





September 17, 2021

## VIA EMAIL

Chair Randolph and Members of the Board California Air Resources Board California Climate Investments 1001 I Street Sacramento, CA 95814 E-mail: Liane.Randolph@arb.ca.gov

### **Re: Draft Cap-and-Trade Auction Proceeds Fourth Investment Plan Related to Building** Electrification

Dear Chair Randolph and Members of the California Air Resources Board:

The undersigned organizations submit the following comments concerning the funding priorities outlined in the California Air Resources Board's (CARB) Draft Fourth Investment Plan for Capand-Trade Auction Proceeds (Draft Plan). Specifically, we focus on the low carbon energy, buildings, and industry sector priorities outlined in the Draft Plan. As a coalition of environmental advocates, researchers, and policy analysts pursuing a fair and equitable transition to zero-emissions homes and buildings across the state, we applaud CARB for its commitment to advancing equity, environmental justice, and public participation as a funding priority in addition to advancing progress on statewide climate goals. Our comments center on efforts to advance the decarbonization of existing buildings and new construction in the residential and commercial sectors.

It is vital that the state invest heavily in efforts to dismantle systems and programs that tether our communities to a fossil fuel infrastructure. The opportunities to decarbonize buildings play a vital role in meeting our climate goals. Commercial and residential buildings represent over 25% of our state's greenhouse gas emissions<sup>1</sup> and the appliances we use to cook, heat water, and regulate the temperature in buildings are entirely replaceable with clean zero-emissions technology that can quickly eliminate many of these emissions. Moreover, CARB has a unique opportunity to leverage the use of these funds with the California's recent commitments to fund heat pump installation in homes and home weatherization in low-income households to better protect communities from extreme weather events. These investments are well aligned with efforts to electrify new and existing buildings. CARB's efforts in prioritizing funding of

<sup>1</sup> Energy Commission Adopts Updated Building Standards to Improve Efficiency, Reduce Emissions from Homes and Businesses, Press Release California Energy Commission (August 11, 2021) <u>https://www.energy.ca.gov/news/2021-08/energy-commission-adopts-updated-building-standards-improve-efficiency-reduce-0</u>. consumer incentives and financing for building electrification is a step in the right direction. We offer the following observations and recommendations on the Draft Plan.

#### Phasing out Incentives for Fossil Gas Appliances in Homes

Appliances powered by fossil fuels can last anywhere from 8 to 20 years.<sup>2</sup> Even low-NOx and highly efficient gas appliances continue to rely on a gas infrastructure that prolongs our reliance on fossil fuels to heat and cook in our homes and commercial spaces. CARB's objectives for the Fourth Investment Plan would benefit from a targeted progressive approach for replacing gas appliances with zero-emissions alternatives.<sup>3</sup> Coupled with setting specific decarbonization milestones for new buildings and existing residential and commercial buildings, a targeted phase-out of incentives for fossil-gas appliances will allow for more strategic investment and policy making that will help meet the state's GHG reduction goals.

#### Targeted Outreach and Coordination with Priority Populations

Defraying the upfront costs of retrofitting and installing zero-emissions equipment for highpriority communities is a good place for any incentive program to start. We are pleased to see that the Draft Plan includes an equity impact statement for each investment strategy. But programs aimed at transitioning from fossil fuel-powered appliances to zero emissions alternatives will require targeted outreach and technical assistance to reach priority populations.

We encourage CARB to reach out to the network of community-based housing and social justice organizations across the state that have a deeper understanding of the current housing crisis and the economic threats facing our state's most vulnerable populations. These organizations can offer valuable insight into how incentives would best serve local communities. The impact of CARB's investments would go much further if community housing advocates and affordable housing developers could help in the development of streamlined applications, identify ways to leverage existing funding streams and have a say in the staging of incentive rollouts to prioritize the most immediate needs of priority communities.

While zero-emissions alternatives are often highly efficient, transitioning to all-electric homes without providing additional support to under-resourced communities ignores serious equity challenges. More will need to be done to defray any increase in utility cost burden to households already struggling financially. Incentive programs would be well served by coordination and in some cases, integration with utility bill protections and utility debt relief programs. We, therefore, support a community-driven focus that incorporates community-based organizations (CBOs) in the planning process, builds in technical assistance to maximize participation, coordinates outreach, includes utility cost protections, and avoids further alienating vulnerable communities through experimentation.<sup>4</sup>

<sup>&</sup>lt;sup>2</sup> A Roadmap to Decarbonize California Buildings, Building Decarbonization Coalition (February 12, 2019), p. 6. <u>https://www.buildingdecarb.org/archived/a-roadmap-to-decarbonize-californias-buildings</u>. <sup>3</sup> *Id.* at p.3.

<sup>&</sup>lt;sup>4</sup> Ted Lamm and Ethan Elkind, *Building Toward Decarbonization: Policy Solutions to Accelerate Building Electrification in High-Priority Communities*, Center for Law Energy & Environment at Berkely Law and Emmett Institute on Climate Change and the Environment- UCLA School of Law (January 2021)

#### Early-Stage Technology Development

We are encouraged by efforts to apply targeted investments to support early-stage application demonstrations designed to foster widespread adoption of the latest technology. Such efforts should focus on zero-emissions technology that cultivates consumer awareness and demand in hard-to-reach markets, expands the menu of functional products that deliver greater efficiency and customer value while eliminating the most carbon from the operation of buildings. Supporting higher-profile demonstration projects that aim to build long-term affordability for low-income households will not only help generate public awareness but also move the adoption of electrification to the "mainstream" while advancing CARB's commitment to greater equity.

# Renewable Natural Gas or Hydrogen Should Not be Considered in Building Decarbonization Strategies

We realize that the recommended investment priorities for this sector may cover a much broader category than buildings. We are opposed, however, to any suggestion that renewable natural gas and hydrogen may be viable solutions for decarbonizing our buildings. These two vague terms are often invoked to suggest the promise of "clean", "renewable," or "green" energy alternatives at the expense of concrete steps that can accelerate true decarbonization. Interest in these terms is often generated by a fossil fuel industry desperate to preserve our reliance on its infrastructure. When examined closely, these alternatives do not reflect the "clean" solutions they are made out to be.

Most of the annual supply of hydrogen in the United States is currently produced through the highly polluting process of steam methane reformation of fossil gas.<sup>5</sup> Even hydrogen produced from "low-carbon sources" as suggested in the Draft Plan still results in harmful emissions and release of greenhouse gases that undermine our state's climate goals. Green hydrogen," derived from a process that splits hydrogen from water molecules using 100% renewable electricity, is not yet widely available and is an extremely costly and inefficient approach to delivering incremental greenhouse gas reductions.<sup>6</sup> The state's investment policy is better served by relying on the direct use of renewable energy to electrify buildings rather than turning to alternatives that threaten our climate and public health.

Moreover, not only can use of hydrogen cause climate harm, but it can also be dangerous to our health. Many applications of hydrogen involve combustion which results in the release of NOx–a known health harming pollutant. Once released, NOx can cause heart damage, respiratory harm, impair a child's lung development, can lead to higher hospitalization rates and even premature death.<sup>7</sup>

<sup>5</sup> Sasan Saadat and Sara Gersen, *Reclaiming Hydrogen for a Renewable Future: Distinguishing Oil & Gas Industry Spin from Zero-Emissions Solutions*, Earthjustice, (August 2021);

https://earthjustice.org/sites/default/files/files/hydrogen\_earthjustice.pdf.

https://law.ucla.edu/sites/default/files/PDFs/Publications/Emmett%20Institute/Building-toward-Decarbonization-January-2021.pdf.

Similarly, most sources of "renewable natural gas," are highly polluting and rarely low-carbon. The production of renewable natural gas, or fossil gas alternatives, exacerbates air and water pollution impacts in frontline communities. Greenhouse gas reductions are accounted based on the false premise that polluters could and should indefinitely emit waste methane, rather than be expected to control its creation in the first instance. <sup>7</sup> Burning fossil gas alternatives in the home, office, or commercial buildings produces toxins that are also harmful to human health. They also continue to emit NOx and other combustion byproducts and contribute to local air pollution.<sup>8</sup> Finally, the production of fossil gas alternatives is 4 to 17 times more expensive than traditional fossil gas and the available supply is not enough to meet current gas demands.<sup>9</sup>

Green hydrogen, along with the small supply of genuinely unavoidable waste methane (expected to be 1% of total gas demand) should be reserved for use in industries and sectors that are more challenging to electrify. Their use in building decarbonization strategies is counterproductive and should not be entertained.

Thank you for the opportunity to submit these comments. Building electrification, powered by clean renewable energy, is vital to meeting California's climate and air quality goals. We look forward to working with CARB to help devise investment strategies that are innovative, impactful, and equitable.

Sincerely,

Fernando Gaytan Senior Attorney Earthjustice

Leah Louis-Prescott Senior Associate RMI

Lauren Cullum Policy Advocate Sierra Club California

 <sup>&</sup>lt;sup>7</sup> Sasan Saadat, Matt Vespa and Mark Kresowik, *Rhetoric vs. reality: the Myth of "Renewable Natural Gas" for Building Decarbonization*, Earthjustice, (July 2020); <u>https://earthjustice.org/sites/default/files/feature/2020/report-decarb/Report\_Building-Decarbonization-2020.pdf</u>
<sup>8</sup> Id.

<sup>&</sup>lt;sup>9</sup> Id.