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Ms. Rajinder Sahota
California Air Resources Board
1001 "I" Street
Sacramento, CA 95812
rsahota@arb.ca.gov

Re: Comments on the Draft Scoping Plan Update

Dear Ms. Sahota,

SoCalGas appreciates this opportunity to comment on the California Air Resources Board's (ARB) 2017 Climate Change Scoping Plan Update (Scoping Plan). SoCalGas strongly supports ARB's efforts to meet California's long-term climate change goals while also sustaining the vitality of the state's economy. SoCalGas wants to emphasize the role that natural gas can continue to play in policies that deliver on this vision. We continue to offer our support, expertise and partnership to ARB to create a technology neutral Scoping Plan that allows a suite of beneficial ideas to be deployed.

In addition to previous comments submitted (attached), SoCalGas respectfully submits the following comments on the Scoping Plan Update:

Renewable Gas

The Scoping Plan specifically highlights using "methane as a renewable source of natural gas to fuel vehicles and generate electricity" and as an important measure to reduce greenhouse gas (GHG) emissions and air pollution. SoCalGas supports the inclusion of renewable gas in the Scoping Plan, and we plan to coordinate with ARB, other state agencies and industry stakeholders to help ensure successful implementation of the final Short-Lived Climate Pollutant (SLCP) strategy, as called for in the SB 1383 timeline.

In order to maximize renewable gas to meet the climate goals of the state, it is imperative to include a Renewable Gas procurement requirement in the Proposed Scenario. Utilities can play a key role in the development of renewable gas resources by investing in the infrastructure needed to produce renewable gas, connect the projects to the gas pipeline system, and deliver renewable energy to end users. A renewable gas procurement requirement, such as a Renewable Gas Portfolio Standard (RGS) would drive the investment in renewable gas production and use in the pipeline system. SoCalGas recommends that ARB include an RGS in the Proposed

Scenario, which would accelerate the goals of SB 1383 to encourage development of renewable gas infrastructure.

Table III-6 of the Scoping Plan Update (page 69) presents the cost per metric ton of various measures. In the latest version of the Scoping Plan Update, ARB has noted a very high cost for a 5% RGS. It is important to recognize the assumptions included in this value. ARB has assumed the RGS would be incremental to the SLCP Strategy and Low Carbon Fuel Standard (LCFS). As a result, they assume hydrogen, which has a higher cost than other renewable gas feedstocks, would be the only available gas for the RGS (see Appendix D of Scoping Plan Update). This characterization of the RGS based on hydrogen can be misinterpreted. ARB should be explicit in identifying 5% renewable hydrogen in its RGS. If ARB assumed a 5% RGS based on biomethane as the feedstock, the cost would be dramatically lower. The abatement cost should be valued to reflect the capture and productive use of biogenic sources of methane, which would result in costs more consistent with the SLCP Strategy value of \$25 per ton.

SoCalGas believes an RGS can be an effective tool to facilitate the SLCP Strategy. We would recommend ARB conduct further examination of the cost of an RGS within the umbrella of the SLCP Strategy.

Low Carbon Fuel Standard

SoCalGas continues to support the LCFS program which is critical to continue the transition to cleaner motor vehicle fuels. The program will help meet California's environmental and economic goals: It has been instrumental in creating price parity between alternative fuels and fossil fuels, thereby spurring the development of low carbon fuels in California—such as renewable gas—that will yield substantial immediate and future GHG reduction benefits. The program, however, must remain technology neutral and should treat all fuel sources equally, based on scientific data. SoCalGas has several concerns with the Draft LCFS Amendments that favor specific technologies and could result in the overgeneration of credits. The joint comment letter expressing our concerns on the LCFS Amendments submitted by the California Natural Gas Vehicle Coalition, the Coalition for Renewable Natural Gas, and the Bioenergy Association of California, is attached.

Heavy Duty Trucks

Natural gas-powered trucks continue to experience significant advances in technology, specifically the development of a near-zero emission engine and the availability of renewable natural gas. Cummins Westport has developed an 11.9-liter natural gas engine certified to 0.02 grams per brake horsepower hour for nitrogen oxides (NOx). This is the only engine at this size certified to meet the ARB's 0.02 gram, near zero option emission standard. At 11.9 liters, this engine is appropriately sized to do goods movement in local and state-wide duty cycles. In fact,

in drayage duty cycles the engine has tested to 0.002 grams NOx, well below its certification level and 99.8 % lower than its diesel counterpart scenarios¹.

When paired with renewable gas, natural gas engines can significantly reduce greenhouse gas emissions. The average carbon intensity of renewable gas is 60-80% lower than diesel. Based on the source, RNG can have a carbon intensity (CI) up to 400% lower than diesel, and can be carbon negative, as RNG mitigates emissions that would have occurred. ARB recently awarded the company, AMP Americas, a CI score of -254.94 grams of carbon dioxide per megajoule (gCO₂e/MJ), which the company noted is the lowest ever issued by CARB. Renewable gas is truly beneficial and plentiful today. A study conducted by ICF states there are 650-700 million diesel gallon equivalents available for RNG production in California per year. Natural gas as a transportation fuel in the heavy-duty trucking sector therefore, should be promoted to meet climate and air quality goals of the state.

Innovative Clean Transit

The Scoping Plan proposes a zero-emission bus requirement by 2030 under the Advanced Clean Transit (ACT) regulations, now called Innovative Clean Transit (ICT). ARB should consider, however, that transit agencies including Los Angeles County Metropolitan Transportation Authority (LA Metro), San Diego Metropolitan Transit System, Orange County Transportation Authority, and Santa Monica's Big Blue Bus have thoroughly studied the use of near-zero emission natural gas buses running on renewable gas, and have found that they provide significant emissions benefits at an acceptable cost. For example, LA Metro's recent study found that the use of near-zero engines with renewable gas is the most cost-effective strategy by an order of magnitude for reducing NOx and GHGs as compared to using battery electric or fuel cell powered buses².

Transit agencies should also be allowed the flexibility to use near zero emission technologies if it best serves their citizens. Affordable public transportation is essential for local and regional mobility and near zero natural gas buses have proven to be the most cost effective means to get emission reductions for transit agencies. A technology mandate of zero emissions would disrupt operations and increase cost for riders and would be in contrast to the intent of ICT.

The ICT measure in the 2016 State Strategy for the State Implementation Plan, intended to consider flexible approach to allow transit fleets to deploy advanced, clean technologies³. SoCalGas supports the pursuit of a performance-based standard, not a technology mandate, to address GHG and criteria pollutant emissions, thereby providing transit agencies with affordable technology choices and operational flexibility.

¹ Ultra-Low NOx Natural Gas Vehicle Evaluation, UCR CE_CERT, 2017

² "Zero Emissions Bus Options: Analysis of 2015-2055 Fleet Costs and Emissions," Ramboll Environ (Feb. 5, 2016) (prepared for LA Metro), *available at*:

https://media.metro.net/board/Items/2016/09_september/20160914atvcitem4.pdf.

³ "Revised Proposed State SIP Strategy," ARB, pp. 69-70 (March 7, 2017).

Thank you again for the opportunity to comment on the Draft Scoping Plan Update and SoCalGas looks forward to working with ARB on implementing the Plan.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'KM' or similar initials, written in a cursive style.

Kevin Maggay
Energy and Environmental Affairs Program Manager