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

October 30, 2015

Re: Comments on the Short-Lived Climate Pollutant Strategy Document

Dear Chairman Nichols:

On behalf of Clean Energy, I would like to comment on the Draft Short-Lived Climate Pollutant (SLCP) Reduction Strategy Strategy dated September 2015. This is a vital document that will contribute toward California's environmental and health goals, for which the natural gas transportation fuel and vehicle industries have and will continue to play a major part.

As North America's largest provider of natural gas transportation fuel with over eighteen years of leading industry experience, we provide construction, operation and maintenance services for refueling stations. We have a deep understanding of the growing marketplace, and our portfolio includes over 550 stations in 43 states, including a significant presence of 154 stations in California, of which 65 are public. All 65 public stations deliver renewable natural gas (RNG) as compressed natural gas (CNG) or liquefied natural gas (LNG) vehicle fuel.

Already used as a clean, low carbon source of energy around the world, natural gas is abundant and proven to be a cost-saving alternative fuel to diesel and gasoline. Natural gas for transportation fuel strengthens our economy with lower fuel costs, increases our energy security, and significantly benefits our environment by reducing carbon emissions and smog-forming NOx emissions by up to 23% and 35%, respectively, relative to diesel fuel. Carbon emissions are reduced even further – approximately 80% to 90% - when RNG is used instead of diesel.

Clean Energy strongly supports the goals outlined in the document targeting reductions in methane, black carbon, and fluorinated gases. However, we do not believe ARB can realistically meet its goals without accelerating the adoption of natural gas fuel in the heavy duty vehicle sector. Failure to do so will compromise the successful implementation of the following objectives:

- Meet the LCFS goal of 10% greenhouse gas emissions (GHG) by 2020;
- Mandated federal regional attainment goals for 8-hour ozone by 2023 and 2031;
- 40% GHG reduction by 2030;
- 50% petroleum reduction by 2030;
- 80% GHG reduction by 2050;
- Significant reductions in Short-lived Climate Pollutant of black carbon and methane.

GAME CHANGER: CWI .01 NOx Heavy Duty Engine

California will not reach greenhouse gas emission (GHG) reductions and other goals, including a large reduction in black carbon, without dedicating significant resources to the heavy-duty class 7 and 8 transportation sector to decrease dependence upon diesel fuel and increase the use of much cleaner low carbon fuels. To this end, the recently ARB-certified Cummins Westport's 0.01 g/bhp-hr NOx heavy duty engine will play a significant role, which is a **game changer** for the transportation sector and public health. The 9L engine is scheduled for deployment as early as 2016 and the 12L in late 2017. These engines will provide immediate environmental and health benefits,

especially to disadvantaged communities and the Mobile Source Strategies Discussion Draft specifically states on page 59 that, "Based on ARB staff's technology assessment, the most viable approach to meeting the 2031 and 2030 goals is low-NOx trucks." In other words, the only technically feasible way to meet the 2031 federal 8-hour ozone standards and the state's low carbon fuel and petroleum reduction goals is to power low-NOx trucks with renewable fuels like renewable natural gas.

These low-NOx engines set at the 0.02 g/bhp-hr standard, powered by natural gas or renewable natural gas, or a blend of the two, will achieve greater environmental benefits than any electrified system for 1/5th to 1/10th the cost and far fewer operational and logistical challenges, as natural gas technology can be seamlessly integrated into large natural gas fleet operations such as drayage, goods movement, refuse, transit, and airport operations.

BARRIERS TO PIPELINE INJECTION OF BIOMETHANE

The Draft mentions the objective of having existing and potential new working groups work toward overcoming pipeline injection barriers for biomethane. We agree that as the current rules and regulations stand, it is still too difficult to get this ultra-low carbon fuel into the pipeline. However, we believe a specific plan to address this should be part of the final SLCP strategy so that the public can review and provide input. Also, with ARB interested in addressing a problem that has been mostly within the jurisdiction of the CPUC thus far, the public should be informed how at least two agencies plan to effectively work together and overcome all remaining barriers to jump-start this market.

These barriers are a major problem for an industry that has been frustrated by a very slow process that started roughly 7 years ago. The failure to solve thes issues has resulted in the vast majority of renewable natural gas fuel production to be outside of California because:

1. The California Public Utilities Commission (CPUC) tariff regulating biogas injection mandates the most stringent gas quality cleanup standards in the country and is cost-prohibitive by requiring highly sophisticated testing. This has inherent risk of false positives and inaccuracies that will jeopardize the productivity of any biomethane plant injecting RNG into the California gas grid;
2. Pipeline interconnection costs are cost-prohibitive to the biomethane producer and are required to be paid entirely by the biomethane producer despite the fact that RNG injected into the gas grid provides a significant benefit to natural gas ratepayers via improved environmental benefits and gas supply diversity.

In 2012, California passed legislation (AB 1900, Gatto) explicitly intended to "facilitate" and "promote" the in-state production and distribution of biomethane. **Unfortunately, the regulations adopted by the CPUC pursuant to that legislation contain the very gas quality testing and tariff requirements that have made it highly difficult if not impossible to develop in-state biomethane production facilities that connect to the California natural gas grid.** To-date, the CPUC has not taken any action to try and mitigate any of the costs imposed on developers by these testing and tariff requirements and thereby stimulate project development. As a result, despite AB 1900 being passed into law, only one pipeline biomethane project is in the process of development in California since its passage.

Enabling pipeline injection of biomethane will help California meet its greenhouse gas reduction, landfill diversion, fuel diversity and clean energy goals, in addition to providing jobs and air quality benefits across the state. Clean Energy strongly supports the Draft's position for the need to make significant changes to utility processes and provide incentives to better align their incentives with SLCP reductions. We urge ARB to include specific recommendations to revise utility processes and incentives that include the following:

- Allocation of Cap and Trade revenues to incentivize the development of in-state biomethane projects;
- Accelerated interconnection processes between the pipeline and in-state biomethane projects;
- Cost certainty for pipeline interconnection and subsidization/incentives;
- Utility incentives for accelerated interconnection;
- Reconsider pipeline integrity standards - such as the BTU requirement and siloxane threshold - for biomethane that vary significantly from other states and make pipeline biomethane costs prohibitive.

We also believe a renewable gas standard would lead to an increase in RNG like the electricity sector enjoys with the Renewable Portfolio Standard and the transportation fuel sector with the Low Carbon Fuel Standard.

Increasing renewable natural gas availability can reduce greenhouse gas emissions by tens of millions of metric tons per year.

UNINTENTIONAL BARRIERS TO RNG PRODUCTION

Given our graduating experience with both the Low Carbon Fuel Standard and the AB 32 Cap and Trade programs – regulations that Clean Energy has consistently been on record supporting – it is important that the SLCP plan not create any unintentional barriers to RNG development for transportation or power generation. Specifically, RNG projects highly depend upon the carbon reduction benefits to make projects pencil out. While Clean Energy supports the goal of the SCLP to reduce fugitive methane leaks from all sources by 40-45% from current levels by 2030, it is equally important that the state implement strategies to reduce these emissions in such a way that it does not impact the value of generation of RNG credits. For example, if the ARB requires that certain sources reduce methane emissions by a certain percentage by a said date, it would be very helpful to allow a RNG project to maintain credit generation of the reduction required if a facility or source chose to install a RNG production facility as a mitigation measure. As current rules stand, if methane reduction is required to reduce methane by a certain percentage at a source, that portion of the reduction is not eligible for credit generation under the LCFS. Unfortunately, this position may greatly reduce the viability of an RNG project and could encourage an alternative such as flaring this valuable low carbon fuel. Such an outcome should be avoided if at all possible and we therefore encourage ARB staff to think about ways that we could avoid this type of scenario once this effort is implemented.

METHANE LEAKAGE

The Draft mentions one objective is to reduce fugitive methane leaks from all sources 40-45% from current levels by 2030. We appreciate the recognition of the problem and intent to rectify it, but we also urge caution in how to proceed to prevent harm to several industries by considering conflicting data and conclusions from different studies. ARB is concerned that unless controlled, methane leakage from the production, distribution and storage of natural gas as well as emissions and leakage from the vehicles could completely offset any potential climate benefit advantages of natural gas. However, calculating methane leakage rates is difficult because of several existing different methodologies.

Our industry is very interested in the continuing pursuit of scientifically valid methods to standardize and effectively calculate this. The natural gas transportation fuel industry acknowledges there is some upstream leakage, but the scientific literature has not demonstrated exactly how much leakage occurs nor can any claim be made that this fuel does not provide sufficient and significant environmental, health and societal benefits. Simply put, the scientific literature has not demonstrated a causal link between methane leakage and reduced climate benefits relative to natural gas transportation fuel.

It is important to emphasize that the GHG benefits of switching from diesel to natural gas are consistent with ARB'S own adopted CI values in the LCFS regulations, which include a 1% methane leakage rate, so there should not be any basis for leakage concerns with offsetting use, as leakage is already factored into the CA-GREET 2.0 model. And with the ongoing interest in pursuing scientific studies, we recommend ARB consider now methane leakage values from utility studies that are scientifically valid which might show better results.

In addition, any regulation must take into consideration in-state and out-of-state sources so as to not inadvertently cause a cost difference and off-set the marketplace.

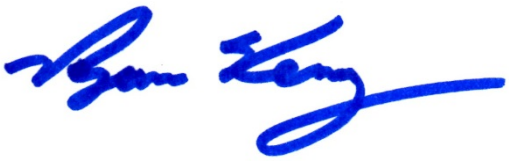
We strongly believe RNG needs to play a significant role in reducing the amount of methane and black carbon currently being emitted by California's transportation sector. The use of RNG would reduce greenhouse gas emissions 90% when displacing diesel fuel used by heavy duty vehicles. The Draft makes a direct link in the reduction of methane and black carbon to improved public health, many less premature deaths, improved agricultural effectiveness, an improved environment, and a growing economy.

We support incentives for the use of RNG in heavy duty vehicles. RNG used as transportation fuel is one part of the overall solution, albeit a significant part. Our industry can help meet the goals of SB 605 and Governor Brown's commitment to limiting global warming to 2 degrees Celsius through 2050. Unfortunately, the proposed budget

for 2015-16 does not include Cap and Trade funding levels that reflect the urgency or the opportunity to reduce SLCPs. We expect the 2016-2017 fiscal year to align Cap and Trade and other funding with SLCP reduction priorities.

We commend staff on the development the Draft – it clearly makes the case for why SLCP need to be addressed. RNG can play a major role in meeting California's environmental goals. We look forward to working with ARB staff throughout the process and hope to assist the agency in developing the Strategy. Thank you for your time and consideration of our comments.

Sincerely,



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Clean Energy

cc: Board members, California Air Resources Board