MID ATLANTIC PROPANE GAS ASSOCIATION

To: House Environment and Transportation Committee

From: Ellen Valentino

Date: February 12, 2021

Re: HB 583 Climate Solutions Now Act of 2021
HB 334 MTA Conversion to Zero-Emission Buses
Important Information on Propane – Domestic, Clean, Reliable and Safe

There are several bills that have been introduced seeking to address Climate Change that focus on incentives for fuel-switching by mandating electrification as a solution to meet emissions goals for buildings and for cars and vehicles.

In the crush of hearings and debate, important information can pass by unnoticed. I don't want this critical information about propane gas to get lost in the shuffle. Please see the attached for facts about propane and its use.

Propane is considered one of the cleanest sources of energy and fuel and a powerful force for greenhouse gas reduction. Propane should not be eliminated from use in state fleets, county school buses, MTA bus fleets or new state buildings. Further, we urge that propane should be included in any incentive programs under consideration.

Thank you for your consideration. Please contact me if you have questions or require additional information (Ellen Valentino, 410-693-2226 or evalentino@ellenvalentino.com)

Today's Propane

NPGA
NATIONAL PROPANE GAS ASSOCIATION

www.NPGA.org

Domestic, Clean, Reliable, and Safe

For more than 100 years, propane has powered our lives. More than 5.5 million American homes rely on propane as their primary heating fuel. When all uses of propane are taken into account, propane is found in nearly 50 million American households, where it is used for primary or secondary space heating, cooking, clothes drying, or grilling.

Globally, propane is the third most prevalent vehicle fuel behind only gasoline and diesel. U.S. Department of Energy data reveals there are more propane vehicles operating in the United States than natural gas or electric vehicles.

The United States currently produces more propane than it consumes, with 75% of U.S. production coming from natural gas.

In 2013, American consumers, farms, businesses, and communities consumed 8.8 billion gallons of odorized propane.

(2013 Sales of Natural Gas Liquids and Liquefied Refinery Gases, American Petroleum Institute Study).

Propane is a low-carbon fuel source that produces fewer greenhouse gas emissions than many other energy options in a wide range of applications. Propane serves an important role in a low-carbon economy.

> Residential Space Heating

Approximately 5.5 million U.S. households rely on propane for home heating.

> Off-Road Applications

Propane cuts emissions by 19 percent compared with gasoline forklifts.

Propane-powered mowers emit 16 percent fewer emissions than gasoline versions.

> Agriculture

Propane-powered irrigation engines produce 11 percent fewer greenhouse gas emissions than diesel engines.

> Propane Autogas

Propane-autogas-powered vehicles emit 11 percent fewer greenhouse gas emissions than gasoline vehicles throughout the vehicle life-cycle.

Grill Cylinders 3.2%

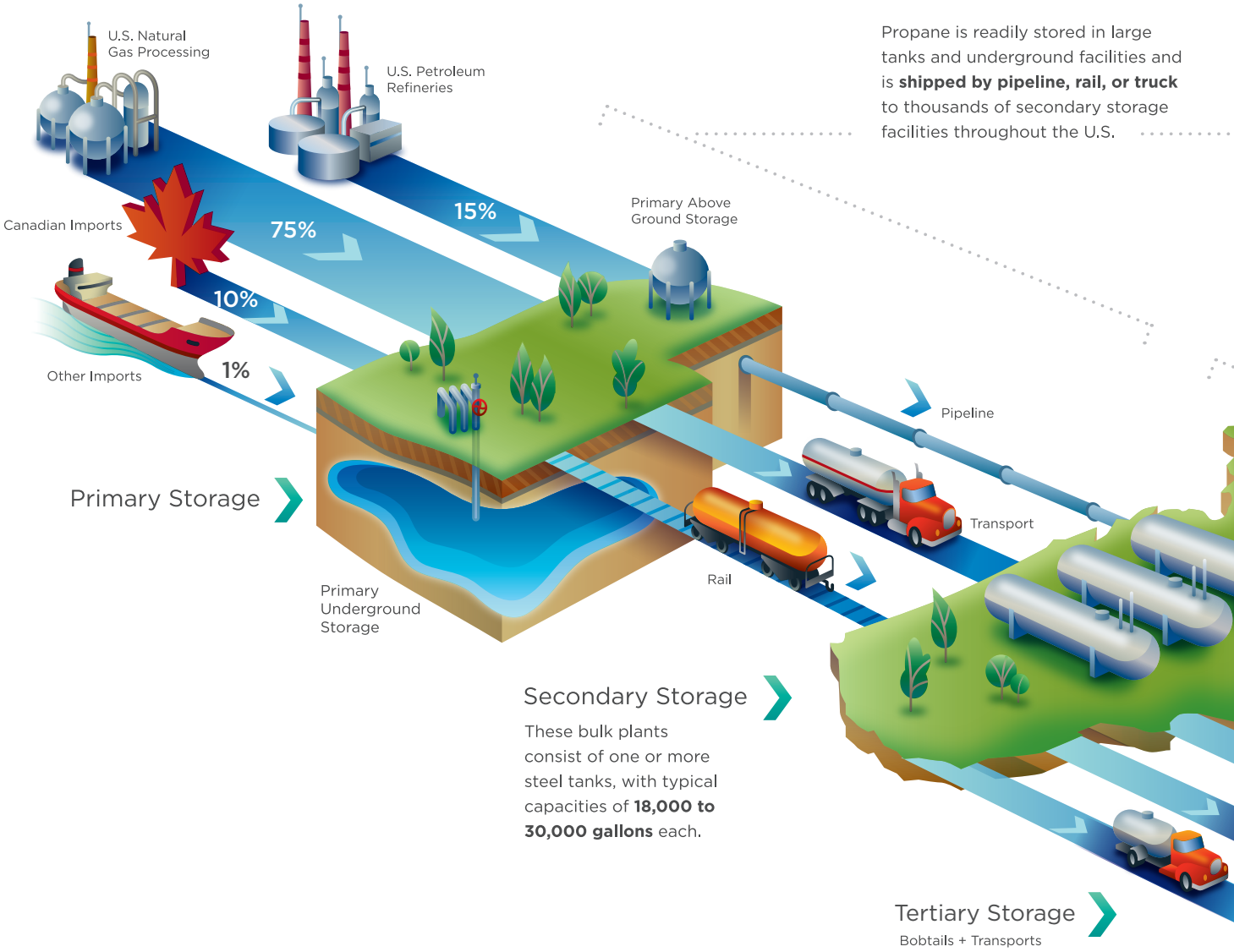
In Michigan, the Flint Mass Transit Authority transports 470,000 passengers annually in a fleet of 72 propane Ford shuttle vans, reducing 20,400 pounds of carbon dioxide per vehicle each year compared to a conventional vehicle — a savings of nearly 1.5 million pounds of carbon dioxide annually.

In Illinois, GO Airport Express anticipates a

reduction of 3.1 million pounds of carbon dioxide

over the operating lifetime of 30 propane Ford vans.

Delivering America's Fuel



Propane is readily stored in large tanks and underground facilities and is **shipped by pipeline, rail, or truck** to thousands of secondary storage facilities throughout the U.S.

Secondary Storage

These bulk plants consist of one or more steel tanks, with typical capacities of **18,000 to 30,000 gallons** each.

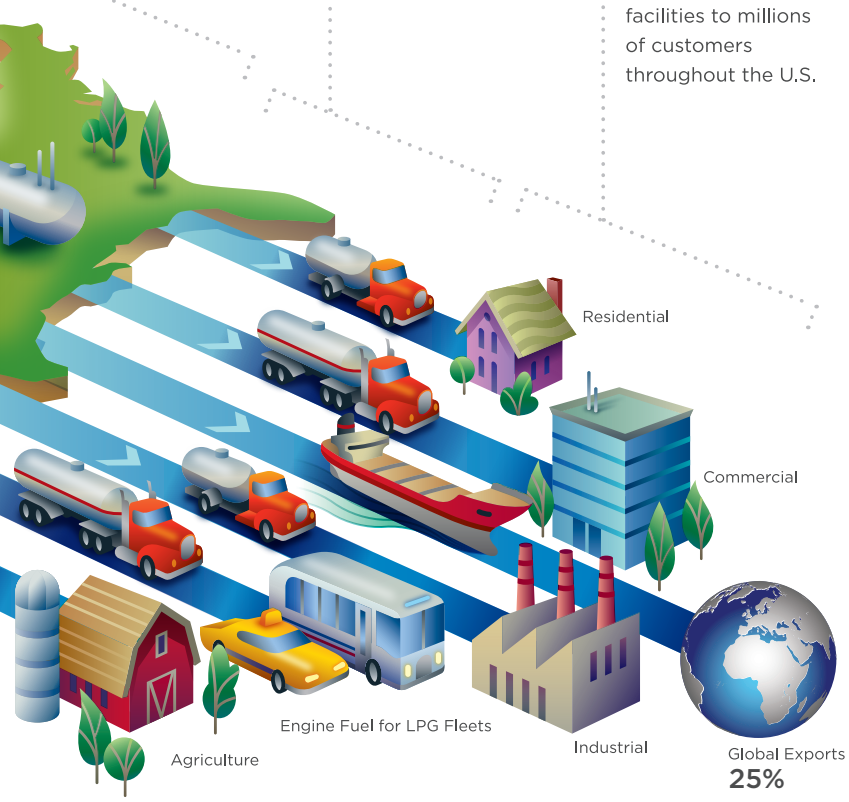
Tertiary Storage

Bobtails + Transports

America produces **20% of the world's propane supply** and produces 15 billion gallons each year.

Tanks used in smaller bobtail delivery trucks and larger highway transport vehicles have capacities that range **from 3,000 – 12,000 gallons** and are built of thick, high-strength steel.

Propane is delivered from nearly 10,000 bulk plant storage facilities to millions of customers throughout the U.S.



Did You Know?

Propane is 270 times more compact as a liquid than as a gas, making it highly economical to store and transport.

Propane by the Numbers

Propane fuels our economy by

States with the highest propane usage in the U.S.

(2013 Sales of Natural Gas Liquids and Liquefied Refinery Gases, API Study)

Residential Sector	**8.1%** Michigan	**5.8%** Wisconsin	**5.5%** Illinois	**4.6%** California	**4.4%** Minnesota
Commercial Sector	**5.4%** California	**5.1%** Florida	**5.0%** Pennsylvania	**4.9%** Texas	**4.7%** Maine
Agricultural Sector	**17.1%** Iowa	**11.6%** Minnesota	**7.9%** Illinois	**7.8%** N. Carolina	**5.2%** California

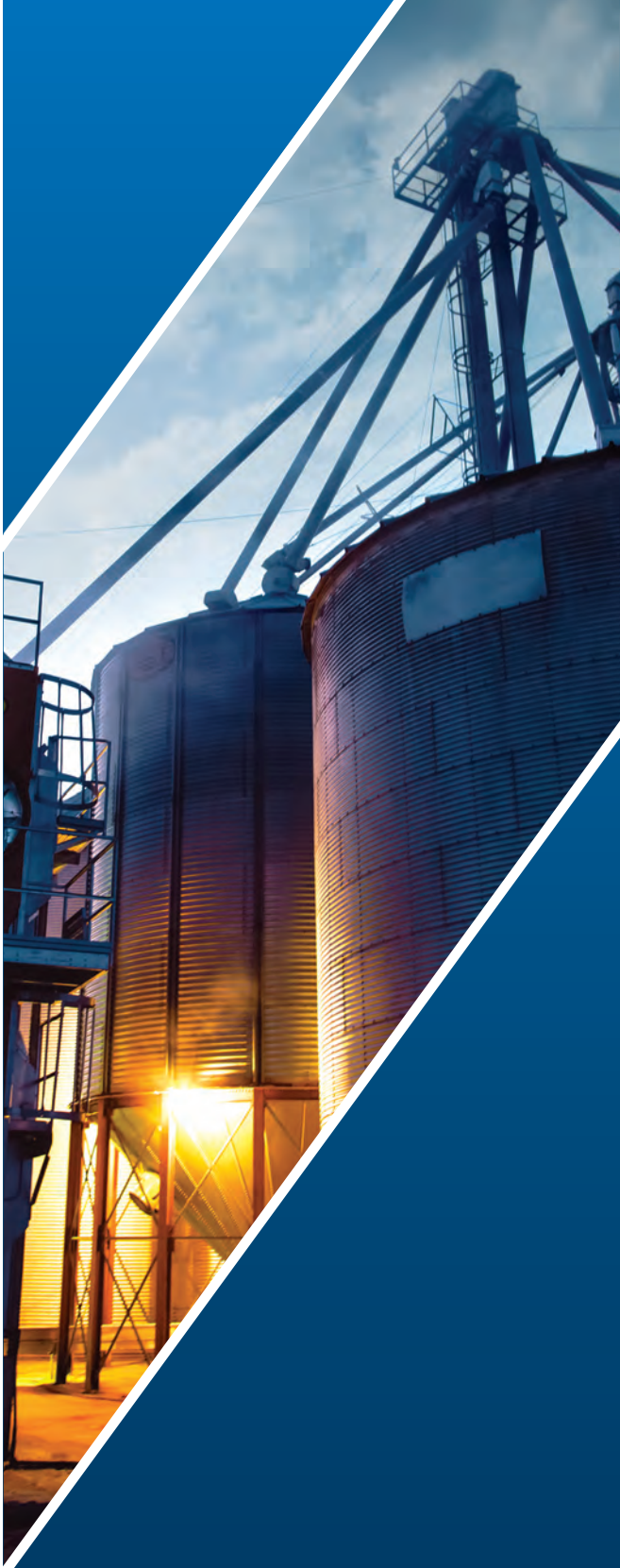
Propane-powered irrigation engines can cost **up to $4,000 less** to operate than diesel irrigation engines.

Propane Goes Beyond the Grill

Propane is an important part of America's changing energy landscape. As propane production continues to rise, there is more than enough supply to meet the America's energy demands.

Propane can be used practically anywhere. From emergency relief operations to isolated islands to ski resorts at high altitude — propane can quickly and reliably reach places other energies cannot.

- Residential & commercial space heating and cooling
- Residential & commercial water heating
- Combined heat and power
- On-site power generation
- Generators
- Irrigation engines
- Mowers
- Terminal tractors
- Forklifts
- School buses and shuttles
- Bobtail trucks
- Light-duty trucks
- Utility cargo vans



Did You Know?

Propane powers appliances more efficiently than many other fuels, reducing overall energy costs.

Autogas

Did You Know?

A propane-powered mower can be used during ozone action days, while using gasoline and diesel powered versions are prohibited.

Propane autogas is the world's leading alternative fuel, and the third most common vehicle fuel in the U.S. Compared with other fuels, it also delivers superior performance for each dollar invested.

Propane vehicle fuel is generally cleaner than gasoline and diesel with reductions in major smog, ozone, and greenhouse gas pollutants, including carbon monoxide (CO), carbon dioxide (CO_2), non-methane hydrocarbon (NMHC), and particulate matter (PM_{10}) for most vehicle applications.

Increases in propane vehicle fuel use do not require new production, distribution, or storage infrastructure as an extensive propane supply chain already exists for residential and commercial customers. Furthermore, almost 3,000 public propane fueling stations are available in the U.S.

The incremental cost of converting a vehicle to propane ranges from $4,000 to $14,000 per vehicle. Fueling infrastructure costs range from $45,000 to $300,000 for small to large fleets — well below the equivalent vehicle and infrastructure costs for compressed natural gas or liquefied natural gas.

There are about 150,000 propane-powered vehicles in the United States.

Real world example

The Sandy Springs, Georgia Police Department wanted to save money and reduce its environmental impact so it integrated propane vehicles into its fleet. The agency now operates 67 propane-powered vehicles and reported the displacement of about 167 tons of harmful greenhouse gas emissions and savings of more than $200,000 in fuel costs in just two years. Police officers like driving the cruisers because propane is less flammable than gasoline and the tanks are 20 times more puncture-resistant.

The alternative fuel vehicle market can continue growing with consistent State and Federal policies.

Renew and Extend Tax Credits | The federal Alternative Fuel Tax Credit and the Alternative Fuel Infrastructure Tax Credit have driven propane fuel innovations, helped fleets reduce their initial capital expense, and supported year-round propane fuel use that helps balance the seasonality of propane demand. For the past several years, these federal tax credits have expired each year before being renewed by Congress. Continued investment from states and the federal government, including the extension of the federal Alternative Fuel and Infrastructure Tax Credits, will support the transition to propane and reduce American dependence on foreign oil.

Excise Tax Equalization | One gallon of propane contains 73 percent of the energy contained in one gallon of gasoline. In other words, it takes 1.37 gallons of propane to equal the energy value of one gallon of gasoline. However, both fuels are taxed at the same rate under current law. Because of this energy disparity, consumers pay more in taxes for propane autogas than for gasoline.

For example, a gasoline-powered truck using 20,000 gallons in a year would pay $3,660 in federal excise taxes. To obtain the equivalent energy content of 20,000 gallons of gasoline, a propane-powered truck would require 27,400 gallons of propane, resulting in $5,014 in federal excise taxes.

That's a 37 percent tax penalty to go the same distance and clean the environment. For business owners and policy makers, this math does not add up.

States are Adopting Propane Autogas

Thirty-two states have alternative fuel policies that fairly tax propane on an energy basis compared with gasoline and diesel. Twenty-seven states have tax incentives available for propane vehicles or fueling infrastructure, as well as rebates, grant funding, loans, and registration exemptions to encourage the deployment of propane vehicles and meet state emissions requirements.

A Safe Energy Choice

The propane industry's commitment to ongoing education, training, preventative maintenance, and safety awareness programs ensures that propane is a safe fuel to use at home and at work. A well-trained propane workforce is the foundation of the industry.

NPGA is an active participant in the committees of the National Fire Protection Association and International Codes Council, which develop the industry's safety codes and standards. Safety is the industry's highest priority, and below is a sampling of the types of programs and safety elements enacted by the propane industry.

The Certified Employee Training Program (CETP) assures that the industry's workers have the necessary knowledge and skills to perform their jobs safely and effectively. Recognized in twelve states to meet training requirements, used by propane marketers nationwide, and being continually updated and expanded, CETP has become the industry's flagship curriculum in propane workforce safety, training and certification.

The Propane Emergencies (PE) program is the benchmark by which many other hazardous materials training programs are measured. Since its inception in 1998, the program has grown from a single textbook to a comprehensive training program adopted by 27 state firefighter training agencies and propane marketers.

New propane cylinders include a device that shuts off the filling process when the tank reaches 80 percent of its liquid capacity. This safety feature ensures the cylinder is filled to the proper level.

Tanks on propane vehicles are constructed from carbon steel and are 20 times more puncture resistant than typical gasoline or diesel tanks. Propane engine fuel systems are fitted with safety devices and shut-off valves that function automatically in case of a fuel line rupture.

Tanks on propane vehicles are
20 times more puncture resistant
than typical gasoline or diesel tanks.

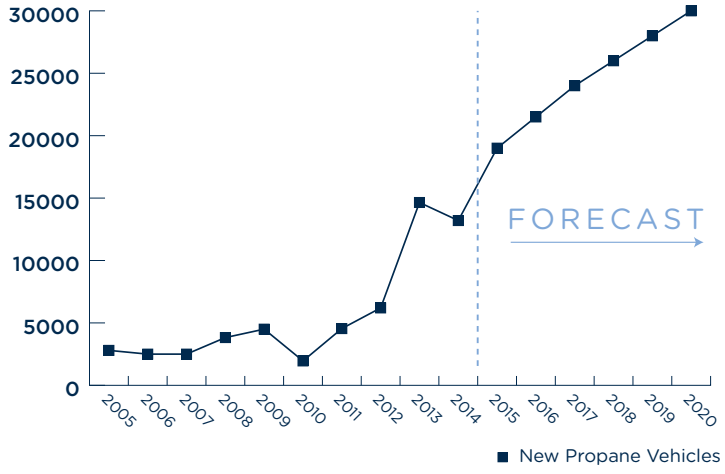
Future of Propane

Today, propane is produced in conjunction with domestic oil and gas drilling, as well as oil refining. About 75 percent of U.S. propane supply is produced in the U.S. in association with natural gas and liquids production. The remaining 25 percent is produced in U.S. refineries, or imported from Canada.

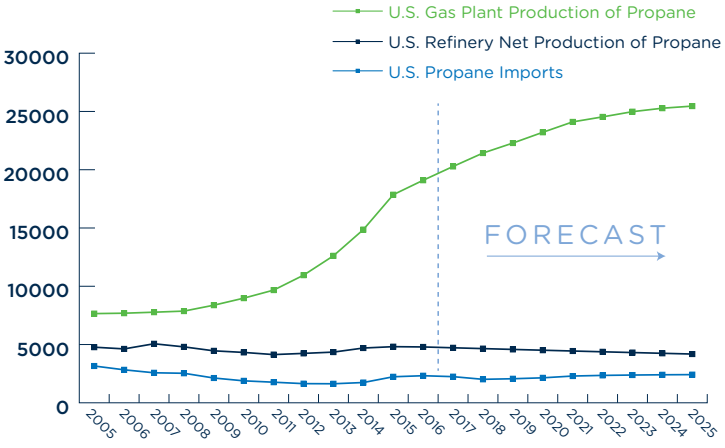
Since 2010, propane production has increased dramatically as part of the shale gas boom that has revolutionized U.S. natural gas and oil production. In 2014, over 19.3 billion gallons of propane were produced in the United States. The U.S. imports a relatively small amount of propane from Canada, as well as very small amounts of propane into the Northeastern U.S. on a seasonal basis. The U.S. became a net exporter of propane in 2011 when U.S. propane production exceeded consumer demand. Currently, the U.S. is the largest propane exporter in the world. U.S. exports are expected to continue to grow for the foreseeable future as the expected increase in production exceeds domestic demand growth.

Propane supply continues to grow.

NEW PROPANE VEHICLE SALES



PROPANE SUPPLY



Did You Know?

By 2020, propane production is expected to reach more than 27.7 billion gallons.

Propane Working for America

MADISON, WISCONSIN

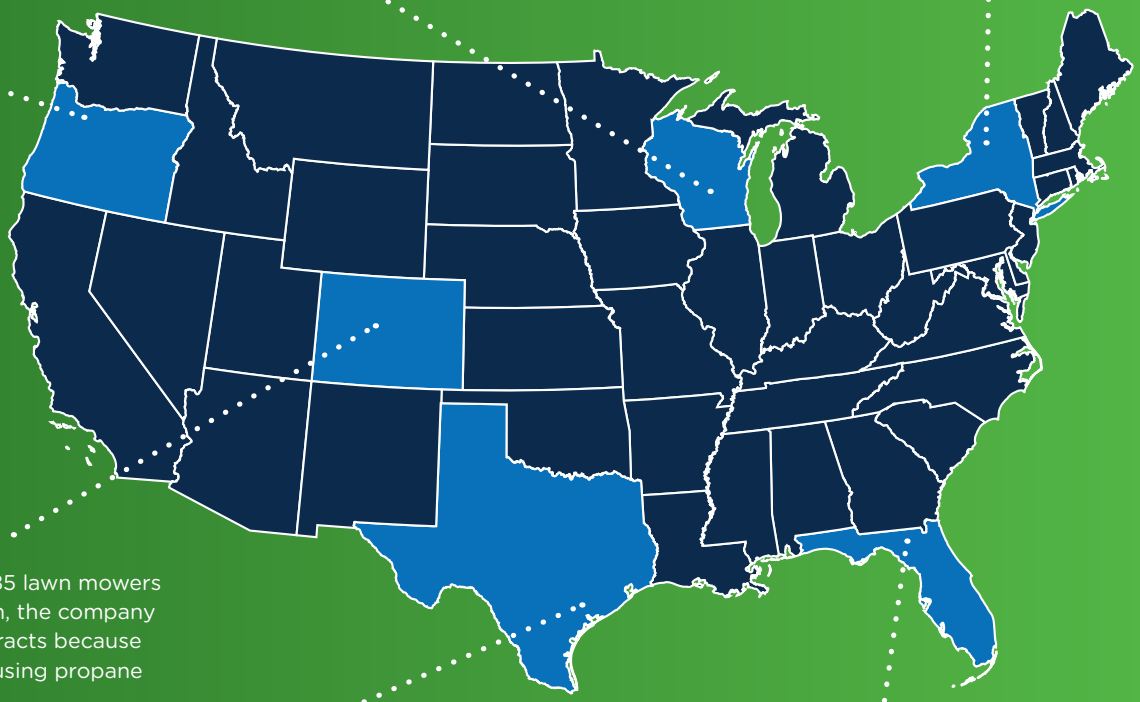
The Badger Cab Company saves 50 to 75 percent in fuel costs with propane autogas. The on-site refueling infrastructure and availability of public fueling stations allows company to run fleet nearly 100 percent on propane.

MARIETTA, NEW YORK

Maple Lane Farms upgraded to a propane-powered grain dryer, allowing them to harvest earlier and take crops to market faster. Since making the switch, drying costs have decreased 38 percent per bushel.

PORTLAND, OREGON

The Portland Public Schools will save an estimated 50 percent for its propane autogas purchases compared with those for gasoline. PPS buses powered by propane run up to 30,000 miles longer than those fueled by gasoline.



DENVER, COLORADO

CoCal Landscape converted 85 lawn mowers to propane in 2012. Since then, the company has secured several new contracts because of environmental benefits of using propane instead of gasoline.

ALVIN, TEXAS

The Alvin Independent School District has been running propane buses for three decades. Today, the district transports about 8,000 students in more than 100 propane-powered buses. Bus refueling time has been cut in half following the installation of a high volume propane autogas pump.

LIVE OAK, FLORIDA

The Shenandoah Dairy milks approximately 3,300 cows a year. The Dairy's propane irrigation engine cost $6,000 less than the same tier three-compliant diesel model, and will save the organization about $10,000 a year in maintenance and refueling costs.

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