California Natural
Gas Vehicle Coalition

September 3, 2021

Submitted via Electronic Comments Docket

Ms. Rajinder Sahota
Deputy Executive Officer
California Air Resources Board
Sacramento, CA 95814

RE: 2022 Scoping Plan Update
Comments on Scenarios Concepts Technical Workshop - August 17, 2021

Dear Ms. Sahota,

The California Natural Gas Vehicle Coalition (CNGVC) appreciates the opportunity to comment on the scenarios presented by staff at the August 17th technical workshop on the 2022 Scoping Plan Update. The decisions made in this update will guide and direct policies decisions for years to come, which is why it is important to be thoughtful in its construction, considering the realities of today's marketplace and the urgency of our climate situation while further implementing California's transition to a clean transportation future.

CNGVC is a coalition of natural gas vehicle and engine manufacturers, utilities, fuel providers and fleet operators. We support a wider deployment of heavy-duty natural gas trucks, fueled by renewable natural gas (RNG), as the solution to California's near-term reduction needs for greenhouse gases (GHG), climate pollutants and diesel particulate matter (PM) to improve air quality and reverse the negative impacts on public health. RNG-fueled vehicles are a proven technology worldwide[1].

When AB 32 was signed into law, it contained a policy statement on combating climate change that instructed CARB to tackle this effort in a manner that *"… achieve[s] the maximum technologically feasible and cost-effective greenhouse gas emission reductions …"*. Though electrification of the State's transportation sector is CARB's stated longer-term goal, the transition will not be accomplished tomorrow and may prove difficult for certain sub-sectors. At a minimum, it will be a decades long transition. Thus, CARB has a responsibility to implement a strategy that achieves emission reductions and public health improvements TODAY and consider the technologies available TODAY to help it realize that obligation sooner rather than later.

[1] More than 50 vehicle manufacturers produce over 100 models of NGVs, with an established sales and service network. There are over 175,000 NGVs on U.S. roads today, operating across every sector and weight class, including medium- and heavy-duty trucks, buses, shuttles, and refuse. More than 23 million NGVs are currently in operation worldwide. *Get the Facts: Common Myths of Natural Gas Vehicles and Renewable Natural Gas.* Available at https://cngvp-7f8e.kxcdn.com/pdf/cngvp-get-the-facts.pdf.

It is with that duty in mind that we urge staff to model scenarios that contemplate the use and deployment of material numbers of low NOx trucks fueled by RNG as an option and opportunity for the transportation sector.

Failure to do so shortchanges the discussion about what emission reductions can be achieved today and proceeds with a future-focus perspective driven by a zero-only analysis. Excluding other immediately viable fuel technology from this discussion will only perpetuate the continued use of heavy-duty diesel trucks, simply because HD ZEV technology is not currently viable, nor can it meet the requirements of today's operators.

Consider the comments from Wayne Nastri, Executive Officer of the South Coast Air Quality Management District (SCAQMD), in his August 3, 2021 letter on the readiness of ZEV HD trucks:

> *"The use of zero emission technology for heavy duty class eight trucks is a reality that simply isn't available yet … Manufactures make promises the vehicles can be ordered but cannot be delivered and put into service on anything other than a small scale pilot basis. And even if they were ready to be manufactured at large scale today, there are substantial challenges regarding whether the duty cycles for ZE class eight vehicles can meet business needs and whether a service network is available for businesses that acquire these vehicles. In addition, the cost of ZE technologies is substantially higher than non-ZE technologies, and while eventually we expect the total cost of ownership to be lower for the E tracks, affordability remains a significant barrier to large scale adoption. Finally, even if all these barriers were addressed, the charging/fueling infrastructure (plugs and hydrogen dispensing stations), The electrical distribution system (neighborhood transformers, substations, etc.) and the power/fuel supply to support widespread deployment will take many years to develop."*

To ensure we construct a plan that responsibly govern the state's continued transition, staff must look at all currently viable solutions and model scenarios that consider immediate as well as long-term emission reductions goals. As Gene Seroka, Executive Director of the Port of Los Angeles, said at the June 17th Harbor Commissioners Board Meeting, *"We can't lead the public down a primrose path without giving them the facts."*[2] And the facts are that HD ZEVs are not commercially ready today, or frankly in the next decade, to step in and take away diesel's market share, whereas RNG-fueled low NOx trucks are!

Low NOx Heavy-Duty Trucks Provide a Solution to Near-Term Emission Reductions

With most Californians still breathing unhealthy air, especially those residing near transportation corridors and in the state's most disadvantaged communities, we cannot wait any longer to transition away from diesel trucks. In California, mobile sources account for 80% of smog forming nitrogen oxides (NOx), 50% of GHG and more than 95% of toxic diesel PM emissions. We must

[2] Port of Los Angeles Harbor Commissioners Meeting, June 17, 2021, Item #7 @ 1:52:30.

focus on deploying the cleanest truck technology commercially available today – carbon-negative Low NOx HD trucks fueled by RNG – until zero tailpipe emission trucks become available. As CARB has stated, *"Achieving California's long-term air quality, climate, and public health goals require a transition from the conventional combustion technologies to zero emission* ***wherever feasible****, and near- zero emission powered by low-carbon renewable fuels everywhere else."* [emphasis added]

Low NOx heavy duty trucks, fueled by renewable natural gas, are a cleaner, cost-effective, immediate, and commercially available solution for today. They are 90% cleaner than diesel, supported by existing infrastructure funded by private sector investments, and can be deployed now to quickly turn over the state's goods movement fleet. Most importantly, by CARB's own data, these trucks are carbon-negative when fueled by RNG[3], which helps to alleviate the impacts of climate change.

Additionally, the looming Truck and Bus regulation makes things even more dire by outlawing pre-2010 model year diesel truck engine starting January 1, 2023. The choice is clear - natural gas heavy-duty trucks are among the cleanest commercially available vehicles. They provide an immediate solution to California's air pollution and global warming problems, delivering lower GHG and pollutant emissions when fueled by RNG. Staff must include this beneficial technology in its scenarios related the to Vehicle Fleet Electrification and Short-Lived Climate Pollutants along with any other section related to the use of transportation fuels to ensure a balanced perspective that considers both near-term and longer-term air quality and public health benefits.

In addition, we offer the following comments to address the specific questions posed by staff under the identified topic areas below:

Vehicle Fleet Electrification – Presentation slides #19-20
Question: Should there be changes in the fleet electrification deadlines?

No matter what date is chosen (Slide 19) or option applied (Slide 20), the analysis will not be complete without the inclusion of scenarios that contemplate the use of RNG for the reasons previously stated above. CNGVC urges staff to include modeling that is not exclusively ZEV. Even Governor Newsom accounted for the reality of technological delays in meeting his 2045 deadline for 100 percent conversion of heavy- and medium-duty vehicles by including in Executive Order N-79-20 the phrase *"where feasible."* We urge staff to adopt the same thoughtful approach and not exclude the use of renewable fuels like RNG in the Scoping Plan modeling.

Short-Lived Climate Pollutants (SLCP) - Presentation slides #23-24
Question: How should we use biogas captured from dairies and landfills - electricity generation, industrial heat, transportation fuel, other?

CNGVC strongly supports the use of biogas as a transportation fuel source. Diesel powered heavy-duty trucks are a source of significant toxic pollutants, including GHG, methane and black

[3] Gladstein Neandross & Associates, *"An Assessment: California's In-State RNG Supply For Transportation 2020-2024,"* July 2020.

carbon, all of which are SLCPs that are not only severely harmful to our environment but also deadly to the most affected communities.

The greatest opportunity we have to expeditiously reduce SLCPs is the immediate transition from diesel to biogas sources like RNG.

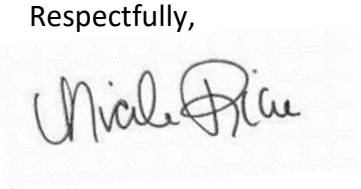
Renewable natural gas is not a fossil fuel, but is derived primarily from organic waste, generated by a variety of sustainable and renewable sources that emit harmful pollutants, like methane, into the environment if left unmanaged. Methane has up to 87 times the global warming potential of C02 in the first twenty years after its release. Transitioning away from diesel to a cleaner, renewable fuel source like RNG can reverse this natural occurrence for the betterment of both the planet and its people. Given that the heavy- and medium-duty trucks generate approximately 70% of smog and 22% of transportation CO_2, it makes sense to put this fuel source to good use.

Further, the carbon intensity for RNG in California continues to drop, which will support and drive the demand for heavy-duty low NOx trucks. For the first time in 2020, vehicles powered by RNG in California removed more carbon dioxide from the atmosphere than they emitted. Based on the latest Low Carbon Fuel Standard data from Q1 2021, the carbon intensity of bio-CNG in California's system is at -16.57 gCO2e/MJ[4].

On the supply side, more than $1 billion is being invested in infrastructure in California to produce large volumes of carbon negative RNG. By January 2024, California-produced RNG will have an average energy weighted Carbon intensity of -101.74 gCO2e/MJ and one natural gas truck fueled by California RNG will completely offset the GHG emissions of two diesel trucks[5]. Capturing biogas for transportation fueling makes sense and we urge staff to adopt this action.

Transitioning to carbon negative fuels today will result in immediate environmental improvements at a time when all the experts, signs, research are confirming that we are running out of time[6]. We respectfully offer these comments and urge staff to adopt the outlined actions. Thank you for consideration and please feel free to contact me if you have any questions.

Respectfully,



Nicole Rice
President, California Natural Gas Vehicle Coalition

[4] https://ngtnews.com/natural-gas-vehicle-industry-shifts-to-full-carbon-negative-future?utm_medium=email&utm_source=LNH+08-20-2021&utm_campaign=+Latest+News+Headlines

[5] Gladstein Neandross & Associates, *"An Assessment: California's In-State RNG Supply For Transportation 2020-2024,"* July 2020.

[6] Kammen, Ramanthan, Matlock, et al, "*Accelerating the Timeline for Climate Action in California,"* submitted to Environmental Research Letters, 2021. Available at: https://arxiv.org/abs/2103.07801 [arxiv.org].