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Laura Watson, Director
Rachel Assink, Clean Fuels Program Rulemaking Lead
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

RE: NGVAmerica Comments on the WA Clean Fuels Program Draft Rule

Dear Director Watson and Ms. Assink:

Natural Gas Vehicles for America (NGVAmerica), the national trade association for the natural gas vehicle industry, respectfully submits the following comments on the State of Washington Clean Fuels Program (CFP) Draft Rule that includes the use of conventional and renewable natural gas (RNG or biomethane) for the Washington transportation sector. The Washington State Department of Ecology (Department) has shown that it understands that to promote a cleaner environment effectively and quickly, RNG is an essential component of the Clean Fuels Program and NGVAmerica appreciates the Department's leadership in this.

NGVAmerica endorses strategies that support the use of zero emission vehicles (ZEV), near-zero emission vehicles and a transition to low and net negative carbon transportation fuels such as renewable natural gas, conventional natural gas and eventually hydrogen. There is **no one solution** to the pressing environmental issues facing the transportation sector. The Department should move quickly to deploy those technologies and solutions that are readily available, maximize cost-effective emission reductions, and provide a real pathway to carbon neutral or carbon-negative emissions.

Converting medium- and heavy-duty (M/HD) vehicle transportation networks to low NOx trucks operating on RNG provides a readily available, proven and cost-effective solution to accelerate the transition to a low-carbon transportation future. Further, dedicating program resources to cleaner alternative fuel technologies that are available now will significantly and immediately benefit all communities by maximizing the displacement of older, higher emitting diesel trucks and buses, including those higher emitting vehicles that operate in communities that are underserved by current transportation options.

Near-zero engines operating on RNG produce at least 90% *less* NOx than the cleanest diesel engines and operate at virtually zero NOx emissions (0.02 g/bhp-hr or less). In California RNG is used to fuel low NOx vehicles providing reduced life cycle emissions of greenhouse gases (GHG) that in some cases can be net zero or even carbon-negative.

CARB data from the Low Carbon Fuel Standard (LCFS) for Q3 2021 confirms the energy weighted carbon intensity (CI) value of California's RNG vehicle fuel portfolio is below zero at -62.7 gCO2e/MJ (negative CI for last 5 reporting quarters). California fleets that fueled with bio-CNG in 2020 achieved carbon negativity in 2020 for the first time ever, with an annual average CI score of -5.845 gCO2e/MJ. Renewable CNG (dairy gas) is now close to -600 gCO2e/MJ. Additional information may be found at the following link: https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities.

NGVAmerica commends the Department for their work to implement the Clean Fuels Program, beginning with the rulemaking process that has produced the current CFP Draft Rule. We appreciate that the Department is basing the CFP carbon intensities (CI) and other measurements on the Argonne GREET model that follows accepted and proven standards and is also used in California and Oregon.

A robust CFP includes the use of low NOx trucks for the near term and beyond to reduce emissions from the transportation sector, especially in disadvantaged communities that have been relegated to diesel solutions while we wait on the EV industry to commercially mature. Low NOx vehicles with the potential of carbon net zero and even carbon negative emissions with RNG are:

- Commercially demonstrated and available today
- Sufficient fueling infrastructure that is largely funded by the private sector
- 90% cleaner than diesel trucks on NOx (without requiring after-treatment apparatus)
- 100% elimination of diesel particulate matter emissions
- When fueled by RNG, can provide substantial GHG emissions reductions
- More cost-effective than ZEV trucks, allowing limited incentive funds to stretch further
- Addresses elements of the transportation sector that are hard to electrify
- Enables a diversity of effective technology/fueling solutions
- Fueled with RNG that is produced from domestic, renewable, plentiful feedstock
- Supports sustainability goals of organizations and fleets

Moreover, the salient points to promote the use of RNG include:

- The immediate reduction of fugitive methane emissions is necessary to rapidly reduce the impacts of climate change
- Waste generators including livestock operators can gain a sustainable outlet for their waste
- Animal manure can be collected on a single large farm or combined from several "cluster" farms and delivered to a single anaerobic digester for RNG production
- If manure is stored in open lagoons that emit methane, moving it to enclosed digesters prevents those emissions
- Addresses agricultural waste and emissions to help offset costs thereby reducing pressure on food prices and farmers
- The RNG produced also displaces fossil NG that would have been consumed by NG vehicles, thereby reducing CO2 emissions
- Avoided methane emissions and displaced fossil CO2 emissions can produce large reductions in carbon intensity
- The California Air Resources Board's assessment shows that RNG produced from dairy waste has one of the lowest carbon intensity (CI) ratings of any transportation fuel
- RNG for transportation can reduce greenhouse gas emissions up to 283%, with an average of 51% reduction (varies by feedstock)
- Fueling with RNG also creates new economic development for energy created from wastewater treatment, landfills, animal waste and other methane sources

Real World Experience

Amazon has ordered thousands of Classes 6 through 8 trucks, choosing low NOx vehicles because they would not buy diesel trucks and could not buy electric trucks now or in a reasonable timeframe. UPS, WM, Republic Services, Pierce Transit, POTELCO, City of Tacoma Refuse, Los Angeles World Airports Buses, City of Los Angeles, City of Fresno Transit, LA Metro Transit, New York's Hunts Point fleet Industries, Fort Collins Transfort Buses, Denver International Airport Buses and equipment, and many other fleets have chosen low NOx trucks as the only available non-diesel heavy-duty truck that outperforms other alternative technologies in all aspects of vehicle operation.

To support low NOx markets in the United States, Asia, Europe, South America and elsewhere, Cummins has initiated a worldwide low NOx engine division to fulfill the demands for immediate diesel alternatives across the world. In addition to 3 heavy duty low NOx engines, they are bringing forward a new heavy-duty 15L engine that provides the power and performance of diesel and that is 500 pounds lighter and more efficient. Also, Hyliion is field testing its CNG range extender equipped electric Class 8 powertrain, the Hypertruck ERX, which is scheduled to be commercially available in late 2023.

As is evidenced in the above paragraphs, low NOx vehicles are growing in the M/HD truck market, especially as new technology is introduced, EV technology is delayed, cleaner engines are mandated and diesel prices continue to climb. It should be noted that using the AFLEET calculations, low NOx trucks are truly virtually zero since it takes only 1.05 low NOx trucks to equal the NOx tailpipe emissions reductions of a battery electric (BE) short-haul truck. When the range/duty cycle issues are factored in (may take more than one BE truck/bus to replace a diesel or low NOx truck/bus), the cost-effectiveness of using electric vehicles is a significant issue.

Reduce Emissions Now and in the Future

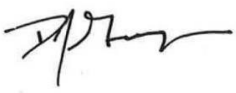
More than four of every ten Americans live in communities with dangerously dirty air. According to the American Lung Association, over 135 million people are living in places with unhealthy levels of ozone or particle pollution. And the burden of living with unhealthy air is not shared equally; people of color are over three times more likely to be breathing the most polluted air than white people.[1]

Investments in RNG-fueled trucks and transit buses accessing ports, cities, and densely-populated neighborhoods are the most immediate and fiscally-responsible actions to clean our air and combat climate change. Communities get more clean vehicles having greater clean air and climate impact for the money with RNG than with any other alternative fuel option. No other transportation fuel is as sustainable, adaptive, and competitive across all applications and vehicle classes. And heavy-duty low NOx trucks are not demonstration science projects; they are proven, scalable, and on U.S. roads today. We will not meet emissions reductions goals or timeframes without using RNG.

Low NOx engines are proven, cost-effective and available today for medium- and heavy-duty vehicles. With virtually no tailpipe emissions and because RNG is used, life cycle greenhouse gas emissions from low NOx vehicles are reduced further. For additional information, please see the NGVAmerica "Start Now. RNG is How!" brochure at https://ngvamerica.org/rng-is-how.

Thank you for your consideration, and please contact me or Sherrie Merrow at smerrow@ngvamerica.org or 303.883.5121 with any comments or questions.

Sincerely,



Daniel J. Gage
NGVAmerica President

[1] American Lung Association, *State of the Air Report*, April 2021.