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March 24, 2016

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

Re: Aliso Canyon Methane Leak Climate Impacts Mitigation Program.

Dear Chairman Nichols,

Clean Energy appreciates the opportunity to comment on the California Air Resources Board's (ARB) proposal to mitigate the climate impacts caused by the Aliso Canyon methane leak that began in October 2015 and concluded in February 2016. As the largest producer of renewable natural gas for transportation in the country, Clean Energy strongly believes that the ARB's proposed mitigation program should focus on the capture and beneficial use of statewide fugitive emissions of methane. Specifically, we believe the tragedy of Aliso Canyon presents a unique and critical opportunity to accelerate in-state biomethane production and to implement its use as transportation fuel. By doing so, ARB's implementation of this program will not only mitigate the climate damage done by the Southern California Gas Company (SoCalGas) natural gas storage facility, but also accelerate both the state's short-lived climate pollutant goals and long term greenhouse gas emissions reduction targets for generations to come.

Program Rightly Focuses on Accelerating In-State Biomethane Production Facilities

As ARB is well aware, California's biomethane industry has several hurdles to overcome before it can become a sustainable and growing contributor toward achieving the state's climate change goals. Once an in-state biomethane production industry is firmly established and capable of delivering renewable natural gas on a broad scale to the marketplace, it will undoubtedly be one of the largest contributors to achieving California's greenhouse gas emission reduction goals. We therefore believe that ARB's draft document rightly advocates

that a significant portion of the mitigation funds should go toward projects that can harvest and make beneficial use of the state's fugitive methane emissions: landfills, dairy, and non-dairy livestock. Specifically, the Aliso Canyon mitigation funds must target the existing barriers that are currently holding back in-state biomethane production projects from moving forward.

First, mitigation funds should address interconnection issues with the existing common carrier pipeline system. This is the single greatest barrier towards greater capture and use of biomethane. Many in-state biomethane facility projects cannot pencil out economically because the cost to connect such projects to the existing utility pipeline system is prohibitive. The allocation of mitigation dollars to minimize, if not eliminate, these costs to in-state biomethane production projects is therefore critical to move this precious resource into the marketplace. We therefore would highly encourage ARB staff to consider directing a meaningful amount of mitigation funding allocation towards the interconnection of biomethane production facility projects with the common carrier pipeline along with encouraging the CPUC to have SoCalGas and other gas utilities directed and incentivized to make these necessary investments. In particular, investment in pipeline infrastructure and gathering systems to collect and deliver biomethane from the State's agricultural heartland are a crucial step towards both reducing short-lived climate pollutants and tapping this significant renewable resource. Such investments should be prioritized.

Second, California's utility tariffs require very stringent gas quality standards for biomethane to enter the common-carrier pipeline system. Ironically, some of these standards are more stringent than those set for fossil-based natural gas that has a higher carbon intensity compared to renewable natural gas. While Clean Energy maintains that existing utility tariffs create an unnecessary barrier to in-state biomethane production that is not required in other states, incentives to help defray the costs of meeting the California gas quality standards would be beneficial. Clean Energy therefore strongly encourages the ARB to direct a meaningful amount of biomethane mitigation funds toward the buy-down of gas purification and quality equipment required to meet such standards in order to make in-state biomethane production projects more economically feasible.

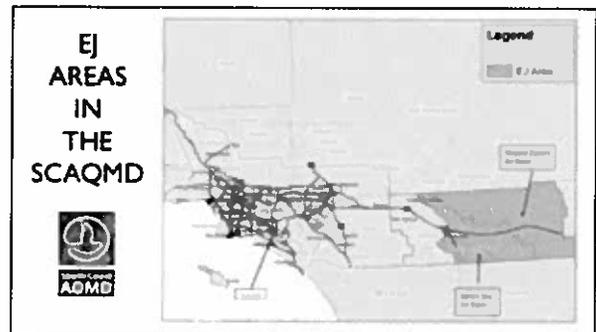
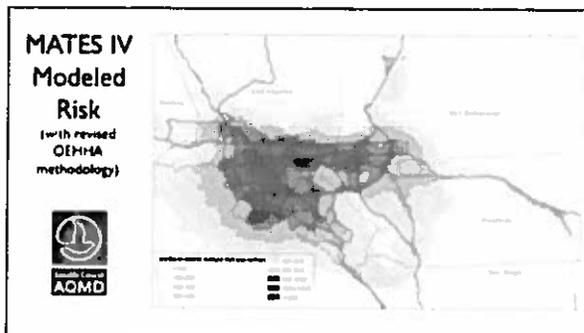
Third, it will be critical that any funding received by the Aliso Canyon mitigation fund that helps to accelerate in-state biomethane production does not jeopardize a biomethane producer's ability to generate carbon credits under the state's Low Carbon Fuel Standard (LCFS). Given the low cost of fossil-based natural gas, programs such as the state's LCFS are critical to the ongoing financial sustainability of production of biomethane. Any elimination of a facility's ability to generate LCFS credits caused by the receipt of these funds will be a non-starter as the facility would not be able to compete against fossil-based natural gas.

Program's Focus on Promoting Sustainable Energy Infrastructure and Addressing "Orphan" and Newly Identified Methane Emission Sources

Clean Energy agrees with ARB the in-state biomethane projects will take some time to bring on-line and there is a need for immediate action to offset the climate impacts caused by the Aliso

Canyon Tragedy. Specifically, it will be critical for ARB to invest additional mitigation dollars toward creating demand for the actual use of biomethane to help drive and sustain the capital investments made by this program and to accelerate in-state biomethane production. By doing so, ARB will ensure that in-state biomethane production facilities are successful and able to grow their production volumes in the years to come. Additionally, we also see opportunities within our own industry to capture methane and improve the overall carbon intensity score of natural gas used as a transportation fuel. Specifically, ARB should consider funding the following mitigation projects that are critical to ensuring that investments in California biomethane fuel production result in sustainable, long term success:

- (1) **Heavy and Medium-Heavy-Duty Natural Gas Vehicle Truck Incentives.** The largest source of oxide of nitrogen (NOx) emissions in both the South Coast and the San Joaquin Air Basins comes from heavy heavy-duty diesel trucks. Additionally, heavy and medium heavy-duty diesel trucks make up a substantial portion of the state's greenhouse gas emission portfolio and have been identified by numerous studies, including the South Coast Air Quality Management District's MATES-IV and Environmental Justice Community Partnership, as a toxic emission source that significantly impacts the region's disadvantaged communities.



In an effort to combat this important category of mobile source emissions, Clean Energy recommends that a meaningful portion of the Aliso Canyon mitigation funds be allocated towards heavy and medium heavy-duty truck incentives that accelerate the adoption of near zero (i.e., optional low NOx engine) trucks capable of using renewable natural gas. At the 0.02 g NOx emissions level, each new natural gas truck that operates with this engine will displace or offset almost 1 ton of NOx over its lifetime. To encourage the production and distribution of renewable natural gas as a transportation fuel, these truck incentives should also require a minimum 30% renewable natural gas blend which would deliver a greenhouse gas benefit of approximately 33-34 CO₂eq metric tons per truck annually using diesel as a baseline. Additionally, the community of Porter Ranch is within close proximity of both Interstate 5 and the 118 freeway which are both heavily impacted by truck traffic.

Not only will an investment in near zero truck incentives deliver direct emission reduction benefits to disadvantaged communities, this investment would also advance the state's petroleum displacement, federal and state ozone attainment, short-lived climate pollutant, sustainable freight, and low carbon fuel standard goals. The market for biomethane

vehicle fuel in California has been a success to date, but is steadily reaching saturation. Over 50% of the natural gas vehicle fuel consumed today in California is already biomethane. In order for a growing in-state production industry to continue to have access to the market, the in-state biomethane industry needs more trucks on the road. This deployment also supports the need for 400,000 near zero trucks in the South Coast by 2030 and its need to reduce the carbon intensity content in transportation fuels.

- (2) Advanced Technology Upgrades for Natural Gas Vehicle Stations: To further ensure that the benefits of methane capture and use can be maximized, Clean Energy would also recommend that some portion of the proposed mitigation funds targeting “newly identified methane emission sources” be allocated toward the technology development and advancement of natural gas vehicle (NGV) station operations that enhance methane management. As a company that has already committed to a renewable future here in California, Clean Energy is attempting to identify potential fugitive methane leaks at our station operations so that we can develop solutions that would improve the overall operational management of the natural gas product we deliver into vehicles. Setting aside some funding to allow NGV fuel providers to investigate and improve upon the methane management at their natural gas vehicle station operations would provide additional greenhouse gas benefits while advancing the benefits associated with natural gas and renewable natural gas use as a transportation fuel.

Concerns with the Aliso Canyon Mitigation Proposal

Clean Energy does have two concerns associated with the proposal that we would like to address.

Our first concern deals directly with the introduction of a 20 year Global Warming Potential (GWP) when ARB has traditionally used a 100 year GWP number to quantify climate change impacts. Currently, the state’s LCFS and AB 32 Cap and Trade program utilizes a 100 year GWP of 25 for methane. Further, the recently released Short-Lived Climate Pollutant plan released by ARB also utilizes a 100 year GWP. It is not clear as to why ARB would suddenly introduce the consideration of a different GWP that reflects a 20 year period, particularly when there has been no real discussion of this value in prior venues. Rather, the ARB should focus on the absolute values of methane captured in evaluating a potential mitigation project. In evaluating reduction of CO2 emissions from a mitigation project not associated with methane capture (for example by displacing petroleum fuel with biomethane) the ARB should apply its existing GHG measurement protocols as developed under AB 32 and the LCFS. We do not believe introducing and applying a new metric is necessary for this mitigation program.

Second, we would like to caution the ARB on their proposed position allowing SoCalGas’ to retain its ability to have economic gain on the proposed mitigation projects. Their economic gain should be limited to utility tariff transport fees and decarbonizing their existing infrastructure - which will ensure that they have a robust business delivering renewable, low-carbon biomethane well into the future. Our concern is that if the investment gain or return to

the utility becomes a component of the evaluation of the expenditure of the mitigation funds, it will delay and complicate the actual investment of the funds. We believe that the mitigation projects should be evaluated entirely based on their methane and greenhouse gas emission reduction potential per dollar spent. For example, if the utility funds a biomethane gathering and interconnection system that enables delivery of biomethane from an agricultural operation to the vehicle fuel market, the utility's economic "return" on the system should be limited to the PUC approved transportation tariffs associated with wheeling the product on its system. If the utility is also allowed to charge the project for the capital investment or recover the capital investment with a financial return, it will continue to represent an insurmountable financial hurdle to project development. In sum, we believe that these mitigation funds should be spent entirely based on their environmental impact, and without consideration of the potential financial outcome of the investment for the utility.

Concluding Remarks

Clean Energy would like to thank ARB for the opportunity to comment on this important proposal involving the mitigation of over 100,000 MT of methane released over a 5 month period at the Aliso Canyon storage facility. We believe this proposal presents a tremendous opportunity to pursue capture and beneficial use of fugitive methane emissions through the acceleration of an in-state biomethane production industry. We further believe this mitigation fund could help accelerate use of captured fugitive methane emissions as displacement of petroleum fuel by investing substantially in heavy and medium heavy-duty near zero emission trucks that can use the biomethane and meaningfully drive down the state's NOx, GHG, and toxic emissions that disproportionately impact disadvantaged communities. Finally, we believe some of the "newly identified methane emission sources" funds should be allocated to help existing natural gas vehicle stations optimize their methane management. Clean Energy believes this source of funding, if it remains focused on the capture and abatement of methane emissions, could be a huge boost to the state's short-lived climate pollution goals while, at the same time, achieving its climate, petroleum reduction, and clean air goals.

Most sincerely,



Todd R. Campbell
Vice President, Public Policy and Regulatory Affairs