



SAN PEDRO & PENINSULA HOMEOWNERS COALITION



To: ARCHES (Biz Fed, City of Long Beach, Los Angeles, LADWP, Port of Long Beach and Los Angeles. University of California, IBEW/NECA, LA Building and Trades, Renewables 100, and other ARCHES members)

Dear ARCHES Executive team:

This group of signed environmental justice and environmental groups are writing to share comments regarding **California’s Federal Hydrogen Hub application**, known as ARCHES. These comments serve to express our collective concerns regarding the application process. We have **concerns regarding green hydrogen’s definition, production, transportation, storage, end use, potential leakage, threats to public safety, and indirect climate pollution**. Green hydrogen may provide some limited opportunities to decarbonize California's economy, but only if done in a process that aligns with environmental justice principles. Unfortunately, so far the ARCHES application has not included sufficient community or environmental justice input and may endanger residents who live near existing infrastructure like ports, pipelines, power stations, refineries, and other industrial energy components from the proposal. Here is an overview of our concerns:

Definition and Production of Green Hydrogen:

While we appreciate statements that this hub would rely solely on green hydrogen, we are concerned that ARCHES has not committed to exclusively using green hydrogen, as properly defined. To deliver meaningful environmental benefits, green hydrogen must be produced using 100% additional or excess local, non-polluting renewable electric resources (like solar or wind) to split water through electrolysis, and all unbundled Renewable Energy Credits associated with the electricity must be retired by the electricity consumer. Producing hydrogen from biomass and biogas, especially using existing steam methane reforming infrastructure, may increase local air pollution and have harmful impacts on frontline community members and those who live in

nearby communities. Our health and climate cannot afford cumulative impacts from using polluting power sources to produce hydrogen, as doing so would not truly be green. California should lead the country by setting strong standards and going beyond the minimum requirements outlined in the DOE application process.

We are also concerned about the sourcing of water resources to produce green hydrogen, and require more clarification on the sourcing restrictions. We seek clarification for the role of the electrical grid in powering electrolyzers and assurances that fossil fuel resources (such as coal and gas-fired power plants) will not be used to produce green hydrogen. We are concerned that ARCHES may allow participants to use a carbon offset or voluntary renewable energy crediting system to claim they are using renewable electricity, when they are actually relying on grid power and not bringing additional zero-emission resources onto the grid to meet their electricity needs.

Hydrogen Transportation and Storage Infrastructure:

The historic and ongoing impacts of racist land use practices have entrenched environmental harms in California's low-income communities of color. The infrastructure to store and transport hydrogen must not replicate these practices and impacts. There is a deep concern about the risks from hydrogen leaks and flammability, especially since there is significant need for research and development on this issue. Hydrogen is a highly flammable substance, and pipelines would likely pass through densely populated neighborhoods. In addition to potentially threatening public safety, hydrogen leaks could contribute indirectly to climate warming by producing more methane, water vapor, and ozone in the atmosphere. Indeed, a [recent study](#)¹ by the Environmental Defense Fund found that a high leakage scenario for hydrogen deployment may lead to 40% of the same climate impact as fossil fuel combustion within 10 years.

We are concerned about the safety protocols for workers, frontline residents, and others in the transportation and storage of green hydrogen. Communities that live near existing fossil fuel infrastructure are exposed to myriad forms of air quality and climate pollutants, so we have questions about the existing and new safety protocols that will be deployed to minimize leaks during hydrogen transport, storage and fueling. We recognize the important expertise today's workers bring, and the high road jobs that the infrastructure and maintenance of a safe hydrogen transportation and storage system could offer to our local communities. However, workers need proper safety protections as well.

Hydrogen Off Takers:

Power Sector: Our concern with plans to use green hydrogen in combustion power is that it may increase local NOx emissions. Because hydrogen burns at a higher flame temperature, it creates more NOx than burning methane, and there is no commercially available NOx control technology for hydrogen-fueled power generation. We are also concerned that the use of hydrogen in the power sector may unnecessarily extend the lifespan of combustion-based power generation. Hydrogen-fueled facilities will likely serve as peaker plants, cycling on and off and exacerbating emissions during startup and shut down times, since emissions control systems may require hours to warm up. This demand could affect community health and increase air pollution across California. It is critical these concerns and risks be addressed.

¹<https://www.edf.org/media/study-emissions-hydrogen-could-undermine-its-climate-benefits-warming-effects-are-two-six>

Hard-to-abate Sectors: Given its renewable energy demand and inefficiency, green hydrogen should only be used where renewable electric power and battery electric technologies are not suitable replacements for power, including in the hardest-to-abate sectors of ocean shipping and aviation. We are concerned that green hydrogen produced at the proposed hub would not be prioritized for these uses and want to ensure that off-takers are planned based on priority needed to decarbonize.

Heavy Duty Transportation and Cargo Handling equipment:

Ports across the state have various clean air plans for cleaner zero-emission cargo handling equipment, battery electric drayage trucks, and other infrastructure investments for clean, zero-emission battery electric technology at the ports. Specifically, the ports of Long Beach and Los Angeles are participating in electrification master planning, which will deliver reliable and available power. Real estate is limited at the ports, and green hydrogen infrastructure needs a lot of space to function. We are concerned that the potential promise of hydrogen will compete with rather than complement battery electric technology at the ports and want to ensure that hydrogen development will not derail critical plans to develop battery electric infrastructure, including charging stations.

Please provide answers to the following questions. Our groups require answers to these questions in order to assess our support for the ARCHES hydrogen hub application.

1. What are steps that ARCHES will take to ensure public transparency in the application and potential hub development process?
2. Will advisory members for environmental justice (EJ) groups be compensated? If so, how will compensation be assessed and paid?
3. How does ARCHES plan to create and maintain a genuine and meaningful partnership with community, EJ, and environmental advocates?
4. How will the ARCHES decision-making process work?
5. What role will community, EJ, and environmental advocates have in those decisions and in the governance of ARCHES?
6. Will ARCHES meetings be conducted under Bagley-Keene or Brown Act, or have some other open meeting requirements/provisions?
7. Who will have access to information, and how will ARCHES balance the need for transparency and confidential business information?
8. What exactly does the commitment to green hydrogen mean? Will all projects use only electrolytic hydrogen generated from additional or excess sustainable and renewable sources from day one, and retire directly the Renewable Energy Credits associated with the electricity?
9. What will be the project selection criteria, and how will projects get selected and prioritized?

10. What guarantees will there be in the Community Benefit Plan, and how will they be enforced?

11. How will potential hydrogen leakage be mitigated, monitored and rectified?

We would appreciate a timely response to the following questions before November 1st.

Sincerely,

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