



March 7, 2024

The Honorable Marc Korman and Members
House Environment and Transportation Committee
House Office Building
Annapolis, MD 21401

Re: **SUPPORT** – HB 1360 - School Bus Transition - Propane-Powered School Buses - Grant Program, Fund, and Purchase

Dear Chairman Korman and Members of the Committee:

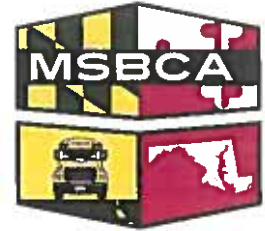
The Maryland School Bus Contractors Association (MSBCA) supports HB 1360 - School Bus Transition - Propane-Powered School Buses - Grant Program, Fund, and Purchase. MSBCA serves as the voice of the private school bus companies that contract with local Maryland school systems in 19 of Maryland's 24 jurisdictions. MSBCA members own and operate over 3,000, or 49% of the school buses transporting school children across the State. MSBCA contracted school buses cover over 44 million route miles each year, we are fully committed to the safety of the students we transport and considers it a privilege to do so.

As you well know, we are facing major challenges transitioning to electric (EV) school buses as mandated by the Climate Solutions Now ACT of 2022. Such challenges include performance concerns for long rural route areas, battery life and charging in cold weather, manufacturing supply and most importantly an undeveloped and unprepared electric grid infrastructure to support these EV school bus charging needs. To meet the mandate, it is projected that 500-600 EV school buses will need to be purchased each year. This will create a huge demand on the state's electrical grid.

HB 1360 would allow for propane powered school buses to qualify as a bridge in meeting this mandate. Propane powered school buses as part the Zero Emissions requirement is a clean, smart alternative to diesel or gasoline. Propane powered school buses are an existing technology with an in-place infrastructure that can provide cleaner school bus operation right now. Currently, there are 129 propane school buses already operating in the State of Maryland.

Propane is listed as an "approved clean fuel" by U.S. Government energy policy makers and energy administrative bodies. Various institutions have determined that using propane cuts smog producing exhaust by as much as 70 percent. Propane engine exhaust is so clean and friendly to the environment that propane powered forklifts operate inside warehouses throughout the world. Additionally, many propane fueled vehicles are certified by the Environmental Protection Agency (EPA) as meeting the Ultra Low Emission Vehicle standard. Propane is a clean burning fuel, that can help stabilize the market until the manufacturing and grid infrastructure needs can be met to continue to move towards the Climate Solutions Now Act.

MSBCA serves as the voice of the private school bus companies that contract with local Maryland school systems in 19 of Maryland's 24 jurisdictions to own and operate over 3000 contracted school buses that transport schoolchildren across the State.



Enclosed are a few additional resource papers for your review that are helpful in support of propane powered school buses.

MSBCA supports HB 1360 and asks for a favorable report. Thank you for your consideration and your commitment to our State.

Sincerely,

Steve Nelson

Steve Nelson, President
1 State Circle, Annapolis, MD 21401
410.268.3099

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The Benefits of Propane Autogas

Buses and fuel are less expensive to operate and easier to maintain, making autogas a budget-friendly option for local school systems.

Autogas from propane is a sensible fuel alternative that can help Maryland achieve its carbon reduction goals.

Allows harder-to-decarbonize communities across Maryland to reduce emissions from the transportation sector without significant infrastructure investments.

Legislation aimed at emissions reductions from our school bus fleets should include propane Autogas as a safe, reliable and clean energy alternative.

Autogas is clean, safe and affordable.

Meeting our urgent climate goals will [require solutions like propane autogas](#), which can be implemented and scaled today at a lower cost than traditional fuels. [Considered a clean alternative fuel](#) by the EPA, propane autogas is a safe, abundant and [affordable fuel source](#) - and a powerful tool in our work to reduce emissions from the transportation and energy sectors. Produced in North America, propane supports our ability to integrate renewable fuels, while providing critical energy security and a more equitable and immediate way for Marylanders to participate in our energy transition.

Emissions reductions

A study by West Virginia University found that emissions from propane school buses are significantly lower than those of diesel buses. For the typical stop-and-go route, emissions of nitrogen oxides (NOx) were 34 times lower for propane than for diesel buses. On city and highway roads, emissions were 15 to 19 times lower.

Improved health outcomes

Researchers at [Georgia State University](#) recently found that cleaner-running school buses like those fueled with propane are making a big difference. The study estimated that reducing emissions across a school district's entire fleet could lead to a 7.8% gain in English test scores and an improvement to students' respiratory health.

How much clean power can \$1 Billion buy?

Propane AutoGas

9,433
Buses



1,188,558

Metric tons of reduced CO₂

Electricity

2,857
Buses



428,500

Metric tons of reduced CO₂

When considering vampire loads associated with electricity, propane autogas offers the best path to decarbonization with available funding.

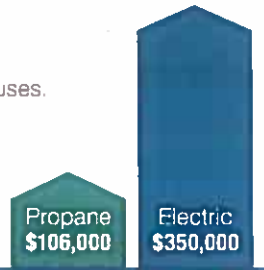
Propane vs. Electric

Program school buses cost less, travel further, fill up more quickly and have a smaller carbon footprint than electric buses.

It's no wonder that school districts across America are making the switch to propane.

Purchase Price

Propane buses cost one third the price of electric buses.



Range

Propane buses can drive more than twice as far as electric without refueling.

Electric up to **120 miles** per charge

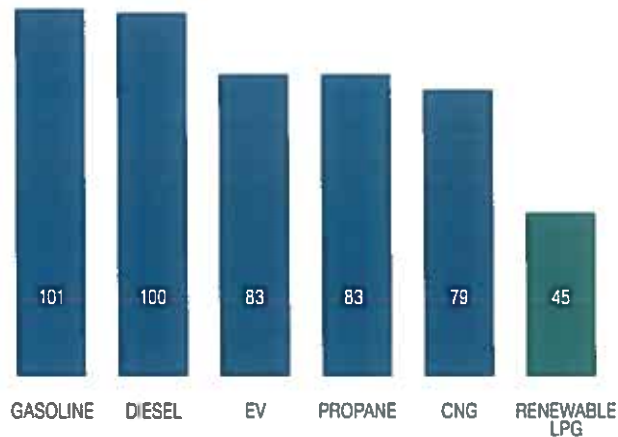
Propane: Up to **300 miles** per 67 gallon tank.

Dynamic and innovative

In today's energy mix, renewable fuel alternatives like propane autogas are a crucial component in lowering carbon emissions from the transportation sector. On the path to net zero, autogas is the ideal bridge fuel. It works with internal combustion and hybrid electric engines and supports the development of solar infrastructure - reducing emissions by 96% compared with clean diesel buses at a cost of 30% - 50% less per mile. Propane autogas also supports our ability to reduce toxic particulate matter from diesel exhaust that contributes to allergies, asthma and lung cancer in communities across the state.

Propane autogas should be a part of any legislative approach to reduce emissions from Maryland's hardest-to-decarbonize sectors.

'Carbon Intensity' scores



Carbon Intensity [g CO₂/MJ]

A cost-effective resource

The cost of an autogas-powered school bus averages \$120,000, compared to the average cost of an electric school bus, which is approximately \$400,000. An autogas bus can drive an average of 400 miles before refueling, in contrast to the average electric bus, which ranges only 70 miles before charging is required. As an important tool in our fight against climate change, autogas allows us to reduce emissions from the transportation sector before our electric vehicle infrastructure is capable of meeting today's emissions reductions needs.

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For more information and to join the Clean Energy Choices Coalition, visit www.cleanenergychoices.org or www.propane.com



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Lucky 7 will win a scholarship to the STN EXPO and
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STNEXPO **GreenBus**
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Indianapolis, IN
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Propane School Buses Love Cold Weather

March 1, 2024



This content is brought to you by ROUSH CleanTech.

With millions of Americans facing sub-zero temperatures this winter, school systems need reliable transportation that operates well in cold weather.

Cold Weather Performance

Cold weather should not be a constant barrier to getting children to and from school. Thankfully, the 1,000+ school districts operating propane school buses are consistently and

seamlessly transporting 1.3 million students to school safely every day — even in the harshest of conditions.

Propane buses don't care if it's cold outside. In the Blue Bird Vision Propane school bus, propane remains in a liquid state until it reaches the cylinder. This cutting-edge technology alleviates cold-weather start issues associated with vapor technology propane systems of the past. In fact, the new fuel system provides for unaided cold weather start ups to minus 40 degrees Fahrenheit.

Transportation directors across the country and in Canada share that, in cold weather conditions, buses fueled by propane autogas start and operate better than their diesel and electric counterparts, where the fuel may gel or range may be compromised. [Districts in the coldest parts of North America](#) speak about how they are faring with propane school buses.

Ready to Go in a Few Minutes

Howard-Winneshiek Community School District in Cresco is located in northeast Iowa. The district's school buses travel up to 15,000 miles each per school year on long rural routes. The weather can be extreme, with cold-weather months of negative 30 degree temperatures and abundant snowfall. The district's fleet consists of nine propane buses and 23 diesel models.

"Our propane buses perform flawlessly," said Brian Swestka, director of transportation. "They warm up substantially quicker than our diesel buses. The propane buses are ready to go in just a few minutes compared with 20-30 minutes for diesel to warm up."

For the school district's diesel buses to operate during the winter months, the maintenance crew plugs the engine block heater to an electrical outlet at night, costing both time and money. This is not needed for the propane buses.

"Every time we do any type of service, it costs us money. Propane buses require less maintenance than our diesel buses, and that means lower costs," added Swestka, who said the school district's yearlong data showed the average cost per mile for its propane buses to be about 60 percent lower than its diesel buses.

Cost savings benefit the school district, but the biggest difference for the drivers and the passengers has been the warmer and quieter performance of the propane buses. On very cold days, the school district's diesel buses often don't get warm enough to get to a comfortable temperature inside the bus, which is not the case with the propane models. Also, the school district's drivers can hear traffic around the propane buses better and hear the students inside the bus with more clarity.



"Performs Consistently Great"

Brandon School Division in Manitoba, Canada, covers a landscape containing both urban and rural areas. Temperatures average in the mid-80s in the warmer months, and down to negative 35 degrees Fahrenheit in the colder months, with wind chills as low as negative 60. Average yearly snowfall is 40 inches. Its school bus fleet is made up of 12 propane buses and 31 diesel buses.

The propane buses have performed consistently for the school district. "We get temperatures from extreme cold to quite hot, and there is no change in how the propane bus performs, which is consistently great," said Ron Harkness, supervisor of transportation.

Prior to purchasing its first propane bus, the school district tested a demo propane bus for its cold-weather performance. It found that the demo bus did not need to be plugged into block heaters and that they started right up. The diesel models are always kept plugged.

The drivers are equally impressed with the propane buses. "The propane buses heat up quickly, which our drivers appreciate," said Harkness. "The student and driver comfort is fantastic. Students even need to tell the drivers to turn the heat down — that never happens with the diesel buses."



Start Up and Stay Warm Inside

Proctor Public Schools in Proctor, Minnesota, operates a fleet of 30 school buses with nine Blue Bird Vision Propane buses. The buses travel rural and mountainous terrain. Nearly three-quarters of the area is serviced by gravel roads and the elevation significantly changes throughout the district. During the summer, temperatures reach into the 90s, with temps dipping to as low as negative 30 degrees during the winter with negative 50-degree wind chill. Average snowfall is 75 inches annually.

Transportation Supervisor Curt Benassi has found that his propane school buses are outperforming their diesel buses in these conditions. "When it's cold out, our diesel buses take forever to warm up and we need to check them to see if they work," Benassi said. "Even when it's 40 below, our propane buses start up with no trouble and no additional time needed."

Benassi says that on cold days lower than 20 degrees, his maintenance crew must dump fuel conditioner into the diesel fuel to avoid it from being turned into a wax. Each bottle of condition fuel is \$9 per bus per time. Sometimes in the district's diesel buses, a block heater doesn't work to warm up the antifreeze, and they can't use the bus. He often has diesel buses that don't start up due to cold weather. In comparison, Proctor Public Schools' propane buses do not need fuel conditioner or electric block heaters to start.

The school district's school bus drivers and students also benefit from the ability of the propane buses to start up and stay warm inside the cabin. "Our drivers love how warm the propane buses get," said Benassi. "From front to back, the temperature remains at a consistent 70 degrees. Students sometimes tell the driver to turn the heat down, which never happens in diesel. Compare that to the front of the diesel bus that might be only 30 degrees — throughout the entire bus route. Drivers often cover themselves with blankets in diesel buses, and, on extremely cold days, almost all of the floor is covered with frost during the route."

During cold-weather months, propane school buses across North America are proving to perform consistently and economically at temperatures well below zero, satisfying drivers, students, technicians, parents and district leadership.



Todd Mouw is executive vice president of ROUSH CleanTech, an industry leader of advanced clean vehicle technology. Mouw has more than two decades of experience in the automotive and high-tech industries. As former president of the NTEA Green Truck Association, Mouw helped set standards in the green trucking industry.

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