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Sierra Club California Comments on Draft 2019 Integrated Energy Policy Report

Additional submitted attachment is included below.



November 27, 2019

Docket No. 19-IEPR-01
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: Sierra Club California Comments on Draft 2019 Integrated Energy Policy Report

Dear Commissioners:

Sierra Club California appreciates the opportunity to comment on the California Energy Commission (CEC) Draft 2019 Integrated Energy Policy Report (Draft 2019 IEPR). We support the CEC and its ongoing leadership to accelerate decarbonization of California's economy. And we agree with the Draft 2019 IEPR's focus on climate adaptation and clean energy equity. Both of these topics are incredibly important, especially in light of increasing climate change impacts which will inevitably hit low-income and disadvantaged communities the hardest.

However, in order to align with the state's overarching climate goals, and to address greenhouse gas (GHG) emissions reduction targets in such a way that reflects the climate crisis, we believe the 2019 IEPR should set forth a pathway that exemplifies a complete transition away from polluting and harmful fuel resources, including biomethane, and toward electrification.

Thus, Sierra Club California offers the following comments:

1. Pathways for building decarbonization must focus on clean, all-electric options

We disagree with any implication that reducing GHG emissions in buildings, or other sectors, would include methods such as upgrading gas-powered products to be more efficient and/or switching to biomethane fuel resources.¹ Neither of these are viable options.

a. All-electric appliances and products offer the best health and air quality benefits

The reason California buildings represent over a quarter of California's GHG emissions is largely attributable to gas appliances. Gas-powered appliances such as gas furnaces, water

¹ Draft 2019 Integrated Energy Policy Report, Docket no. 19-IEPR-01, <https://efiling.energy.ca.gov/getdocument.aspx?tn=230539>, at 39 [hereinafter Draft 2019 IEPR].

heaters, stoves, and clothes dryers, release more GHG emissions than all of California's gas-fired power plants combined.

Gas appliances also produce harmful indoor air pollution, specifically nitrogen dioxide, carbon monoxide, nitric oxide, formaldehyde, acetaldehyde, and ultrafine particles, which can cause respiratory diseases and sometimes death. Homes and buildings that burn gas, propane and wood are the largest source of fine particulate matter, which can lead to respiratory illnesses and disease.² Similarly, gas appliances in residential and commercial buildings produce nearly seven times more nitrogen oxide emissions than gas power plants do, also leading to respiratory diseases and asthma.

In order to achieve the deep reductions in GHG emissions necessary to meet or exceed our state's goals, buildings in California need to shift from gas-fired end use appliances to high efficiency electric appliances powered by clean, renewable energy. We cannot afford to keep postponing this transition. Advanced electric appliances are available now. Thus, the CEC should focus solely on making these clean, zero-emission electric alternatives accessible and affordable.

b. Biomethane use brings health, environmental, and safety risks

Reliance on biomethane sources to reduce emissions comes with its own environmental, health, and safety risks. The Draft 2019 IEPR should adequately address the damaging air quality and environmental justice problems associated with using biomethane as a fuel source instead of including it as a viable option for meeting our targets.

The Draft 2019 IEPR correctly states that “[r]egardless of source, methane leakage must be addressed given its direct climate impact” and recognizes that methane leakage “also poses serious public health risks.”³ We agree. However, the Draft 2019 IEPR fails to recognize that biomethane can have the same impacts.

Biomethane comes from methane that's captured at dairies, landfills, and wastewater treatment facilities, and is then processed, refined and injected into the utility pipeline for customers to burn like conventional gas in their homes for heating and cooling. Yet the Draft 2019 IEPR fails to recognize that biomethane is not a clean alternative fuel.

² Air Quality Implications of an Energy Scenario for California Using High Levels of Electrification, <https://ww2.energy.ca.gov/2019publications/CEC-500-2019-049/CEC-500-2019-049.pdf>

³ Draft 2019 IEPR at 41.

First, biomethane come from polluting sources like dairies and landfills. These are often located in disadvantaged communities causing detrimental health impacts on the local residents through air pollution as well as soil and groundwater contamination. It is unjust to structure any decarbonization plans around sources that perpetuate local impacts, especially when those impacted communities are already suffering the brunt of climate impacts.⁴

Second, once biomethane is put into the pipeline, it is identical to methane gas (or “natural gas”), bringing all of the same health and safety risks the state is committed to eliminating..⁵ The risk of accidents, such as those in San Bruno and Aliso Canyon, are the same.⁶ Biomethane leaks, explodes, is a potent fire risk, is dependent on aging and dangerous infrastructure - all like gas. Biomethane consumption emits the same contaminants as conventional gas, releasing GHGs like CO₂, smog-forming nitrogen oxides, ammonia and hydrogen sulfide. In addition, further use of biomethane for any sector would inevitably include out-of-state sources or non-sustainable in-state sources that would actually add methane to the environment.⁷

The Draft 2019 IEPR should illustrate that using biomethane to replace true zero-emission solutions, like replacing gas furnaces and water heaters with more advanced and high performing electric appliances, would be inconsistent with California’s health, safety, and environmental goals.

2. Electrification is needed for climate resiliency

We agree with the importance placed on climate adaptation in the 2019 Draft IEPR. We also agree with the Draft 2019 IEPR statements regarding co-benefits resulting from electrification,

⁴ Earthjustice, Natural Resources Defense Council and Sierra Club Comments on Final Project Report on Natural Gas Distribution in California’s Low Carbon Future, Docket No. 19-Misc-03.

⁵ Phoebe Seaton & Rachel Golden, “Renewable gas really is too good to be true” (2019), *available at* <https://capitolweekly.net/renewable-gas-really-is-too-good-to-be-true/>; Rachel Golden, “Study: Transitioning California Off Gas Could Lower Costs and Prioritize Low-Income Communities” (June 2019), *available at* <https://www.sierraclub.org/articles/2019/06/study-transitioning-california-gas-could-lower-costs-and-prioritize-low-income>; Union of Concerned Scientists, The Promises and Limits of Biomethane as a Transportation Fuel (“[B]iomethane combusts the same as natural gas...there are no benefits of using biomethane compared with natural gas at the point of combustion.”) (2017) *available at* <https://www.ucsusa.org/sites/default/files/attach/2017/05/Promises-and-limits-of-Biomethane-factsheet.pdf>.

⁶ Phoebe Seaton & Rachel Golden, “Renewable gas really is too good to be true” (2019), *available at* <https://capitolweekly.net/renewable-gas-really-is-too-good-to-be-true/> (“It leaks methane pollution like gas, explodes like gas, is a potent fire risk like gas, is dependent on an aging and dangerous infrastructure like gas, and releases carbon dioxide when burned - just like gas.”).

⁷ Final Project Report, Natural Gas Distribution in California’s Low-Carbon Future (October 2019) at 19, 21.

such as improved health.⁸ However, we believe the Draft 2019 IEPR falls short by not demonstrating the additional resiliency benefits of electrification.

The climate crisis has exacerbated fire seasons, with more fires and now extensive blackouts from power shutoffs. Modern gas appliances are more vulnerable to outages since they are dependent on two infrastructure systems.⁹ They need electricity to operate, as well as a functioning gas system, so they won't work during gas or electric outages. On the other hand, all-electric homes are more resilient during outages. For example, a heat pump water heater can use electricity from rooftop or community solar to heat water and store it so that homes can have hot water when the grid is down.

In addition, decarbonizing homes can also contribute to climate adaptation strategies because they “can support sustainability and equity policy goals. For example, heat pump systems provide a climate adaptation advantage, because they provide both high efficiency cooling and heating. Air conditioning, along with better building design and more resilient communities, can help protect public health in low-income and vulnerable communities as heat waves become more severe under climate change.”¹⁰

We are already seeing that climate change means increases in extreme weather events and longer heat waves. Electrification can help keep the power on in a more efficient and affordable way.

3. Conclusion

In sum, we urge the CEC to continue to focus on a transition to all-electric homes and buildings, while giving priority to low-income households and without losing sight of equity, affordability, and accessibility concerns. We appreciate the important steps the CEC has taken and look forward to working with the CEC on achieving widespread building electrification.

Sincerely,

A handwritten signature in black ink, appearing to be 'Laurie M.', written in a cursive style.

⁸ Draft 2019 IEPR, at 118.

⁹ Rachel Golden, *Electrification for Climate Resiliency* (Oct. 9, 2019), <https://www.sierraclub.org/articles/2019/10/electrification-for-climate-resiliency>.

¹⁰ “Residential Building Electrification in California” *Energy+Environmental Economics (E3)* (April 2019), jointly funded by Southern California Edison, the Los Angeles Department of Water and Power, and Sacramento Municipal Utility District.

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