



Natural Gas Vehicles for America

400 North Capitol Street, N.W.
Washington, D.C. 20001
ngvamerica.org

Jeffrey Clarke

Director of Regulatory
Affairs and General Counsel
jclarke@ngvamerica.org
202.824.7364 office
202.824.7087 fax

December 14, 2018

Kathleen H. Burgess, Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, NY 12223
Via email: secretary@dps.ny.gov

RE: Case 18-E-0138 – In the Matter of Electric Vehicle Supply Equipment and Infrastructure

Introduction

Natural Gas Vehicles for America (NGVAmerica), the national trade association for the natural gas vehicle industry, respectfully submits the following comments regarding Case 18-E-0138. The comments submitted here respond in general to the proposal to provide incentives to encourage development of electric vehicle charging infrastructure and to the November 21 Consensus Proposal to Encourage Statewide Deployment of Direct Current Fast Charging Facilities for Electric Vehicles (Consensus Proposal).

NGVAmerica is dedicated to the development of a growing, profitable, and sustainable market for vehicles and carriers powered by clean, affordable and abundant natural gas or renewable natural gas. Our 175-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.

Comments

Providing Incentives for NG Fueling Stations that Operate Electric Compressors

NGVAmerica and its members have an interest in this proceeding because it is intended to advance the use of electric vehicles for transportation including in light, medium and heavy-duty applications, markets that directly impact natural gas vehicles. The stated purpose of this proceeding is to advance electric vehicles to help New York achieve its goals for reducing greenhouse gas emissions. NGVs also provide greenhouse gas emission benefits and face many of the same hurdles that electric vehicles face in terms of gaining market acceptance and therefore warrant similar regulatory incentives.

The proposed incentives in the Consensus Proposal include direct payments to infrastructure developers and reduced transportation rates, among other things. These incentives are intended to address the initial high costs or stranded costs associated with developing fueling infrastructure that initially will be underutilized until more electric vehicles are operating in the state and using the installed infrastructure. To offset this initial underutilization and to address issues related to demand charges, the proposal includes direct payments and reduced rates to encourage developers to install infrastructure. The proposal includes providing up to a total of \$30 million in direct payments and unspecified amounts of other incentives.

NGVAmerica contends that its members and natural gas fueling developers face similar challenges when developing natural gas fueling infrastructure. Specifically, natural gas developers utilizing electric compressors at compressed natural gas fueling stations can incur high demand charges associated with these stations. These demand charges initially disproportionately impact the retail price of fuel dispensed at stations that in the early years of development often are underutilized. The higher demand charges discourage investments in natural gas fueling infrastructure. Because natural gas stations are using electricity, are providing increased base load for New York, are delivering greenhouse gas benefits and supporting economic development in the state of New York, they similarly should receive economic support. Moreover, providing incentives for NGVs will provide greater opportunity for the state to achieve its greenhouse gas reductions targets because NGVs are available in a number of applications that are not yet feasible or practical to power with electric batteries and therefore encouraging NGVs will enable the state to address more total emissions than if it only encourages electric vehicles.

To assure fair competition in New York and advance the market for a variety of types of vehicles that deliver lower greenhouse gas emissions, we recommend the following be included as part of this proceeding:

- 1) Provide the same discounted delivery rates for electric compressors in operation at natural gas fueling stations;
- 2) Provide the same opportunities for electric compressors installed at natural gas fueling stations to qualify for the business incentive rates offered by utilities;
- 3) Provide payments for a period of years to newly installed natural gas to offset demand charges in a way that is commensurate with the payments provided to electric stations;
- 4) Alternatively (in lieu of direct payments) provide discounted demand charges for natural gas stations for the duration of the fast charger incentive program;
- 5) If no incentives are provided to natural gas fueling stations take steps to provide discounted rates to natural gas fueling stations or otherwise ensure they are not subsidizing EV infrastructure through the rates they are charged.

Natural Gas Vehicles Are Environmentally Sustainable, Proven Technology and Commercially Available

The U.S. market for natural gas vehicles currently consists of between 175,000 and 200,000 on-road vehicles, consuming 550 – 600 million gasoline gallon equivalents of natural gas in 2017.¹ NGVs are road-tested, proven, and commercially-available from a variety of mainline automakers, truck and bus manufacturers. Fuel providers stand ready to increase infrastructure in response to growing demand whether it be in the on-road light-duty and heavy-duty vehicle markets or in the off-road marine and rail sectors. No other powertrain is as sustainable, clean, domestic, abundant, safe, reliable, affordable, adaptable, and competitive across all vehicle classes. No alternative fuel powertrain uses as much low-carbon, renewable fuel as do today's natural gas vehicles.

Natural gas is a sustainable transportation fuel because it already reduces numerous harmful pollutants and it offers the potential for significant additional emission reductions through efficiency improvements, blending or substitution with abundant sources of renewable natural gas (RNG) or hydrogen (power-to-gas fuel production), and it can support not only NGVs but also fuel cell vehicles, electric vehicles, and methanol vehicles. RNG is derived from biogas that has been captured from organic waste streams at landfills, wastewater treatment facilities and anaerobic digestion of manure and agricultural waste. The captured biogas is subsequently refined and upgraded to fuel quality standards that make it indistinguishable from geologic natural gas. RNG is fully fungible in our nation's existing energy infrastructure and can be used to fuel natural gas vehicles.

Market success in the U.S. is being achieved in transit and shuttle buses, refuse trucks, and short-haul trucking. In refuse, new natural gas trucks account for more than 25 percent of all new orders. In the heavy-duty segment, Waste Management (WM) has led the way in this sector, deploying more than 6,000 natural gas refuse trucks and installing 120 plus fueling stations. WM recently announced the opening of a new \$30 million renewable natural gas facility in Kentucky that will produce enough fuel to power 800 of the company's natural gas refuse trucks each year. Demand is similarly strong in transit where natural gas buses represent about 35 percent of all transit bus orders and 12,000 transit buses or nearly 20 percent of the current fleet is powered by natural gas.

In medium- and heavy-duty vehicles, NGVs offer unmatched emission reduction benefits. Today's natural gas vehicles are powered by extremely clean, low-NOx or zero-equivalent natural gas engines. Natural gas engines achieve emission reductions that are 90 percent cleaner than federal standards and 90 percent cleaner than the newest diesel vehicles without requiring complex emission control systems or use of additives. Included among these new, cleaner natural

¹ EIA AEO 2018 estimates total on-road natural gas fuel consumption in 2017 at approximately 654 million gasoline gallon equivalents (GGE) after converting quadrillion Btu to GGE units. Based on our own independent survey of members and fuel providers, we can confirm sales volumes of about 535 million GGE; this figure is not complete however as some retailers are unwilling to share data. This figure nevertheless likely represents fuel volumes from the major market suppliers. Based on these factors, we estimate the U.S. on-road market in 2017 probably included sale volumes of between 550 – 600 million GGE.

gas engines is the Cummins Westport ISX12N produced in Jamestown, New York. Incentives, economics, and the desire by businesses to reduce their emissions are driving this market. Today virtually all heavy-duty truck manufacturers offer natural gas vehicles. Natural gas trucks and buses offer a proven and cost-effective solution for communities desiring to offset harmful emissions. Investing in NGVs reduces more total emissions for each dollar spent than any other on-road option today.

Newer natural gas engines benefit from improvements in efficiency and engine controls that greatly limit greenhouse gas emissions. Continued improvements and advancement in internal combustion engines and truck designs hold the promise of further reducing emissions from future natural gas vehicles. The greater use of renewable natural gas is another way that NGVs are delivering significant, cost-effective reductions in greenhouse gas emissions. According to Argonne National Laboratory's GREET model, the estimated lifecycle CO₂-equivalent emission *reductions* of NGVs operating on RNG when compared to gasoline vehicles are 84% (from landfill gas) to 129% (actually *negative* lifecycle emissions when considering manure-based anaerobic digesters).

Renewable natural gas by our estimates now accounts for about 30 percent of on-road natural gas consumption and by the end of 2018 is expected to account for 37 percent of all on-road consumption of natural gas.² According to the U.S. EPA RFS Program, fuel providers in 2017 supplied a total of 242.5 million ethanol gallon equivalents of renewable natural gas. This equates to approximately 162.5 million gasoline gallon equivalents (GGE) of RNG. For 2018, EPA estimates RNG suppliers will have produced 309 million ethanol gallon equivalents of RNR or about 206 million GGE. Renewable natural gas is a relatively new entrant to the transportation sector and has shown tremendous growth in just a few years, more than 700 percent since 2014. EPA's RFS Program assures there will be even more RNG available in 2019 as it has set a level of 399 million gallons for RNG.

As the figures here indicate, RNG volumes are a real, significant, and growing portion of the total fuel used by NGVs. For a variety of reasons, we believe that RNG use will continue to expand in future years. This includes policies in states that encourage biogas production, the investments being made by WM and other refuse companies, and the fact that utilities and fuel providers are looking to expand their offerings of renewable fuel. Clean Energy, a major fuel provider of natural gas, announced that it plans to increase the supply of RNG to its retail stations and expects to sell 100 million GGE of RNG in 2018.³ Recent studies conducted in California, Idaho and Oregon indicate that significant quantities of RNG could be available for use.

² The renewable natural gas percentages are based on EPA RFS reported volumes of renewable natural gas for 2017, EIA AEO 2018 estimates of on-road natural gas fuel use and NGVAmerica's own estimate of on-road fuel volumes. Other data sets available include the *NG Annual* which includes volumes of about 390 million GGE for 2017; using this figure, RNG accounts for more than 40 percent of the volumes reported to EIA by gas utilities.

³ <https://www.cleanenergyfuels.com/press-room/clean-energy-bp-expand-renewable-natural-gas-supply-agreement-growing-number-fleets-asking-clean-fuel/>

The National Petroleum Council's *Future Transportation Fuels Study* estimated that total supply of RNG could reach 40 billion GGE in the next several decades.⁴ Another report by the American Gas Foundation has been referenced by Argonne National Laboratory to estimate that 0.74 trillion cubic feet or roughly 6 billion GGE of RNG could be readily available.⁵

Conclusion

NGVAmerica requests that the Public Service Commission recognizes that reducing greenhouse gas emissions and addressing climate change requires policy makers to support a variety of solutions and technologies. We also urge the Commission to consider the many benefits of supporting natural gas vehicles and how policies that favor only electric vehicles could distort markets in New York and unfairly discourage the use of natural gas and other low-carbon solutions. We therefore urge the Commission to broaden the scope of the policies under consideration and expand the incentives to also encourage the greater use of natural gas vehicles.

⁴ https://www.npc.org/FTF_Topic_papers/22-RNG.pdf

⁵ <https://publications.anl.gov/anlpubs/2011/12/71742.pdf>