



May 20, 2019

Ms. Kathleen Theoharides, Chair
Transportation & Climate Initiative of the Northeast and Mid-Atlantic States
Georgetown Climate Center
600 New Jersey Avenue, NW
Washington, DC 20001

Dear Secretary Theoharides:

NGV America is the national trade organization dedicated to the development of a growing, profitable, and sustainable market for vehicles and carriers powered by clean, affordable and abundant natural gas or biomethane. Our 200-plus member companies produce, distribute, and market natural gas and biomethane, manufacture and service natural gas vehicles, engines, and equipment, and operate fleets powered by clean-burning gaseous fuels across North America.

Several NGV America member company representatives and I attended TCI's April 30th Technical Workshop in Boston and participated via live stream in TCI's May 15th Workshop in Newark. I provide these comments on behalf of our industry to compliment those discussions.

NGV America endorses strategies that support the transition to low-carbon transportation fuels, including geologic and renewable natural gas. Converting the Northeast and Mid-Atlantic regions' heavy- and medium-duty freight and transit transportation network to natural gas accelerates the transition to a low-carbon transportation future. Further, cap-and-invest program resources invested in natural gas technologies would significantly and immediately benefit all communities, particularly those underserved by current transportation options and overburdened by pollution.

Cleaner Air Starts with Cleaner Trucks and Buses

Increased use of natural gas as a transportation fuel provides immediate and significant criteria and toxic air pollutant reductions. Fact: the cleanest commercially-available heavy-duty engine in the world is powered by natural gas now and for the foreseeable future. Designed, built, and manufactured in America by Cummins Westport, this engine is certified to a 0.02 g/bhp-hr. standard, making it 90 percent cleaner than the EPA's current NOx emissions requirement and 90 percent cleaner than the cleanest diesel engine. And in real-life study, these engines emitted lower NOx emissions than certified.¹ Replacing just one traditional diesel-burning heavy-duty truck with one new Ultra Low-NOx natural gas truck is the emissions equivalent of removing 119 traditional combustion engines cars off our roads. Heavy-duty equals heavy impact.

¹ University of California, in-use testing of heavy-duty trucks in port applications, November 2016.

Carbon-Neutral/Negative Freight with RNG

Natural gas engines offer significant climate change benefits. Compared to diesel, natural gas engines fueled with geologic natural gas reduce CO₂ and greenhouse gas emissions by up to 17 percent. When fueled with renewable natural gas (RNG or biomethane) captured from agricultural, food, landfill or wastewater, even greater CO₂ and greenhouse gas benefits are achieved, up to 125 percent lower than diesel. Fueling with RNG is carbon-neutral, even carbon-negative, depending on the feed stock.² No better commercially-available and deployable alternative fuel option currently exists for the heavy-duty sector.

Address Noise Pollution

Natural gas vehicle technology affordably addresses noise pollution in urban neighborhoods. A U.S. Department of Energy study identified significant noise reduction benefits as a motivator for many refuse collection truck operators in accepting the technology, citing up to 10 decibels quieter than their diesel counterparts.³ A 2016 in-use study of diesel and CNG urban transit buses in Serbia found considerable reductions in noise pollution when powered by CNG.⁴

Invest Impactfully

Investments in Ultra Low-NOx and Near Zero emission natural gas vehicle technologies greatly impact underserved and marginalized communities. Natural gas transportation provides the largest and most cost-effective reductions in transportation-related pollutants than any other powertrain option commercially-available today or near-term.⁵

As such, investments in RNG-fueled trucks and transit buses accessing ports, cities, and densely-populated neighborhoods are the most immediate and fiscally-responsible investment to clean our air and combat climate change. Communities get more clean vehicles having greater clean air and climate impact for the money with natural gas than with any other alternative fuel option, especially electric. No other transportation fuel is as sustainable, adaptive, and competitive across all applications and vehicle classes. And heavy-duty natural gas trucks are not demonstration science projects; they are proven, scalable, and on U.S. roads today.

Natural gas fueling pays into the federal highway trust fund and is ready-right-now technology. It is road-tested and backed by a mature network of manufacturers, servicers, and suppliers coast-to-coast. An established refueling infrastructure of 2,000 stations already exists.

It is also important to note that while 34 U.S. states produce geologic natural gas, the potential to produce renewable natural gas exists in every U.S. state and the District of Columbia by taking the problem of fugitive methane gas created from organic waste, capturing it, then using it to fuel traditionally heavy-carbon freight and transit transportation applications. In addition to its clean air and climate benefits, the development of RNG facilities also supports the agriculture industry

² California Air Resources Board, February 2017.

³ U.S. Department of Energy, *Case Study – Compressed Natural Gas Refuse Fleets*, February 2014.

⁴ Milojevic, Sasa, “CNG propulsion system for reducing noise of existing city buses,” *Journal of Applied Engineering Science*, January 2016.

⁵ <https://www.ngvamerica.org/environment/>.

with new revenue streams, addresses the Northeast's solid waste issue, and impacts watershed management efforts and nitrogen runoff concerns.

Geologic and renewable natural gas is a 100 percent domestic fuel, unlike limited electric vehicle battery components that are controlled by foreign interests and mostly sourced from conflict countries like the Democratic Republic of the Congo.

More than four in ten Americans live in communities with dangerously dirty air. According to the American Lung Association, that number continues to rise, from 125 million in 2017 to nearly 141.1 million today.⁶ Cap-and-invest program investments in natural gas vehicle technologies offer the most proven, cost-effective, and immediate way to promote a low carbon transportation future, clean our air, and provide more affordable, accessible, and reliable transportation opportunities for marginalized and underserved communities.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Gage', with a long horizontal flourish extending to the right.

Daniel Gage
President

⁶ American Lung Association, 2019 *State of the Air Report*, April 2019.