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Department of Environmental Conservation
New York State
625 Broadway, 11th Floor
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ATTN: Jeff Marshall, P.E.

Submitted by email: air.regs@dec.ny.gov.

RE: Proposed Part 218 Emission Standards for Motor Vehicles and Motor Vehicle Engines

Introduction

NGVAmerica provides the following comments in response to the New York Department of Environmental Conservation's (DEC's) proposed adoption by reference of the Advanced Clean Trucks Program.

NGVAmerica is the national trade association dedicated to the decarbonization of the transportation sector through the increased use of gaseous fuels including renewable and conventional natural gas and, eventually, hydrogen. Our 200-plus member companies produce, distribute, and market natural gas and renewable natural gas (RNG, also called biomethane), manufacture and service natural gas vehicles (NGVs), engines, and equipment, and operate fleets powered by clean-burning gaseous fuels across North America.

Comments

1. **Supporting Efforts to Address Climate Change and Provide Clean Air for All**

NGVAmerica's members support the ultimate goal of the Advanced Clean Trucks Rule – to decarbonize the medium- and heavy-duty transportation sector as quickly as possible while greatly reducing harmful criteria emissions that contribute to poor air quality. However, we respectfully disagree with the proposed program's approach to achieving these objectives: relying on a sales mandate for vehicles that are largely not commercially available, affordable, or proven.

For the reasons outlined below, we believe the adoption of the Advanced Clean Trucks Rule as it currently exists will not achieve its intended purposes and instead will delay achieving more immediate and longer-lasting reductions in harmful pollutants. A better, more cost-effective approach would be to accelerate the introduction and sale of a variety of emission reducing technologies including technologies that are commercially available today and have a track record of delivering steep emission reductions. Electrification surely must be part of the effort to addressing climate change emissions, but

it is not the only solution and certainly will not deliver all the necessary reductions. Policies therefore should encourage a variety of technologies and solutions. Fortunately, today there are an increasing number of low-carbon and carbon neutral biofuels that are readily available and proven, offering different pathways to delivering steep reductions in harmful emissions.

There is no reason to wait ten or fifteen years or more to breathe clean air. New York and other states should move more quickly to advance the uptake of commercially available, lower-polluting vehicles. By focusing on cost-effective solutions and readily available technology, New York and other states can move quickly to accelerate the retirement of higher-polluting, older, medium- and heavy-duty trucks that in many cases will not be impacted by the proposed rule because it only addresses new vehicle sales. The good news is that the recently passed, and just signed into law*, Infrastructure Investment and Jobs Act*,[1] provides billions in new funding to support cleaner trucks. This funding should be put to work deploying readily available, cost-effective technologies to maximize emission reduction benefits now.

2. **New York Should Accelerate the Use of Commercially Available Near-Zero Technology**

NGVAmerica believes the best approach is to focus on what matters the most – accelerating the timely retirement of older, higher emitting vehicles from New York's roads. Taking older trucks off the road, adopting policies that reduce congestion in neighborhoods with exceedingly high pollution, increasing access to affordable, lower-polluting public transit, and implementing other similar measures, will provide more immediate relief and longer-lasting public health benefits than trying to force businesses and fleets to slowly incorporate costly and unproven technology. And using available funds to accelerate the uptake of commercially available, low-polluting cost-effective trucks will provide more immediate reductions than waiting for the slow phase-in of a sales mandate that is likely to fail because it is too heavily reliant on electric vehicles.

NGVAmerica's members are committed to increasing the use of new ultra-low NOx medium- and heavy-duty natural gas-powered trucks and buses – these engines perform at levels that are 95% below the federal NOx standard and 98% below the PM standard. New natural gas ultra-low NOx engines operating on renewable natural gas – available today – produce greenhouse gas emissions that are 75 to 500 percent lower than diesel powered vehicles and deliver carbon neutral or carbon negative emissions in real world applications. Today, the majority of fuel used in on-road natural gas vehicles is renewable natural gas. RNG use accounted for 92 percent of the fuel consumed in California in natural gas vehicles in 2020, while 53 percent of fuel consumed in nationally in natural gas vehicles was RNG. This use is expected to increase as many fuel providers in our industry are committed to supplying greater volumes of RNG and some plan to only offer RNG in the future. NGVAmerica's members have set a goal of achieving 80 percent penetration of RNG in on-road fuel use by 2030 and 100 percent by 2050.[2]

[1] PL 117-58 (Nov. 15, 2021); HR 3684 https://www.congress.gov/117/bills/hr3684/BILLS-117hr3684enr.pdf
[2] 2021 RNG Fuel Use Fact Sheet: https://ngvamerica.org/wp-content/uploads/2021/04/Decarbonize-Transportation-with-RNG-Updated-April-16-2021.pdf; 2021 CA RNG Fuel Use Fact Sheet: https://ngvamerica.org/wp-content/uploads/2021/05/NGV-RNG-CA-Decarbonize-2020-FINAL-6.2.21.pdf; NGVAmerica Statement on Climate Change: https://ngvamerica.org/wp-content/uploads/2021/08/NGVAmerica-Climate-Change-Statement-FINAL-7.29.21.pdf

The latest data from California's low carbon fuel standard (LCFS) program demonstrates just how clean and low carbon these heavy-duty, high fuel use vehicles truly are – the average carbon intensity of bio-CNG sold in California in 2020 was -5.85 g/MJ and in the second quarter of 2021, the average was -35.87 g/MJ. Vehicles fueled by fully renewable electricity produced from solar and wind do not achieve such an impressive carbon negative intensity score. But under California's rules, which New York would adopt by reference, these trucks do not qualify. Rather than encourage the accelerated uptake of these lower-polluting trucks, adopting the California program without change would signal to businesses and fleets that they should instead hold off and wait on deploying cleaner trucks until vehicles that satisfy the new mandate are available. Rather than delivering cleaner air or encouraging innovation and flexibility, this mandate will be an impediment to cleaner air now.

3. **New York Should Not Rely on Unproven Technologies to Deliver Cleaner Air and Reduce Greenhouse Gas Emissions: Addressing Climate Change Requires Many Pathways and Many Solutions**

An unfortunate fact of the California Advanced Clean Trucks Rule is that it picks technology winners and losers over the timely provision of lower emissions and cleaner air for all citizens. By focusing only on tailpipe emissions and excluding low-carbon biofuels to address climate change emissions, it instead mandates the use of the most expensive technology, i.e., full electrification, thus preventing new, ultra-low emission natural gas trucks from qualifying under the program and contributing to cleaner air and lower emissions. It is inexplicable that policy makers continue to ignore the upstream emissions associated with zero-tailpipe emission vehicles and refuse to open up the regulations to encourage and incentivize vehicles powered by low-carbon, carbon neutral and even carbon negative fuels. The refusal to include these other vehicles and fuels not only ensures that the rollout of cleaner, lower emitting trucks will be delayed but raises serious doubts about the viability of the strategy that as the Biden Administration points out faces serious challenges.

California has attempted to mandate electrification for many years, but its approach has been met with consistent delays, waivers, and only minimal success, and that is with respect to light-duty vehicles and despite the State spending hundreds of millions of dollars across multiple programs and agencies to support widespread ZEV market adoption. The current light-duty ZEV sales mandate was first established in 1990 with goals of reaching 2 percent of sales by 1998, 5 percent in 2001, and 10 percent in 2003. Last year, however, ZEV-qualifying Advanced Technology Vehicles accounted for less than 8 percent of light-duty vehicle sales in California.

As recognized in the Biden Administration's "Long Term Strategy," just released as part of its COP26 policy contribution, achieving net-zero emissions will require focusing on a variety of strategies beyond just electrification. As noted in the plan, the Biden Administration will "prioritize clean fuels like carbon-free hydrogen and sustainable biofuels where electrification is challenged." The plan elsewhere specifically calls attention to the limitations of electrification and the need to expand efforts to promote the use of low-carbon biofuels and hydrogen: "Accelerated research, development, demonstration, and deployment of lower-carbon fuels, such as clean hydrogen and sustainable biofuels, will contribute to the decarbonization of applications that may be more difficult to electrify including aviation and *marine transportation and some medium- and heavy-duty trucking segments*." (emphasis added).[3]

[3] https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf

Another concern with the approach New York is taking is that electric vehicles are mostly not commercially available and as a technology solution for trucking are unproven from the standpoint of deployability, scalability, dependability, and cost-effectiveness. Many of the companies touting the ready availability of electric trucks are new market entrants with no track record of manufacturing, servicing, or supporting motor vehicles in actual use. Regarding their claims that the technology will be less costly to operate, there is no data to support the argument because the vehicles in most cases do not yet exist. Another claim is that over time these trucks will cost less to purchase as the cost of batteries comes down, despite the significant increase in demand for battery materials and batteries. Consider the views expressed recently by Daimler Truck, a company that has many years of experience in manufacturing and supporting trucks. Daimler Truck CEO, Martin Daum stated, "The first truth is, in heavy duty commercial vehicles you need such a huge amount of energy, meaning you need such large batteries, that such a truck always will cost significantly more than a combustion engine powered truck."[4]

Claims regarding cost-effectiveness almost always overlook factors such as range, utility, and turnover. In many cases, it appears that fleets deploying shorter-range electric vehicles will need to deploy more trucks to move the same amount of freight. The implications of this are huge as trucking fleets will need more trucks and more drivers in some cases if they deploy electric trucks. These factors appear to be ignored in cost-comparisons, but they have significant implications. For shorter range trips and vehicles that do not accumulate significant daily mileage, electric trucks may be an excellent option, but it is also true that in these applications there is less opportunity to reduce fuel consumption and offset pollution.

Few assessments acknowledge the additional monetary investments required and enormous challenges associated with the establishment of statewide heavy-duty vehicle charging infrastructure – including the build out of charge points, mandatory grid upgrades, and the expansion of transmission capacity – that must complement these new battery electric vehicle purchases once they are market ready and deployable. A number of recent reports have highlighted concerns regarding whether the electricity grid is ready for electric vehicles. One recent review of this issue by the *Washingon Post* focused in on the issues specific to New York state.[5] Based on that report it appears that there are some very serious challenges to preparing the grid so that it can transport renewable electricity to the locations it will be needed to serve electric vehicles, and additional challenges installing necessary charging equipment.

The infrastructure issue and challenges of getting electricity to where it is most needed goes to the issue of scalability and deployability which could significantly frustrate electrification plans even if vehicles become readily available and are lower in cost. An article published this week by Oregon Public Broadcasting highlights the very real concerns expressed by representatives of the trucking industry. Oregon like New York is currently considering adoption of the Advanced Clean Truck program. Here are excerpts from that article:

> *Oregon Trucking Associations President Jana Jarvis said there are opportunities for new technologies for the trucking industry but she's not sure if electric trucks are the fuel for*

[4] Meghana Kandra, "Daimler CEO Talks About Advancements in Heavy Electric Duty Truck", https://www.cnbc.com/2021/11/12/too-risky-to-not-use-battery-and-hydrogen-tech-daimler-truck-ceo.html, November 13th, 2021.

[5] https://www.washingtonpost.com/business/2021/10/13/electric-vehicles-grid-upgrade/

the future, especially for medium- to heavy-duty trucks….it's unclear what the future holds when it comes to batteries and charging stations along transportation routes to ensure that trucks can deliver freight efficiently. "Then you think about having to stop and recharge — if there was a charging infrastructure and if there was enough grid capacity. And both of those are questions today," she said. "You start thinking about doing that every couple hundred miles and you realize the inefficiencies the trucking industry would be subject to by conversion to electric vehicles."

Jarvis said some of her association's larger companies are trying to use electric trucks, but getting the charging infrastructure installed in their terminals has been difficult, depending on their location.

"In many parts of the state there just isn't the grid capacity to accommodate that," she said.[6]

4. New York Should Amend the Advanced Clean Truck Rule to Include Near Zero Natural Gas Vehicles

If New York goes forward with the Advanced Clean Truck Rule, we strongly urge it to amend the program to incorporate existing near-zero technology vehicles. California's regulations unfortunately do not include near-zero natural gas or other commercially available near-zero powered vehicles since it recently revised its definitions of near zero and has yet to finalize certification procedures for these vehicles. California's actions are particularly perplexing given that the South Coast Air Quality Management District (SCAQMD), a body responsible for addressing the worst airborne pollution of any region in the nation, has consistently taken the position that the expanded use of near-zero natural gas trucks and buses is critical to its effort to meet mandatory federal Clean Air Standards. SCAQMD has continued to express its commitment to accelerating the expanded adoption of natural gas vehicles in its efforts to combat pollution and improve air quality in California.

We believe that the California Air Resources Board's actions in redefining near-zero and its misguided decision to exclude available, extremely low polluting vehicles in an effort to favor certain technologies is unfortunate and bad policy since studies have shown California could achieve increased emission benefits now and for the longer term by accelerating sales and purchases of available near-zero technologies.[7] Our request is that New York include provisions in its rules allowing near-zero natural gas trucks powered by biofuels to qualify toward the obligations included in the program.

A constant refrain is that the Clean Air Act does not allow states to make changes to California's regulations. We, however, believe that consistent with the provisions in section 177 of the Clean Air Act, New York can alter the California rule to meet its needs so long as those changes do not include

[6] M. Samayoa, OPB.org, Zero emissions trucks could be soon be required in Oregon (Nov. 15, 2021); https://www.opb.org/article/2021/11/15/zero-emissions-trucks-could-soon-be-required-in-oregon/

[7] Achieving NO_x and Greenhouse gas emissions goals in California's Heavy-Duty transportation sector, Arun S.K. Raju, Barry R. Wallerstein, Kent C. Johnson, Transportation Research: Article 102881 (June 2021); https://www.sciencedirect.com/science/article/pii/S1361920921001826; "The analysis suggests that Heavy-Duty (HHD) NZEVs should be encouraged in the near to mid-term, and even long-term, if operated on renewable natural gas."

provisions that are more burdensome. As such, allowing greater flexibility and increasing the opportunity for existing near zero trucks would not be considered more burdensome and therefore is legal.

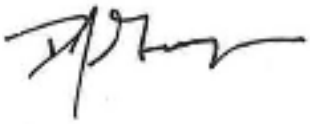
Conclusion

The Biden administration and New York and many other states have set very aggressive greenhouse gas emission reduction goals. Those targets are much more likely to be met if the federal government and states encourage a variety of technological solutions, rather than betting on a limited set of options. Based on the latest information released by the White House during the COP26 discussions, the Biden Administration has signaled it supports the pursuit of a variety of pathways including promoting low-carbon biofuels as well as electrificaiton. It is also imperative that state authorities immediately address the unhealthy air that exists in many urban cities while also seeking to tackle climate change.

New York can be a leader on both of these fronts by taking steps to accelerate the replacement of older, higher emitting trucks with new, more cost-effective, and readily available natural gas trucks powered by the cleanest internal combustion engines, and increasingly powered by low-carbon, renewable natural gas. Deploying a greater number of the cleanest and most cost effective ultra-low carbon RNG-fueled trucks available now will result in the accrual of hundreds of thousands of carbon negative road miles across New York. Getting more clean trucks on the road as soon as possible will compound their clean air and decarbonization impact year over year, ensuring greater success in reaching New York's ambitious climate goals.

Thank you for your consideration.

Sincerely,



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