



GALLON GROWERS

AUTOGAS TOOLKIT

FIRST THINGS FIRST

CONGRATULATIONS.

You hold in your hands the GallonGrowers Autogas Toolkit. This kit was developed specifically to help propane marketers like you grow their business by targeting fleet managers. We hope you'll share it with anyone who helps attract new customers to your business, including sales managers, account managers, and service center general managers.

Up front you'll find a collection of facts and market information, including advice on how to get started. The following section highlights available materials like PowerPoint presentations and instructional videos to help train your employees on the fleet market. The last section collects and explains all the available materials you can use with current and prospective customers.

The files for these materials can be found on the enclosed flash drive, but because materials are often updated and new ones added, we encourage you to visit **propanemarc.com/autogastoolkit** for the most up-to-date versions. You can also customize many items and order printed copies on the MaRC.

We hope you use this toolkit as a road map that you can follow to help your business find new demand for propane gallons in this exciting new market.



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AUTOGAS MARKET OVERVIEW

PROPANE AUTOGAS MARKET OVERVIEW



DRIVING BUSINESS WITH PROPANE AUTOGAS

For propane marketers who are committed to finding new demand for their product, on-road fleets represent an opportunity to replace gallons that may have been lost in core markets, according to Darren Engle, director of marketing for Blue Star Gas in Central Point, Ore.

“The propane industry is changing, we are seeing average homeowner use decline as appliances become more efficient and homes are built tighter. Our industry is challenged to replace those gallons. The good news is, we have a dominant competitive advantage over gasoline and diesel all day long. By embracing the on-road market, we have the ability to turn the ship and grow our industry.”

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DRIVING BUSINESS

DRIVING BUSINESS WITH PROPANE AUTOGAS



This opportunity has not been overlooked by vehicle manufacturers. Over the last few years, manufacturers have increased their commitment to the production of OEM-supported dedicated propane-autogas-fueled vehicles.

Leading school bus manufacturers like **Blue Bird**, **Thomas Built**, and **Collins**, have captured increasing market share in the student transportation market.

Roush CleanTech as a **Ford** Qualified Vehicle Modifier [QVM] offers a variety of trucks, vans, and cutaways, while **General Motors** partnered with **CleanFuel USA** on the **4500 chassis**. In 2013, **Freightliner Custom Chassis Corp.** in partnership with CleanFuel USA and Powertrain Integration launched the **S26 chassis** designed for medium-duty applications such as delivery trucks, including propane bobtail trucks.

As more OEM-backed propane-autogas-fueled vehicles become available, the list of potential customers for propane marketers will continue to grow.

"The time for propane autogas is now. Our partners, both OEM and aftermarket, will sell more vehicles in the next 12 months than they did in the last three years combined."

Tucker Perkins

Chief Business Development Officer, Propane Education & Research Council

Propane autogas represents all-season demand for propane. Learning how to tap into it through your existing customer base and beyond will allow you to grow your business with the market.

Now that you know use of propane autogas is on the rise, the next question becomes: "Why?"

Let's examine the factors contributing to growing adoption.

WHY IT'S GOOD FOR FLEET MANAGERS.

For managers of public and private fleets, propane autogas is an **ideal alternative fuel** choice for several reasons:

- 1 IT REDUCES OPERATING COSTS.
- 2 IT HAS AFFORDABLE, FLEXIBLE REFUELING OPTIONS.
- 3 IT OFFERS PROVEN PERFORMANCE.
- 4 IT LOWERS EMISSIONS.
- 5 IT REDUCES DEPENDENCE ON FOREIGN OIL.



COST EFFECTIVE

As a propane marketer, you are in an ideal position to make inroads into the on-road market because your product has a proven track record of helping fleet managers cut their life-cycle cost-of-ownership.

For instance, Portland Public Schools [PPS] converted 82 percent of its buses to run on propane autogas. According to Andy Leibenguth, the PPS transportation director, propane autogas has helped the district make significant reductions in its overall fuel budget. "PPS projections for 2012 show a 50 percent savings for its propane autogas purchases when compared with those for gasoline," Leibenguth said.

The school district has reaped financial benefits from propane autogas through reduced bus maintenance costs and extended engine life. According to PPS Fleet Maintenance Supervisor Melvin Philbrook, the propane-autogas-fueled buses run up to 30,000 miles longer than those fueled by gasoline.

A vehicle fueled by propane autogas also offers significant maintenance savings compared with diesel. Propane autogas requires less oil by volume than diesel and no additional filters or fluids, minimizing unexpected financial strain during each maintenance interval.

"As a fleet gets more into autogas, a marketer could see sales double and triple. Once you have the gallons and the fleet sees the benefit to it, propane should be able to compete with gasoline for a long time. Serviceability is going to grow gallons in propane autogas more than it will in any other propane market. If you can provide a quality service at a good price, they'll buy more because customers can get a payback, depending on the vehicle, at 40,000 to 60,000 miles. Most fleets are putting at least 100,000 miles on a vehicle, so they are going to save money."

Chad Kroening

Boehlke Bottled Gas Corp., Cedarburg, Wis.

SWITCHING TO PROPANE AUTOGAS IS A SMART FINANCIAL MOVE FOR YOUR CUSTOMERS AND FOR YOU.

"I converted all my vehicles to autogas last January, and in a little over a year I've already gotten a payback on that investment. Plus, I've been thoroughly impressed at how well the propane equipment works. As a marketer, it's a no-brainer to run your vehicles on autogas. I want to run 100 percent of my own product, and I encourage all marketers to do the same."

Gordon Cunningham

Cunningham Propane, West Helena, Ark.



EASY REFUELING

After a fleet manager realizes how propane autogas can lower operating costs, the next question he or she will inevitably ask is, "How do I get the fuel?" Propane is inherently portable. This portability is part of what makes propane autogas the most affordable infrastructure solution for fleets that need a central refueling location. In fact, **for the price of installing just one compressed natural gas (CNG) station, a fleet manager could install 15 propane autogas refueling stations.**

COST OF INSTALLATION



Fleets that need to refuel while on the road can find propane autogas refueling stations in every state, with many more public refueling stations opening every day. No other alternative fuel can offer the same convenience.



PROVEN

PROVEN PERFORMANCE

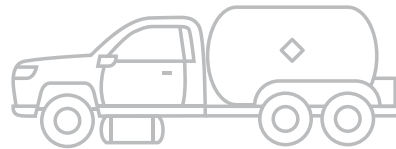
The high octane rating of propane autogas means drivers don't have to settle for substandard performance. Vehicles that run on propane autogas can provide the same horsepower, torque, and towing capacity as many conventional versions of the same models, all while driving down operating costs.

Fleets can count on propane autogas refueling technology to deliver as dependably as the vehicles themselves. Refueling with propane autogas is quick, quiet, and safe. It's the same experience as refueling with diesel or gasoline, making the customer's transition to propane autogas easy.

OPERATING COSTS



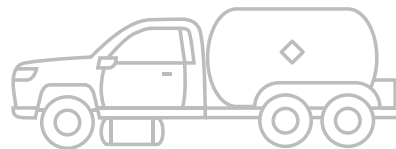
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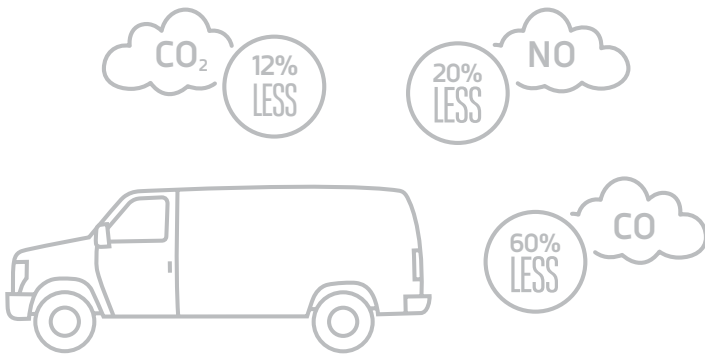
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CONVENTIONAL VEHICLE

CLEANER & GREENER

Over the last few years, federal and municipal air quality standards have become more stringent in some communities, causing government fleet managers to turn to alternative fuels like propane autogas to help cut their emissions. Many private companies have also spearheaded green initiatives and asked fleet managers to lower their company's carbon footprint by choosing alternative fuels.



Propane autogas can deliver the emissions benefits these fleet managers need. Propane-autogas-fueled vehicles emit about **12 percent less** carbon dioxide, about **20 percent less** nitrogen oxide, and up to **60 percent less** carbon monoxide than gasoline-fueled vehicles.

Light-duty vehicles fueled by propane autogas produce about 40 percent fewer smog-producing hydrocarbon emissions than gasoline. It's an 80 percent reduction for heavy-duty propane-autogas-fueled vehicles when compared with diesel.

Propane autogas is not only a cleaner fuel for the environment but also a cleaner fuel for those using it. The World Health Organization has identified diesel engine exhaust as a carcinogen.

THE FIVE 'C' TEST

CHOOSING AN ALTERNATIVE FUEL

While we know propane autogas can lower emissions for fleets, most fleet managers are looking at more than that as they consider how best to meet sustainability goals. For instance, Tom Armstrong, director of fleet at ThyssenKrupp Elevator, developed a series of questions he calls the "Five C's" for analyzing alternative-fueled vehicles:

- Is it **CLEAN**?
- Does it **CONSERVE**?
- Is it **COST-EFFECTIVE**?
- Does it make **COMMON SENSE**?
- Can you **COMMIT**?

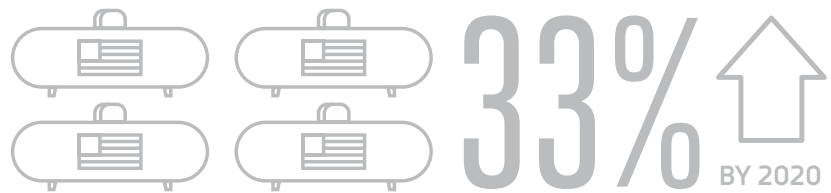
According to Armstrong, the only product that qualifies for all "Five C's" is propane autogas.



MADE IN THE U.S.A.

Propane autogas is an abundant, American-made fuel. It offers fleet managers an economical alternative to gasoline or diesel while also minimizing dependence on foreign oil, creating jobs in the United States, and increasing our nation's energy security.

In fact, U.S. propane production is exceeding national customer demand. In 2011, the United States became a **net exporter** of propane, a byproduct of natural gas processing, and experts project America's supply will increase another **33 percent** by 2020.



OVERCOMING MARKETING BARRIERS

Propane autogas offers the best return on investment of any fuel while promoting our nation's and our planet's best interests. But there are still misconceptions in the marketplace that prevent some fleet managers from making the switch. There are two primary reasons cited that typically prevent fleet managers from purchasing a propane autogas vehicle:

- Concern about a lack of refueling infrastructure.
- Concern that propane autogas will provide an acceptable return on investment.

These barriers are easy to overcome with the right information.



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REFUELING

REFUELING INFRASTRUCTURE

THE CONCERN

For fleet managers, running out of fuel while on the road can cause routing nightmares. They need peace of mind knowing that their drivers are able to refuel when necessary. Most fleet managers are unaware of the available propane autogas fueling stations that are currently in place, and how affordable propane autogas infrastructure can be conveniently installed at various locations to meet their needs.

HOW TO OVERCOME

Propane autogas is ideally suited for fleets whose vehicles return to a common location each day to refuel or share refueling stations with others nearby. In terms of cost, propane autogas infrastructure beats conventional fuels and many alternative fuels. Propane autogas is a non-contaminant of air, land, and water resources, reducing or even eliminating many EPA requirements for installing and maintaining diesel and gasoline infrastructure. Propane autogas fueling stations are 15 times less expensive than a CNG station.

There are more fueling stations in the United States for vehicles fueled by propane autogas than there are for vehicles fueled by any other alternative fuel, except for electricity. A surge is currently underway to install commercial fast-fill fuel pumps, so the number of available stations will continue to grow.

And for those who need to travel long distances without fuel anxiety, bi-fuel vehicles that offer a gasoline backup to propane autogas can overcome fleet managers' concerns.

CASE STUDY

THYSSENKRUPP ELEVATOR

As a marketer you may decide that installing a public refueling station in the appropriate location is worthwhile for a significant new customer. This was the case with the marketers serving ThyssenKrupp Elevator.

At ThyssenKrupp, company drivers are assigned vehicles that are taken home each night and are always available to satisfy customer demands. Therefore, refueling infrastructure must be strategically placed so that vehicles can be refueled at any time.

Tom Armstrong, fleet manager for ThyssenKrupp, has a strategy for putting autogas pumps where he needs them. "When we enter new markets we load driver home addresses into a mapping program to identify where we need autogas infrastructure," he said.

ThyssenKrupp works with local and national propane autogas suppliers to provide the infrastructure in the areas identified.

Today, ThyssenKrupp runs 47 Roush CleanTech Ford E-series vans and seven F-series trucks in Phoenix, Seattle, Los Angeles, San Diego, and Detroit. The company is looking at Dallas, Houston, Sacramento, and San Francisco next, and will continue to add new vehicles and markets with the goal of operating 10 percent of its fleet on propane autogas by 2015.





RETURN ON INVESTMENT

THE CONCERN

Another concern is disbelief that an investment in propane autogas, from the purchase of vehicles to the installation of an on-site fueling station, can provide an appropriate payback. Fleet managers need proof that their upfront investment will provide a timely return in order to move them from the consideration stage to actual purchase.

HOW TO OVERCOME

In terms of cost effectiveness, businesses that have invested in propane autogas have experienced lower life-cycle costs for a strong return on investment. For instance, ThyssenKrupp has saved \$4,152 on each vehicle annually since switching to propane autogas.

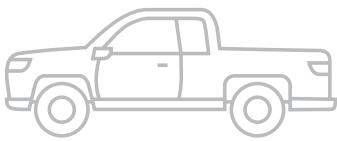
It's no secret that the price of gasoline and diesel has been trending up, placing a heavy strain on the bottom line for fleet managers. Fortunately for you, propane autogas provides a very attractive alternative.

As you know, propane is generally **significantly less expensive** than gasoline or diesel. You can entice fleet managers by offering a long-term fuel contract, which helps **minimize price volatility** and helps managers project their annual fuel costs, alleviating anxiety about budgeting for unforeseen spikes in price at the pump.

To help potential customers calculate their specific upfront costs and payback period, direct them to calculators on websites like **roushcleantech.com** or **cleanfuelusa.com**. Use these tools in your conversations with fleet managers to help them see exactly how their fleet can reap long-term benefits from an investment in propane autogas.

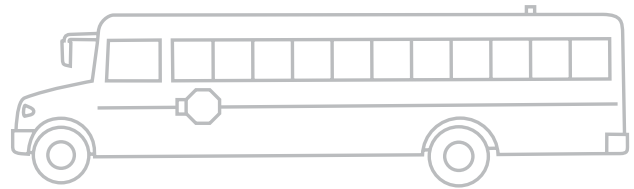
TOOLS OF THE TRADE:

LIGHT & MEDIUM-DUTY VEHICLES



LIGHT-DUTY VEHICLES

There are a number of propane autogas light-duty vehicles on the market. These vehicles have engines ranging from 3.7 liters to 6 liters. Propane-autogas-dedicated light-duty pickup trucks are backed by leading OEMs and are EPA- and CARB-certified. Additionally, EPA-certified bi-fuel conversions are offered on many light duty vehicles such as SUVs, police cruisers, and taxicabs. To see a complete list of aftermarket systems, visit autogasusa.org.



MEDIUM-DUTY VEHICLES

The list of medium-duty propane autogas vehicles is growing every day. These vehicles have engines ranging from 6 liters to 10 liters. OEM-supported medium-duty vehicles include school buses, shuttle buses, and trucks. In all those categories, fleet managers can choose from an array of propane-autogas-dedicated EPA- and CARB-certified options.



GET STARTED

HOW TO GET STARTED

1 DO YOUR HOMEWORK.

Now that we've introduced you to the market and identified why it offers immense potential for propane marketers to grow gallons, you're ready to take the next step and form a game plan.

PERC is here to help you approach this new market right — and you're already taking a step in that direction by using this toolkit. In addition, consider attending a Marketer Technology & Sales Training class on propane autogas. Visit propanecouncil.org/mtst to see a list of upcoming classes or to request one in your area.

If you still have questions, consider reaching out to PERC for some one-on-one coaching. Write to Michael Taylor, director of autogas business development and a former propane fleet manager, at michael.taylor@propane.com.

2 FIND YOUR DISPENSER SOLUTION.

Once you've done your homework, you're ready to begin forming relationships. First, identify a company that can help choose and supply the best dispenser option for your business and your customers. As a starting point, review PERC's recommended minimum specifications for a propane autogas dispenser, included in the next section of this kit, to ensure a positive customer experience.

QUICK OVERVIEW

1. DO YOUR HOMEWORK.
2. FIND YOUR DISPENSER SOLUTION.
3. PARTNER WITH VEHICLE SALES REPS.
4. TAP YOUR CURRENT CUSTOMERS.
5. LEARN ABOUT THEIR NEEDS.
6. CONDUCT A COST ANALYSIS.
7. SCHEDULE A TEST DRIVE.
8. CONSIDER CONVERSIONS.



GET STARTED

HOW TO GET STARTED

3 PARTNER WITH VEHICLE SALES REPS.

Next, identify commercial vehicle dealers or OEM sales reps in your area that offer vehicles that run on propane autogas. Not every dealer will sell commercial fleet vehicles, so make sure you find the right ones. Get to know the sales reps. Demonstrate how you can be a resource that helps the sales team close a deal when a customer is interested in propane autogas by offering a dependable fuel supply. That way, when a customer comes to the dealership or sales rep and wants more information about propane autogas, they can turn to you to answer questions on refueling options.

4 TAP YOUR CURRENT CUSTOMERS.

Then, you'll want to review your current list of commercial customers and identify those businesses that use fleet vehicles like vans or light-and medium-duty trucks. Try to determine which vehicle models your customers are using and check with the OEM to see if a propane-autogas-fueled option is offered.

5 LEARN ABOUT THEIR NEEDS.

Once you've determined that the right OEM-supported propane autogas vehicle is available, visit your customer for an informal meeting to learn about their vehicle needs. Ask questions to confirm that propane autogas is a good fit. And come prepared with the following things:

- Information on potential ROI.
- Information on how you can provide a seamless refueling solution.
- Testimonials from similar fleets.
- Information on specific propane autogas models similar to what the company runs today.

"If you're walking in to talk to a fleet manager, don't pitch propane right off the bat. Ask about their needs. How do they use their vehicles? Do they come back to a base? How long do they keep vehicles? Once you understand their fleet, tell them about the vehicles they own today that make the most sense for a strong return on investment with propane. And don't be afraid to say a certain vehicle isn't the best match. That will give you credibility and help you make a long-term customer rather than a short-term sale."

Darren Engle

Blue Star Gas, Central Point, Ore.



GET STARTED

HOW TO GET STARTED

6

CONDUCT A COST ANALYSIS.

Once a fleet manager has expressed interest in switching to propane autogas vehicles, your next step should focus on helping him or her conduct a personalized cost analysis report.

START BY ANSWERING SOME BASIC QUESTIONS:

- What are the company's gasoline and diesel costs?
- What are the company's maintenance costs?
- How many vehicles would the company convert?
- What is an average vehicle life?
- What are the incremental costs of the propane autogas vehicle?
- What will you charge for propane autogas?

From there, you can use calculators on websites like roushcleantech.com or cleanfuelusa.com to determine the potential cost savings.

7

SCHEDULE A TEST DRIVE.

Finally, schedule a test drive. This will give your prospect valuable first-hand experience and allow him or her to become acquainted with the fueling process. Ideally, you drove your own propane-autogas-fueled vehicle to the meeting. But if that's not the right model, work with the OEM sales rep to arrange a test drive.

8

CONSIDER CONVERSIONS.

Once you're confident in selling OEM-backed vehicles, another way you can grow your gallons is by branching out to bi-fuel conversions. In order to do this successfully, you'll need answers to the following questions:

- Which EPA-certified kits will you use?
- Who can you trust to handle the installation?
- Who will help your customer with maintenance?
- Who will warranty the vehicle if it breaks down?



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QUESTION

FREQUENTLY ASKED QUESTIONS

What is a dedicated propane autogas vehicle?

It's a vehicle that runs on propane autogas only. Examples include school buses, Roush CleanTech trucks and vans, the GM 4500, and the Freightliner S2G.

What is the difference between bi-fuel and dual fuel?

Bi-fuel refers to a vehicle that runs on either propane autogas or gasoline. Many aftermarket conversions are bi-fuel systems. By having the option of either fuel, drivers no longer suffer from range anxiety, making this a popular option for fleets that may need to refuel while on the route.

Dual fuel refers to vehicles where both propane autogas and diesel are injected into the engine at the same time. This is done primarily as a way of displacing diesel use.

What companies offer propane autogas vehicle conversion kits?

EPA-certified conversions of existing vehicles are available nationwide. See the complete list of aftermarket systems at autogasusa.org.

What type of refueling infrastructure is recommended for fleets?

In the resources section of this toolkit you'll find a Propane Autogas Dispenser Specifications sheet with detailed information on the minimum requirements PERC recommends for propane autogas refueling equipment. Following these specifications will ensure your system:

- Meets all necessary federal, state, and local codes and regulations.
- Delivers fuel to end-users in a similar way to gasoline.
- Will be the correct dispenser for the type of vehicle that will be filled.
- Provides propane autogas powered vehicle operators a safe, reliable refueling option.

QUESTIONS

FREQUENTLY ASKED QUESTIONS

**How much does a propane autogas refueling station typically cost?
How does that compare with other alternative fuels?**

A propane autogas refueling station can range in price from \$45,000 to \$175,000, according to the U.S. Department of Energy. You can build 15 propane autogas fueling stations for the price of one CNG fueling station, which can range from \$400,000 to \$1,700,000.

**How much does it typically cost to convert a vehicle to propane autogas?
How does that compare with other alternative fuels?**

An average light-duty propane autogas conversion ranges in cost from \$4,000 to \$12,000, according to the U.S. Department of Energy. That compares with \$12,000 to \$18,000 to convert a light-duty vehicle to CNG according to Natural Gas Vehicles for America.

How long does it take to see a return on investment from switching to propane autogas?

Propane autogas consistently delivers a strong return on investment to fleets. The exact length of that payback period depends on a number of factors, however, including current fuel and maintenance costs; number of vehicles converted; type of vehicles converted; average life of vehicles; and driver habits.

To get an accurate cost estimate for a potential customer, direct them to one of the available cost calculators at roushcleantech.com or cleanfuelusa.com.





RESOURCES FOR YOUR TEAM

These materials are designed to help educate you and your staff on the benefits and proper use of propane autogas for fleets. All of these resources are included on the enclosed flash drive, but for the most up-to-date versions, check propanemarc.com/autogastoolkit.

RESOURCES FOR YOUR TEAM

TRAINING MANUALS

CONVERTING VEHICLES TO PROPANE AUTOGAS SERIES

These four manuals provide technical training on retrofitting, servicing, and fueling propane autogas vehicles. They also cover troubleshooting and diagnostics for IMPCO, CleanFuel USA, Roush CleanTech, and Prins Alternative Fuel Systems.

PART I: Installing Fuel Tanks and Fuel Lines Training Manual.

PART II: Installing Underhood Components Training Manual.

PART III: Installing and Operating Dispensers Training Manual.

PART IV: Troubleshooting Four Current Autogas Fuel Systems Training Manual.

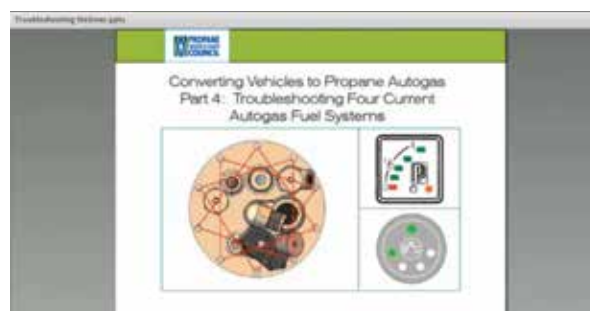
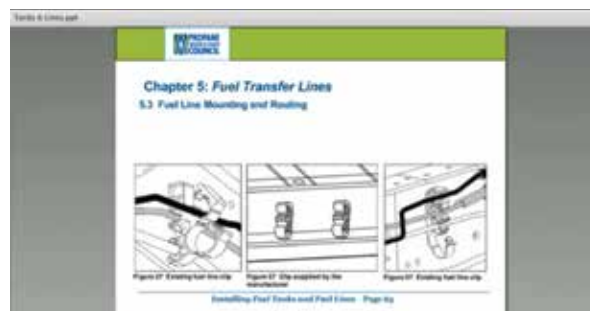
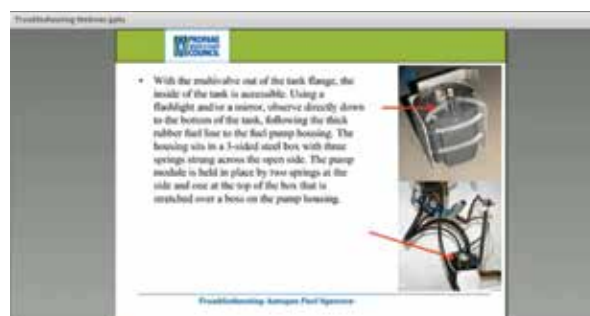
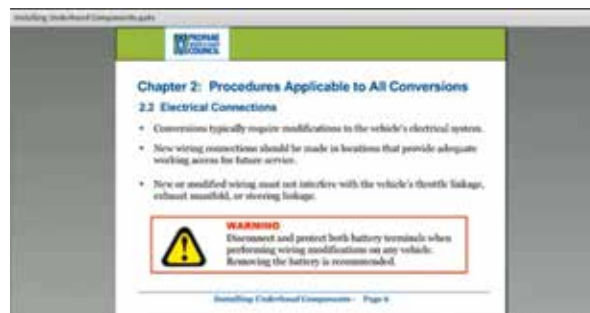


VIDEOS

TRAINING VIDEOS

In these three videos, Franz Hofmann of Alternative Fuels Research & Education (AFRED) walks viewers through the Converting Vehicles to Propane Autogas training manuals. Specific topics covered include:

- **Fueling Tanks and Fuel Lines.**
- **Installing Underhood Components.**
- **Troubleshooting Four Current Autogas Fuel Systems.**



COLLATERAL

PROPANE AUTOGAS REFERENCE CARD

This card gives a brief overview of the advantages of propane autogas for fleets. Share this with your sales team for an easy cheat sheet on propane autogas' value proposition for vehicles.

FUELING A COMPETITIVE FLEET

Propane autogas delivers the money-saving benefits fleet managers need.

MORE SAVINGS

An initial investment in propane autogas lowers life-cycle vehicle costs for fleets. Other alternative fuels burden budgets with maintenance demands.

LOWER FUEL COSTS

Propane autogas simply costs less than gasoline. Managers can also take advantage of state and federal tax credits, making an already affordable fuel even more so.

EASY REFUELING

Unlike conventional fuels, propane autogas has an affordable infrastructure solution for refueling location. Fleets that need to find propane autogas refueling stations can find many more public refueling stations than other alternative fuels.

PROVEN TECHNOLOGY

Fleets can choose from an array of OEM vehicles that are EPA- and CARB-certified. Many models offer more horsepower, torque, and towing capacity than gasoline versions of the same models.

DRIVE GREEN WHILE SAVING GREEN

Propane autogas is an economical approach to substantially lower harmful emissions. Vehicles fueled by propane autogas emit 25 percent fewer greenhouse gas emissions than vehicles running on gasoline.

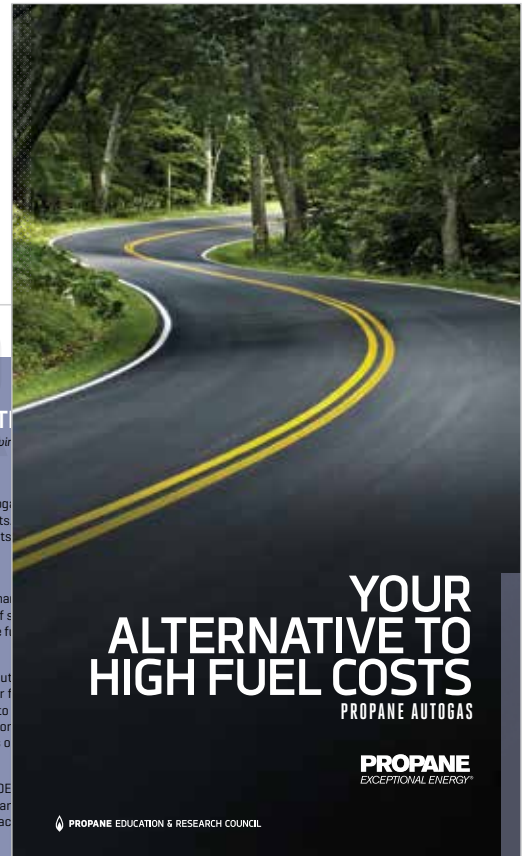
ABUNDANT SUPPLY PRODUCED IN THE U.S.

Choosing vehicles that run on American-made propane autogas reduces dependence on foreign oil and keeps jobs at home. With more than 70 percent of propane production coming from domestic natural gas, the United States is producing enough of its own propane to exceed customer demand.

To learn more about fueling your fleet with clean, affordable propane autogas, visit autogasusa.org/fleets.

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YOUR ALTERNATIVE TO HIGH FUEL COSTS

PROPANE AUTOGAS

PROPANE
EXCEPTIONAL ENERGY™

PROPANE EDUCATION & RESEARCH COUNCIL

COLLATERAL

PROPANE AUTOGAS DISPENSER SPECIFICATIONS

Use this resource for guidance when installing propane autogas dispensing equipment for your customers. It covers recommendations for system performance and equipment.

PROPANE
EXCEPTIONAL ENERGY®

PROPANE AUTOGAS DISPENSER SPECIFICATIONS

OVERVIEW AND PURPOSE:

This document provides recommended minimum specifications, from the Propane Education and Research Council (PERC), to ensure positive end-user experiences with the installation and operation of propane autogas dispensing equipment.

Following these specifications will ensure that new propane autogas dispensing equipment installed:

- Meets all necessary federal, state and local codes and regulations.
- Delivers fuel to end-users in a similar way to gasoline.
- Will be the correct dispenser for the type of vehicle that will be filled.
- Provides propane autogas powered vehicle operators a safe, reliable refueling option.

SYSTEM PERFORMANCE REQUIREMENTS:

- Dispensing rate minimum of 8 gallons per minute (GPM).
- Pump package (motor, pump, bypass, piping, system sizing and electrical) must be able to provide adequate differential pressure based on vehicle type, geographic location and climate conditions.
- Location of dispensing station and proximity to the pump package impacts performance and shall be considered.
- Vehicle fueling area (ground where vehicle is parked) should be reasonably level to allow for complete fuel fills.

EQUIPMENT REQUIREMENTS:

- Dispenser cabinet:
 - Shall be constructed of nonflammable, noncombustible materials; including but not limited to powder coat steel, stainless steel, aluminum or equivalent materials.

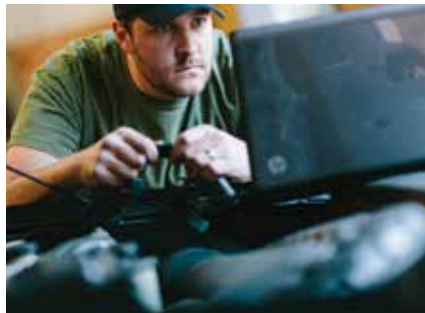
- Shall meet all federal, state and local codes and regulations applicable at the installation location.
- Shall be constructed with lockable access panels to prevent tampering.
- Shall provide separation of the base classified area from the non-classified area (above 48") by a permanent seal.
- Dispenser metering:
 - Shall have a digital display capable of providing gross or net volumes.
 - Where required, temperature compensation shall be provided and meet all federal, state and local codes and regulations; dispenser meter shall be provided with secondary temperature thermometer well for testing and proving (checking the accuracy/calibrating) the meter.
 - The metering system selected must have a minimum capacity sufficient to meet the performance standard listed in the System performance requirements section.

- If you are using an electronic dispensing system, it shall be equipped with a pulse transmitter providing a minimum of 100 pulses per gallon (PPG) for retail sales and/or custody transfer.
- Mechanical temperature compensation without pulse output is acceptable.
- Meter accuracy shall be in accordance with federal, state and local codes and regulations, with a minimum accuracy of $\pm 0.6\%$ [.006] linearity and $\pm 0.24\%$ [.0024] repeatability when dispenser is used for retail sales and/or custody transfer.
- The meter shall be inspected prior to operation to ensure compliance with state weights and measure standards applicable at the location of installation when dispenser is used for retail sales and/or custody transfer.
- Dispenser display:
 - Shall indicate gallons dispensed, with mechanical or electronic register.
 - If equipment is mechanical, indicate gallons dispensed and totalizer display.
 - If equipment is electronic: indicate gallons dispensed, net or gross gallons, dispenser may include display with an alpha numeric keypad for ease of entering data.
- Electrical requirements:
 - All electrical installations shall be performed by a licensed, bonded electrician with motor control experience to ensure compliance with all federal, state and local codes and regulations at the location of installation.

PHOTOS & LOGOS

PHOTOGRAPHY

A library of hi-res fleet photographs is available for your website or printed collateral.



PHOTOS & LOGO

PHOTOS & LOGOS

LOGOS

The library also includes the Propane Exceptional Energy® logo.

PROPANE
EXCEPTIONAL ENERGY®

PROPANE
EXCEPTIONAL ENERGY®

RESOURCES FOR DEALERS AND END-USERS

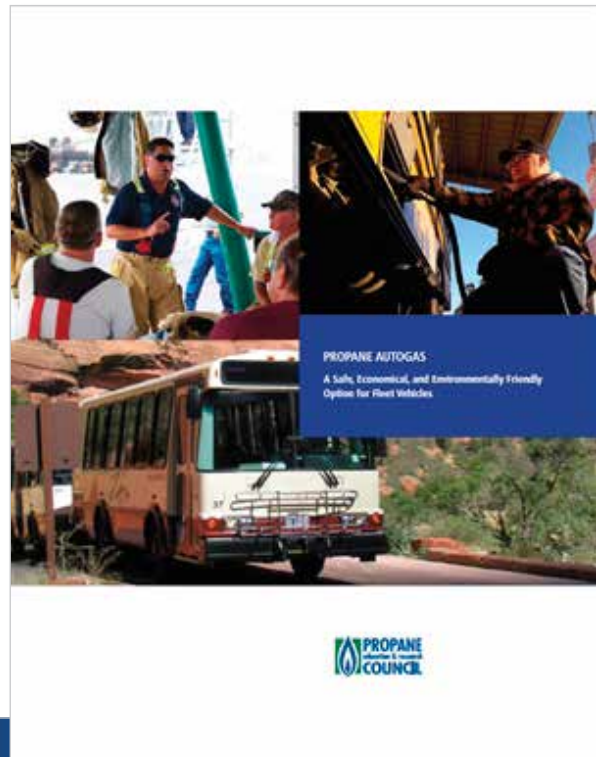
These materials are designed to help equip fleet vehicle dealers and sales reps with information on propane autogas to make the sale with fleet managers. You will find files for these materials on the enclosed flash drive. Always check the MaRC (propanemarc.com/autogastoolkit) for the most up-to-date versions and to order printed copies or customized materials when available.

TRAINING MATERIALS

PROPANE AUTOGAS: A SAFE, ECONOMICAL, AND ENVIRONMENTALLY FRIENDLY OPTION FOR FLEET VEHICLES

Share these materials with fleet operators, school and community groups, emergency responders, and the general public to overcome any safety concerns and illustrate how propane autogas benefits them.

- **Brochure.**
- **Customizable PowerPoint presentation.**



Propane Autogas

Resources to Effectively Communicate
the Benefits of Propane Autogas to Fleet
Operators, School Boards, Community
Groups, and Emergency Responders



PROPANE
Autogas Dealer

VIDEOS

SAFELY REFUELING PROPANE POWERED SCHOOL BUSES VIDEO

In 14 minutes, viewers learn safe methods for refueling certain types of propane systems on school buses.

LEANDER INDEPENDENT SCHOOL DISTRICT VIDEO CASE STUDY

Director of Transportation Kirby Campbell discusses why choosing propane autogas buses is "a win/win situation" for his school district.



BROCHURE

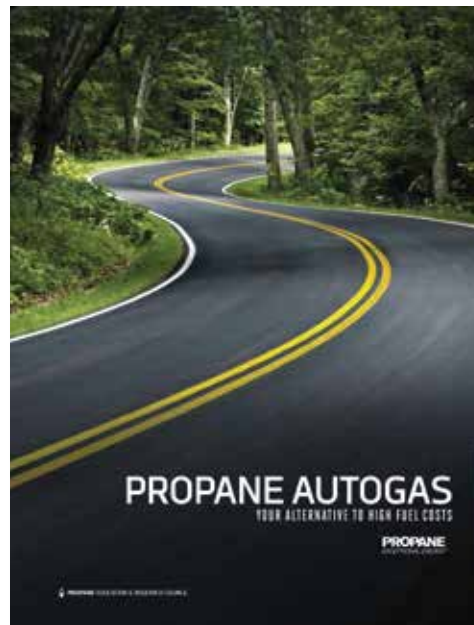
BROCHURES

PROPANE AUTOGAS: YOUR ALTERNATIVE TO HIGH FUEL COSTS

Use this brochure to make a compelling case for the benefits of propane autogas. It includes detail on potential savings for fuel, maintenance, and infrastructure costs; OEM-supported vehicles available; and the benefits propane autogas delivers to our nation and our planet.

PROPANE AUTOGAS: FUEL AT THE TOP OF ITS CLASS

This comprehensive brochure describes the wide-reaching benefits that propane-autogas-fueled buses bring to school districts: affordability, safety, cleanliness, and proven technology. It also features testimonials from districts around the country enjoying the value of their autogas-fueled buses.



FACT SHEETS

These fact sheets list the competitive advantages of propane autogas over other fuel options. Each fact sheet features attractive infographics and straightforward evidence for easy readability.

- Propane Autogas vs. Compressed Natural Gas (CNG).
- Propane Autogas vs. Gasoline.
- Propane Autogas vs. Diesel.

TAKE YOUR INVESTMENT FURTHER

PROPAANE AUTOGAS VS. COMPRESSED NATURAL GAS (CNG)

FLEET FACT SHEET

SWITCH TO A DOMESTIC FUEL

THAT SAVES MONEY WHILE IT SAVES THE PLANET

PROPAANE AUTOGAS VS. GASOLINE

FLEET FACT SHEET

POWER UP WITH PROVEN TECHNOLOGY
With a variety of high-performing OEM-supported vehicles to choose from, propane autogas offers the performance fleet managers need at a price they can't ignore.

LOWER FUEL COSTS
Mile for mile, propane autogas simply costs less than gasoline. For instance, ThyssenKrupp Elevator reported an annual savings of \$4,152 on each vehicle since introducing autogas to its Phoenix fleet, and plans to add even more propane-autogas-fueled vehicles around the country. Fleet managers can also take advantage of state and federal fuel tax credits for propane autogas.

MORE AFFORDABLE INFRASTRUCTURE
Propane autogas refueling infrastructure costs less than gasoline to install and operate, in part because propane is classified by the EPA as a non-contaminant of air, land, and water resources.

AMERICAN-MADE AND ABUNDANT
United States propane production continues to exceed customer demand. This is largely due to the country's increasing natural gas supply — more than 70 percent of propane comes from domestic natural gas. As a result, fleets that choose propane autogas help create needed jobs in the United States and strengthen our nation's movement toward energy security.

70% COMES FROM NATURAL GAS

THE GREENER FUEL
Propane autogas offers an economical approach to substantially reducing greenhouse gases and other harmful emissions. Greenhouse gas emissions alone are reduced by up to 25 percent when compared with gasoline-fueled vehicles. Autogas also provides an estimated 40 percent reduction in the hydrocarbon emissions that produce smog.

FOR MORE INFORMATION
Visit autogasusa.org/fleets to learn more about the advantages of propane autogas for fleets.

REDUCED NOISE
According to the Alternative Fuels Group of the Cleaner Vehicles Task Force, propane-autogas-fueled buses are 50 percent quieter than buses fueled by diesel. This results in a safer and more enjoyable experience for drivers and passengers.

UNITED STATES PROPAANE PRODUCTION CONTINUES TO EXCEED CUSTOMER DEMAND. This is in large part due to increasing natural gas supply — more than 70 percent of propane comes from domestic natural gas. As a result, fleets that choose propane autogas create needed jobs in the U.S. and strengthen our nation's movement toward energy security.

SAVING MONEY WHILE

YES, THEY'RE SIMILAR
More than 93 percent of propane autogas comes from clean, domestic natural gas. So they have a few shared characteristics.

THEY DRIVE GREEN
Propane-autogas- and CNG-fueled vehicles are both proven to substantially lower greenhouse gases and other harmful emissions compared to conventional fuels. Compared with gasoline, vehicles fueled by propane autogas cut carbon monoxide emissions by 60 percent, nitrogen oxide emissions by 20 percent, and carbon dioxide emissions by 12 percent.

THEY ARE MORE

FOR NATION

THE GREENER FUEL
Diesel engines are documented as producing significant amounts of fine particulate matter. Switching to propane autogas results in an estimated 80 percent reduction in smog-producing hydrocarbon emissions compared with diesel-fueled vehicles. Propane autogas is cleaner for the environment and its users — both the World Health Organization and Environmental Protection Agency (EPA) have identified diesel engine exhaust as a carcinogen.

FOR MORE INFORMATION
Visit autogasusa.org/fleets to learn more about the advantages of propane autogas for fleets.

CASE STUDIES

These case studies provide dealers and end-users with proven results of propane autogas. You can find additional case studies on our partners' websites:

- **Roush CleanTech:**
roushcleantech.com.
- **Blue Bird Corp.:**
blue-bird.com.
- **CleanFuelUSA:**
cleanfuelusa.com.
- **Texas Railroad Commission:**
rrc.state.tx.us.



ZEELAND PUBLIC SCHOOL DISTRICT'S SUSTAINABLE SOLUTION

A PROPANE AUTOGAS CASE STUDY

BUSES FUELED BY PROPANE AUTOGAS OFFER SCHOOL DISTRICT HIGH-PERFORMING, COST-EFFECTIVE OPTION TO INCREASE SUSTAINABILITY

Zeeland Public School District in western Michigan, like many school districts across the country, is finding ways to incorporate environmentally friendly practices in its operation. The district has upheld its commitment to sustainability by using alternative fuels, including propane autogas, in its school bus fleet.

"Zeeland has been on the cutting edge of green practices for a while," explains David Meeusen, Zeeland Public School District transportation director. "We are always looking for new ways to improve the environment."

CHOOSING BUSES FUELED BY PROPANE AUTOGAS

Zeeland Public School District buses transport 5,000 students daily and travel 750,000 miles annually. Since 2003, the district has used biodiesel to power the majority of its school buses. District officials recently became interested in the advantages propane autogas could provide as an alternative fuel.

School officials learned that propane autogas burns cleaner than diesel, thus reducing the amount of harmful emissions released into the atmosphere and inhaled by the district's students and staff. They also found propane autogas to be more cost-effective than biodiesel and to perform better, too.

Propane autogas is one of the cleanest burning fuels of all fossil fuels, resulting in

COMPANY
Zeeland Public School District
Zeeland, Mich.
INDUSTRY
School Bus

CHALLENGE & SOLUTION
To reduce costs and emissions, while expanding use of alternative fuels, through the purchase of nine Blue Bird Vision school buses fueled by propane autogas.

RESULT

- Lower emissions.
- Lower operating costs.
- Longer maintenance intervals.
- The same horsepower and torque as diesel-fueled buses.

PROPANE EDUCATION & RESEARCH CENTER

operations cleaner and greener by reducing emissions, the district researched different fuel options to meet the increasing air



PROPANE EDUCATION & RESEARCH CENTER

MOUNTAIN MOBILITY PROVIDES A CLEAN, HIGH-PERFORMING OPTION FOR NORTH CAROLINA RESIDENTS

A PROPANE AUTOGAS CASE STUDY

VANS FUELED BY PROPANE AUTOGAS OFFER SUSTAINABLE, COST-EFFECTIVE SOLUTION FOR WELL-TRAVELED FLEET

Mountain Mobility, a program of North Carolina's Buncombe County Planning and Development's transportation division, provides transportation to county residents in a fleet of 42 vehicles on a typical day, covering more

than 100,000 miles. "The process of converting the fleet to run on propane autogas was swift and easy," says

Alan Motor Works in Asheville. Motor Works installed the conversions using Alliance Gas Propane conversion technology. It provided Mountain Mobility with maintenance training required for

help on the new systems. Mountain

ity also installed an on-site refueling

structure, including a storage tank,

refueling dispenser, which reduces

time and distance for drivers to travel

to fuel their vehicles. Blossman Gas, a

long member of Alliance AutoGas,

now propane autogas to Mountain

COMPANY
Mountain Mobility
Asheville, N.C.
INDUSTRY
Public transportation

CHALLENGE & SOLUTION
To implement a sustainable option for its fleet through the conversion of 42 Ford E-350 vans to an eco-friendly propane autogas fuel system.

RESULT

- Lower emissions.
- Lower operating costs.
- Less dependence on foreign oil.
- Longer maintenance intervals.

DISTRICT'S

INDUSTRY

School Buses

ORGANIZATION

Los Angeles Unified School District

CHALLENGE & SOLUTION

Reduce emissions and overall

operating costs through addition

of 50 Blue Bird Propane-Powered

Vision buses.

BENEFITS OF PROPANE AUTOGAS

- Potential 80 percent reduction in

- smog-forming emissions.

- Compliance with California's new

- air quality requirements.

- Potential 30 percent savings

- in fuel costs.

- Increased safety, as propane

- autogas fuel tanks are 25 times
- more puncture-resistant than
- typical gasoline or diesel tanks, and
- propane autogas has the widest
- flammability range of all alternative
- motor fuels.

CASE STUDIES

CASE STUDIES

LOS ANGELES UNIFIED SCHOOL DISTRICT SCHOOL BUSES CASE STUDY

The LA Unified School District has seen significant environmental, fiscal, and safety improvements since 2009, when it added 90 propane-autogas-fueled buses to its fleet. The district has found propane autogas to be an affordable, convenient alternative to diesel that meets California's strict air quality requirements.

LOS ANGELES UNIFIED SCHOOL DISTRICT'S LESSON LEARNED

A PROPANE AUTOGAS CASE STUDY

REDUCED EMISSIONS AND COST SAVINGS COME FROM PROPANE-AUTOGAS-FUELED

School districts have always required safe, cost-efficient buses to transport children, but now they also prefer environmentally friendly options.

The largest school district in California, the Los Angeles Unified School District, met these requirements by using buses fueled by propane autogas. The district added 90 Blue Bird Propane-Powered Vision buses to its fleet of 1,400 in December 2009 and has already seen significant environmental and safety advantages and anticipates fiscal savings, as well.

BENEFITS OF CONVERTING TO PROPANE-AUTOGAS-FUELED SCHOOL BUSES

The Los Angeles Unified School District carries nearly 53,000 children every day and travels almost 15 million miles in an average school year. In an attempt to make operations cleaner and greener by reducing emissions, the district researched different fleet options to meet the increasing air

quality regulations in the state. The district investigated propane autogas as an alternative fuel. Using propane-autogas-fueled school buses from Blue Bird proved a competitive alternative to using buses that run on diesel or compressed natural gas, and they met California's new air quality requirements. Specifically in heavy-duty applications like school buses, propane autogas reduces smog-forming emissions

INDUSTRY

School Buses

ORGANIZATION

Los Angeles Unified School District

CHALLENGE & SOLUTION

Reduce emissions and overall operating costs through addition of 90 Blue Bird Propane-Powered Vision buses.

BENEFITS OF PROPANE AUTOGAS

- Potential 80 percent reduction in smog-forming emissions.
- Compliance with California's new air quality requirements.
- Potential 30 percent savings in fuel costs.
- Increased safety, as propane autogas fuel tanks are 20 times more puncture-resistant than typical gasoline or diesel tanks, and propane autogas has the lowest flammability range of all alternative motor fuels.



CASE STUDIES

CASE STUDIES

ZEELAND PUBLIC SCHOOL DISTRICT CASE STUDY

After adding nine Blue Bird propane-autogas-fueled school buses to its fleet, this school district is enjoying lower costs and emissions. The district has found that propane autogas can deliver a cost-effective, high-performing alternative to the biodiesel it used previously.



ZEELAND PUBLIC SCHOOL DISTRICT'S SUSTAINABLE SOLUTION

A PROPANE AUTOGAS CASE STUDY

BUSES FUELED BY PROPANE AUTOGAS OFFER SCHOOL DISTRICT HIGH-PERFORMING, COST-EFFECTIVE OPTION TO INCREASE SUSTAINABILITY

Zeeland Public School District in western Michigan, like many school districts across the country, is finding ways to incorporate environmentally friendly practices in its operation. The district has upheld its commitment to sustainability by using alternative fuels, including propane autogas, in its school bus fleet.

"Zeeland has been on the cutting edge of green practices for a while," explains David Meeuwesen, Zeeland Public School District transportation director. "We are always looking for new ways to improve the environment."

CHOOSING BUSES FUELED BY PROPANE AUTOGAS

Zeeland Public School District buses transport 9,000 students daily and travel 750,000 miles annually. Since 2003, the district has used biodiesel to power the majority of its school buses. District officials recently became interested in the advantages propane autogas could provide as an alternative fuel.

School officials learned that propane autogas burns cleaner than diesel, thus reducing the amount of harmful emissions released into the atmosphere and inhaled by the district's students and staff. They also found propane autogas to be more cost-effective than biodiesel and to perform better, too.

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COMPANY

Zeeland Public School District
Zeeland, Mich.

INDUSTRY

School Bus

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- Longer maintenance intervals.
- The same horsepower and torque as diesel-fueled buses.

CASE STUDIES

CASE STUDIES

MOUNTAIN MOBILITY'S CONVERSION OF FORD F-350 PARATRANSIT VANS TO OPERATE ON A BI-FUEL SYSTEM CASE STUDY

By converting 10 of its paratransit vans to operate on a bi-fuel system, Mountain Mobility can now choose to run on either propane autogas or gasoline. Since the switch, the company has enjoyed lower operating costs, fewer emissions, and convenient on-site refueling.

PROPANE
EXCEPTIONAL ENERGY®

MOUNTAIN MOBILITY PROVIDES A CLEAN, HIGH-PERFORMING OPTION FOR NORTH CAROLINA RESIDENTS

A PROPANE AUTOGAS CASE STUDY

VANS FUELED BY PROPANE AUTOGAS OFFER SUSTAINABLE, COST-EFFECTIVE SOLUTION FOR WELL-TRAVELED FLEET

Mountain Mobility, a program of North Carolina's Buncombe County Planning and Development's transportation division, has been providing public transportation to county residents since 1989. The company operates a fleet of 42 vehicles and transports more than 500 passengers on a typical day, averaging more than 3 million miles driven per year.

In a recent attempt to incorporate sustainable operations into its fleet, Mountain Mobility started to explore the use of alternative fuels. Through this investigation, the company learned of vehicles fueled by propane autogas from Alliance AutoGas, a partnership of vehicle conversion companies and propane marketers.

In July 2010, Mountain Mobility secured funding through the American Recovery and Reinvestment Act to convert 10 Ford E-350 paratransit vans to operate on a bi-fuel system that can run on either liquid propane autogas or gasoline, and to install propane autogas refueling infrastructure.

MAKING THE SWITCH TO PROPANE AUTOGAS

"Making the switch to propane autogas was an easy decision for the Buncombe County commissioner to make after learning about the environmental benefits, fuel savings, and lower maintenance costs of vehicles fueled by propane autogas," says Lori Hembree, director of Mountain

Mobility. "The process of converting the vans to run on propane autogas was smooth and quick."

German Motor Werks in Asheville completed the conversions using Alliance AutoGas Prins conversion technology, and it provided Mountain Mobility with the maintenance training required for upkeep on the new systems. Mountain Mobility also installed an on-site refueling infrastructure, including a storage tank and refueling dispenser, which reduces the time and distance for drivers to travel to refuel their vehicles. Blossman Gas, a founding member of Alliance AutoGas, delivers propane autogas to Mountain Mobility's headquarters for refueling.

MORE THAN JUST AN ENVIRONMENTALLY FRIENDLY FUEL

While vehicles fueled by propane autogas significantly reduce greenhouse gas emissions, Mountain Mobility is gaining more than just a sustainable operation from use of these vehicles. For example,

COMPANY

Mountain Mobility
Asheville, N.C.

INDUSTRY

Public transportation

CHALLENGE & SOLUTION

To implement a sustainable option for its fleet through the conversion of 10 Ford E-350 paratransit vans to an eco-friendly propane autogas bi-fuel system.

RESULT

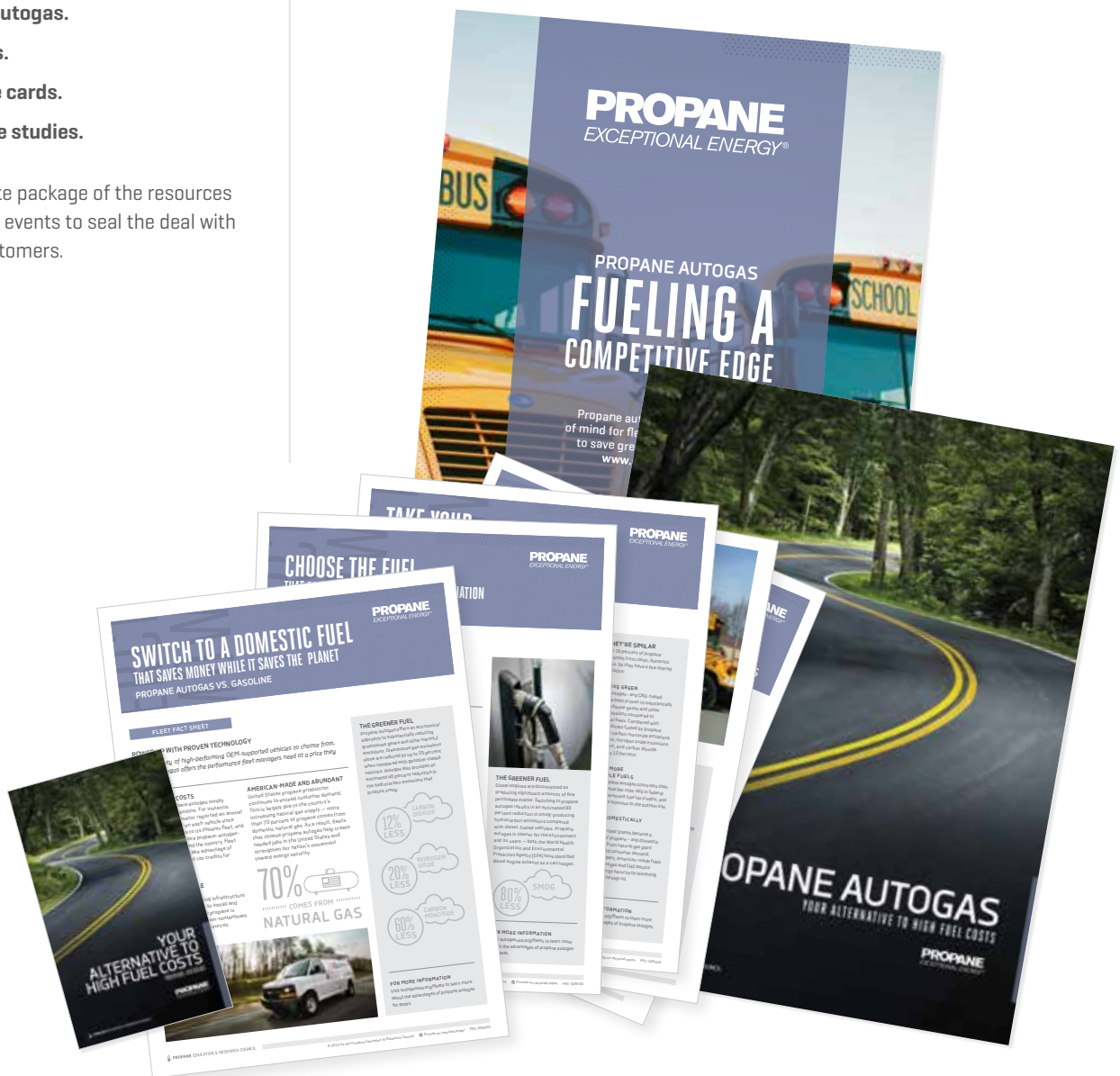
- Lower emissions.
- Lower operating costs.
- Less dependence on foreign oil.
- Longer maintenance intervals.

THE EVENT SUPPORT KIT

Local events can be a great way to meet and develop relationships with vehicle dealers, sales reps, and fleet managers. This comprehensive kit contains:

- A sign highlighting the benefits of propane autogas.
- Brochures.
- Reference cards.
- Three case studies.

It's a complete package of the resources you'll need at events to seal the deal with potential customers.



To get the most up-to-date resources and materials found in this toolkit,
visit propanemarc.com/autogastoolkit.

To learn more about propane autogas and the Propane Education & Research Council,
visit autogasusa.org.

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The Propane Education & Research Council was authorized by the U.S. Congress with the passage of Public Law 104-284, the Propane Education and Research Act (PERA), signed into law on October 11, 1996. The mission of the Propane Education & Research Council is to promote the safe, efficient use of odorized propane gas as a preferred energy source.



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