJ communities, which are often located near aging pipelines. Hydrogen should not be transported in existing methane gas systems, and should never be blended into existing methane pipelines or storage containers.<sup>11</sup>

## **V: END-USE**

### **1: Prioritize Electrification**

E3's clean alternatives evaluation must account for end-use's non-energy benefits and "well-to-gate" efficiency. Direct electrification with renewable energy is cheaper, safer and more efficient than producing green hydrogen, and therefore should be prioritized. Emerging electrification technologies should be pursued over considering hydrogen for the end-use; likewise, electrification research and development should be prioritized above hydrogen research and development. Hydrogen should only be considered when there is a technical or practical constraint to electrification. Hydrogen should not be used in transportation methods that can easily be electrified, including passenger cars, light-duty trucking, main line rail, and drayage trucking.

### **2: Transition Away from Harmful End-Uses:**

Hydrogen end-uses which perpetuate environmental injustices, such as refinery hydrogen use or excessive ammonia fertilizer use, should be studied for managed decline and transition. For example, hydrogen should not be combusted in gas-fired generating units to produce electricity,

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<sup>10</sup> <https://acp.copernicus.org/articles/22/9349/2022/>

<sup>11</sup> <https://pstrust.org/wp-content/uploads/2022/11/11-28-22-Final-Accufacts-Hydrogen-Pipeline-Report.pdf>  
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and should not be blended into the fossil gas system in pursuit of decarbonization. Using cleaner hydrogen to improve the carbon intensity of environmentally harmful practices should not justify the continuation of those harmful practices. Potential end-uses should use the Precautionary principle, requiring proof that using hydrogen in that context is not harmful before proceeding.

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## **VI: CONCLUSION**

CEJA urges CARB and other agencies to consider the concerns and recommendations outlined in this letter to ensure that California's hydrogen buildout prioritizes environmental justice, community health, and safety. Low income communities and communities of color have long borne the brunt of environmental harm. By embedding environmental justice throughout all phases of hydrogen development, California can avoid replicating the injustices of our current energy system.