MID ATLANTIC PROPANE GAS ASSOCIATION

March 5, 2025

House Environment & Transportation Committee
Maryland House of Delegates
6 Bladen Street
Annapolis, MD 21401

Re: House Bill 1269

On behalf of the Mid-Atlantic Propane Gas Association (MAPGA), which represents propane marketers, suppliers, distributors, and equipment manufacturers across the state, including in your district, we appreciate the opportunity to provide comment on House Bill (HB) 1269, adding propane-powered vehicles to the state's School Bus Transition Grant Program. Our members provide clean-burning and critical energy to residential, commercial and agricultural customers. Maryland's propane industry provides good-paying jobs and generates more than $799 million in economic activity annually.[1]

MAPGA supports efforts to reduce emissions of air pollutants and greenhouse gases from the transportation sector, especially in environmental justice communities. As Maryland pivots to cleaner school transportation fuels, it is important not to focus only on electric school buses. Propane autogas buses can play an important role in helping to reduce emissions, improve air quality, and promote public health in a cost-effective manner.

I. Clean American Energy

Propane burns cleanly, efficiently and has a low-carbon content.[2] It is nontoxic and will instantly vaporize when released from a pressurized cylinder. As such, and unlike diesel or gasoline, it presents no threat to soil, surface water or ground water.[3] This helps protect ecologically sensitive areas, including the land and water resources Marylanders treasure. Given propane's clean profile, we can also reduce emissions of black carbon, particulate matter, and nitrogen oxides (NOx).

For example, according to a West Virginia University study, propane school buses can reduce harmful NOx emissions by 96 percent compared to diesel buses.[4] And numerous companies have produced propane engines that can meet the California Air Resource Board's optional ultra-low NOx emission certification for heavy-duty engines. These engines are certified to a NOx emission standard of 0.02 grams per brake horsepower-hour and are 90 percent cleaner than current standards.[5] These ultra-low NOx engines greatly improve air quality and foster healthier communities. Fleets around the country,

[1] *Propane's Impact on Economy: 2021 Maryland*, National Propane Gas Association, https://www.npga.org/wp-content/uploads/2024/05/Maryland_2024.pdf
[2] *Carbon Dioxide Emissions Coefficients by Fuel*, U.S. Energy Information Administration, (Oct 5, 2022), https://www.eia.gov/environment/emissions/co2_vol_mass.php
[3] *Propane Fuel Basics*, Alternative Fuels Data Center, U.S. Department of Energy, https://afdc.energy.gov/fuels/propane_basics.html
[4] *In-Use Emissions and Performance Testing of Propane-Fueled Engines, PERC Docket 20893*, Ryskamp, R., West Virginia University, (June 11, 2019), https://cloudinary.propane.com/images/v1601044101/website-media/WVU-School-Bus-Emissions-Final-Report-June-2019/WVU-School-Bus-Emissions-Final-Report-June-2019.pdf?_i=AA

[5] *Optional Low NOx Certified Heavy-Duty Engines*, California Air Resources Board (2021), https://ww2.arb.ca.gov/sites/default/files/classic//msprog/onroad/optionnox/optional_low_nox_certified_hd_engines.pdf

including school districts, are adopting these ultra-low NOx propane engines to achieve even greater emission reductions.[6]

Propane school buses emit 13 percent less carbon dioxide than their diesel counterparts.[7] Further, compared to conventional gasoline school buses, propane buses can reduce both source energy use and emissions, including a 44 percent reduction in emissions of sulfur oxides, a 24 percent reduction in NOx, and a 21 percent reduction in greenhouse gases.[8]

II. Decarbonization

It is important to remember that, even if an electric bus lacks a tailpipe, it is not truly zero emission, as our bulk electricity sector is not zero emission. Fossil fuels, including coal, oil and natural gas, generate the majority of utility-scale electricity in Maryland. These are the real-world circumstances that should be considered before pursuing an electric-only approach to decarbonizing school transportation.

III. Performance & Operation

The benefits of expanding clean bus procurement goals to include propane buses becomes even clearer when you consider the performance and operational characteristics of propane-powered vehicles, especially in the medium- and heavy-duty class. Propane is noncorrosive, has a high-octane rating (104 to 112) and low oil-contamination characteristics, which reduce maintenance costs and prolong the life of an engine.[9]

Critically, propane vehicles have the power and operating range required to meet the real-world demands of school transportation. In fact, propane-powered vehicles have similar power, acceleration and cruising speed as those running on conventional fuels.[10]

IV. Propane School Buses

MAPGA believes that it would benefit the state to consider clean and proven alternatives bus fuels, such as propane, in procurement requirements for school buses.
Maryland is home to more than 170 clean, propane autogas school buses.[11] School districts are drawn to propane buses because they operate reliably in the region's cold climate. But also, because they reduce emissions, create a quieter, more comfortable cabin experience, and decrease operating costs – allowing schools to redirect transportation dollars back inside the classroom.[12,13]

All propane vehicles, including school buses, now utilize the K15 quick-connect nozzle. This nozzle creates a refueling experience that closely resembles gasoline and diesel. And the amount of time required to refuel a propane vehicle also mirrors gasoline and diesel, which minimizes downtime for fleet

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[6] *Leander Independent School District*, Roush Clean Tech, https://www.roushcleantech.com/portfolio/leander-independent-school-district-2/
[7] *Supra 4*
[8] *GHG and Criteria Pollutant Emissions Analysis*, Leslie, N., Rowley, P., Gas Technology Institute, (2017), https://propane.com/wp-content/uploads/2019/06/20890-GTI-GHG-Emissions-Analysis-Final-Report.pdf
[9] *Where is Propane Used*, Natural Resources Canada, (December 19, 2018), https://natural-resources.canada.ca/energy-efficiency/transportation-alternative-fuels/alternative-fuels/propane/21611
[10] *Propane Basics*, Vehicle Technologies Program, U.S. Department of Energy, (March 2010), https://www.nrel.gov/docs/fy10osti/46996.pdf
[11] *Propane Autogas School Buses*, National Propane Gas Association, (2021), https://www.npga.org/wp-content/uploads/2020/12/Propane-Autogas-School-Buses-Poster.pdf
[12] *Supra 4*
[13] *Washington School District Cuts Costs and Improves Air Quality with Propane Buses*, U.S. Department of Energy, (April 9, 2019), https://afdc.energy.gov/case/3075

managers and ensures buses are ready to operate when needed. The ability to quickly refuel a school bus is especially valuable during unforeseen events that alter normal transportation schedules, such as a school closing early due to a snow storm. Notably, propane school buses can be fitted with a 93-gallon tank that stores enough fuel to produce an operating range of 400 miles.[14]

Importantly, propane buses are an extremely cost-effective way to reduce transportation emissions. For the price of one electric school bus, you can purchase three propane buses. So, for every electric school bus deployed, in reality, two diesel buses that could have been replaced with the same monetary investment in propane, will remain operational. This cost multiplier quickly adds up. As with any expenditure of public monies, the true effectiveness of a program is not just measured in dollars disbursed, but how efficiently the money was spent to achieve the stated goal.

V. Conclusion

Again, we support HB1269. We believe the state's School Bus Transition Grant Program could be greatly improved by expanding the scope of the bus procurement targets to also include propane-powered school buses. This would make the entire program more cost-effective, efficient, and give schools districts additional flexibility to meet their unique transportation needs and decarbonize their fleets in a practical manner.

Sincerely,
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[14] *Blue Bird | Vision Propane*, Blue Bird Corporation, https://www.blue-bird.com/images/brochures/Propane_Vision_Single_Sheet_2021-0121.pdf