



August 20, 2018

Mary Nichols
Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Proposed Consent Decree on Aliso Canyon Mitigation

Dear Chair Nichols:

The Aliso Canyon disaster underscored both California's over-reliance on natural gas and the significant safety and climate risks posed by its infrastructure. Sierra Club staff have reviewed the proposed Aliso Canyon Consent Decree that was filed in Los Angeles Superior Court on August 8. We have grave concerns about the proposed decree and Mitigation Agreement ("Agreement"). Rather than focus on measures that would reduce gas demand in the Aliso area and facilitate the facility's permanent closure, the proposed decree would direct \$26 million of mitigation funds to a loan account to advance dairy digester biomethane production and transport. We oppose this use of the funds for four main reasons:

1. The funds would facilitate the expansion of dairies, which pollute air and water and have significant negative impacts on the health of nearby communities, especially in the San Joaquin Valley.
2. The funds would likely lead to more methane emissions because they support the injection of biomethane from dairy digesters into common carrier pipelines that are riddled with leaks.
3. In purporting to require mitigation at a level equal to the emissions from Aliso, the settlement may not fully account for leakage from dairy digesters and the delivery of methane, or the reduced climate value of emissions that occur later in time.
4. The funds would increase production and dependence on methane at a time when state policies and incentives should be directed toward reducing all dependence on methane. For example, incentives to encourage switching from natural gas to electric space and water heating for homes and businesses in the Aliso area would reduce gas demand and the need for Aliso Canyon's continued operation.

We explain our concerns in more detail below.

The Funds Encourage a Pollution Source, Contrary to the Desires of Community and Environmental Justice Organizations in the San Joaquin Valley

Dairies are an identified source of criteria pollution and methane. Over the last decade and a half, clean air advocates representing a range of groups, including environmental groups, have advocated for regulations to reduce pollution from dairies. Their success has been incremental.

There are various market forces, including a general decline in milk consumption, that would argue for dairies in the San Joaquin Valley to reduce their operations.¹ Yet between 2016 and 2017, the number of dairies declined slightly and the number of cows increased and the number of cows per dairy increased.²

One reason that dairies have not substantially declined with the reduction in milk consumption is the promise that those dairies will be considered a new source of biomethane. A combination of state grant funds, regulatory incentives, and pilots funded by the utilities—including Southern California Gas—that hope to profit from selling dairy biomethane have shifted thinking about the purpose of a dairy. Now cows are not valued just for milk production, but also for poop production. The dairymen and the gas purveyors benefit from this shift. The people who live in the San Joaquin Valley, and all Californians who want to see a sharp decline in climate pollution, suffer from this shift.

Providing funds—even if just in loan form—to increase dairy biomethane projects will have the effect of reducing one of the costs of doing business as a dairy farmer. It will have the same effect as providing an incentive to continue an otherwise failing dairy or to increase the size of a successful dairy. The funds will ultimately increase the source of methane and dependence on dairies for that methane.

Now, with this \$26 million loan fund, the California Air Resources Board, established to protect public health from the effects of air pollution, will be extending and potentially expanding a pollution source. Indeed, by encouraging more biomethane, the state will ultimately be using the SoCalGas mitigation funds to support expanding SoCalGas business and economic interests. The mitigation funds should in some way serve as a penalty to the company for its negligence. Instead, the funds will essentially be used as an investment in SoCalGas. That isn't an appropriate role for CARB or the state.

The Funds Would Support Injection of Biomethane into Common Carrier Pipelines, Leading to Greater Methane Emissions

The natural gas industry and the dairy industry have tried on various occasions to force through legislation that would allow the injection of biomethane into common carrier pipelines now used for conventional methane. The legislature has resisted these efforts.

¹ Yu, Douglas. "U.S. dairy milk sales expected to decline until 2020, Mintel report shows." *Dairy Reporter.Com.* (Mar. 22, 2017.) <https://www.dairyreporter.com/Article/2017/03/16/US-dairy-milk-sales-expected-to-decline-until-2020-report-shows>

²CDFA. *California Dairy Statistics Annual 2017.*
https://www.cdfa.ca.gov/dairy/pdf/Annual/2017/2017_Statistics_Annual.pdf

Common carrier pipelines are notoriously leaky. Additionally, investing in a network that would allow dairy biomethane injection into common carrier pipelines would establish new infrastructure for a gas that is best and most safely used onsite. Ultimately, infrastructure that is built to allow biomethane injection from dairies will become a stranded asset when the dairies shrink and biomethane becomes less common--as should be the case if we are to truly cut climate pollution.

The funds associated with mitigating the leaks from Aliso Canyon should not be invested in projects and infrastructure that will increase dependence on methane gas.

The Proposed Mitigation Agreement Fails to Account for the Reduced Value of Delayed Emissions Reductions and the Likelihood of Significant Methane Leakage from the Proposed Projects

CARB has previously determined that 109,000 metric tons was the “total amount of methane that needs to be mitigated.”³ The proposed Agreement states that SoCalGas’s “Mitigation Obligation” “terminates in full” when the “aggregate Mitigation Fund Certified Reductions” is equal to or exceeds 109,000 metric tons. However, the proposed Agreement fails to properly account for the time-cost of methane reduction and fails to specify how it will accurately measure, address, and account for methane leakage.

First, the proposed Agreement does not explain the basis for the discount values proposed Agreement’s “Mitigation Discounting Table,” and in any event the proposed values appear inaccurate. For example, under the proposed schedule, mitigation projects that begin operation after January 1, 2023 could still have 100% of their emissions reductions credited. Such crediting is will not lead to full mitigation because it does not properly account for the significant decline in the value of emissions reductions over time.

Second, it is not clear from the proposed Agreement’s accounting method whether or how the Mitigation Fund Certified Reductions accounts for leakage in the mitigation projects and in methane transport and use. It is well-established that methane leakage is rampant in California, both within the pipeline system and behind-the-meter, with a total leakage rate of up to 3%.⁴ This rate will be even higher when on-project leakage for the mitigation projects is fully factored in. Indeed, research shows that bottom-up estimates tend to underestimate actual emissions,⁵ and additional evaluations involving actual measurements of leakage at biogas project sites is needed to ensure accurate overall leakage estimates. Thus, given the proposed Agreement’s failure to identify and account for significant amounts of likely methane leakage, it is unlikely to achieve full mitigation of the 109,000 metric tons emitted by the Aliso Canyon gas leak.

³ CARB, Determination of Total Methane Emissions from the Aliso Canyon Natural Gas Leak Incident https://www.arb.ca.gov/research/aliso_canyon/aliso_canyon_methane_emissions-arb_final.pdf (Oct. 21, 2016).

⁴ Alvarez et al., Assessment of methane emissions from the U.S. oil and gas supply chain. *Science*. (21 June 2018); M.L. Fischer et al., An Estimate of Natural Gas Methane Emissions from California Homes. *Environmental Science & Technology*. (Aug. 2, 2018).

⁵ *Id.*

Mitigation Funding Should Focus on Measures that Reduce Southern California's Dependency on Natural Gas and Thereby Help Enable the Permanent Closure of Aliso

The lesson from the Aliso Canyon leak is that it is very easy for methane to leak and essentially erase successful efforts to reduce climate pollution. The lesson is that to permanently reduce climate pollution, we need to reduce dependence on climate pollutants.

CARB should rethink the sorts of projects that should be funded with the \$26 million and focus on projects that will permanently cut dependence on methane. These kinds of projects could include:

- Incentives for home, apartment, and business owners to replace gas appliances with high-efficiency heat pump water heaters, space heaters, and clothes dryers and electric induction stoves;⁶
- Incentives for homeowners and apartment owners to install rooftop solar and battery storage;
- Incentives for commercial restaurant owners to shift from gas cooktops to electric induction cooktops;
- Incentives for schools, sports clubs and gymnasiums to replace gas hot water heaters with electric heat pumps;
- Funding to accelerate transition away from compressed natural gas to electric buses throughout transit agencies in the Los Angeles region;
- Expanded funding for electric school buses;
- Funding to accelerate adoption of electric refuse trucks throughout the Los Angeles region; and
- Incentive funding for electrification pilot projects in the industrial sector.

Following the Aliso leak, gas reliability in Southern California in the winter months is an ongoing concern. In response to this risk, California Energy Commission Chair Robert Weisenmiller and California Public Utilities Commission President Michael Picker recommended last winter that the region permanently curb gas consumption and stop expanding gas infrastructure to buildings. The incentives listed above are critical to lower the upfront costs of electrification for residents and businesses in Southern California, and to reducing demand for gas in the winter heating season.

Electrification measures will also improve outdoor and indoor air quality, co-benefits that are in high-demand in Southern California. The combustion of gas in household appliances like stoves, water heaters, and furnaces produces nitrogen dioxide, carbon monoxide, nitric oxide,

⁶ The Sacramento Municipal Utility District (SMUD) has some of the state's leading efficiency incentives to help ratepayers replace gas appliances with advanced electric appliances. Their programs which offer rebates up to \$13,750/house are cost-effective for the utility and ratepayer and are critical to dramatically reducing dependency on gas in the region. See SMUD's [Home Performance Program](#) and [Appliance Rebates](#) for more details.

formaldehyde, acetaldehyde, and ultrafine particles, all of which are harmful to human health.⁷ Gas combustion pollutants can cause minor respiratory irritation and as well as more serious conditions; the California Air Resources Board warns that “cooking emissions, especially from gas stoves, have been associated with increased respiratory disease.”⁸

Conclusion

We urge CARB staff to rethink its approach to spending the \$26 million assigned to Appendix A in the proposed consent decree. Funding the expansion of biomethane production and transport is a sure way to create longer dependence on methane. We urge the agency--and the court--to instead design a plan for spending those funds that directly reduces dependence on methane.

Sincerely,



Kathryn Phillips
Director
Sierra Club California

⁷ See, Jennifer Logue et al., “Pollutant Exposures from Natural Gas Cooking Burners: A Simulation-Based Assessment for Southern California” *Environmental Health Perspectives* Vol. 122 No. 1 pp. 43-50, (2013); Victoria Klug and Brett Singer, “Cooking Appliance Use in California Homes—Data Collected from a Web-based Survey,” Lawrence Berkeley National Laboratory (August 2011); John Manuel, “A Healthy Home Environment?” *Environmental Health Perspectives*, Vol. 107, No. 7 1999, pp. 352–357; Nasim Mullen et al. “Impact of Natural Gas Appliances on Pollutant Levels in California Homes” Lawrence Berkeley National Laboratory, 2012.

⁸ California Air Resources Board, “Combustion Pollutants” (reviewed Jan. 19, 2017). Available at <https://www.arb.ca.gov/research/indoor/combustion.htm>