

SPRING 2011

PERC Honored for “Outstanding Body of Work” in Research

The World LP Gas Association (WLPGA) has bestowed its Distinguished Service Award on the Propane Education & Research Council (PERC) for leadership in propane technology. This is the first time an organization, not an individual industry contributor, has received the award.

PERC President and CEO Roy Willis called the award “a testament to the propane industry’s entrepreneurial spirit and its steadfast support” for PERC. “More than a dozen years ago, visionary leaders saw an opportunity to invest collectively in propane innovation. PERC was the result,” said Willis. “Today, PERC collaborates with government agencies, equipment manufacturers, university researchers, and safety and training experts to find innovative ways to use propane and train the people who handle it and use it.”

WLPGA lauded PERC for managing “one of the largest, sustained programs of research and development of propane-fueled equipment in the world.” The association said the award recognized PERC’s “outstanding body of work.”

LP Gas: Exceptional Energy for North America and Europe, a summit co-hosted in Washington by PERC, attracted more than 200 industry leaders and experts



PERC President and CEO Roy Willis, left, accepts a Distinguished Service Award on behalf of the Council from World LP Gas Association Managing Director and CEO James Rockall at the World LP Gas Association North American-European Summit in Washington.

from Africa, Asia, Australia, Europe, and North and South America.

Industry leaders including Roush CleanTech, CleanFuel USA, Blossman Gas, Ferrellgas, Autogas for America, and Alliance AutoGas addressed the high environmental and performance characteristics of propane autogas vehicles.

Outlook 2011: Higher Supply and Demand

“Any way you look at it, propane supply is growing, and the U.S. has the capability and thus the opportunity to benefit from growing propane supplies locally and globally,” declared Roy Willis, PERC president and CEO, in a recent interview with the weekly *PERC Update*.

“The fate of propane is tied up with the overall economy,” explained Willis. “So if the national economy starts growing just a little stronger, I’m optimistic that propane will do well.

After all, propane is well positioned for growth on both the supply and demand side, and that’s where you want to be in a recovering economy.”

Willis also is optimistic about demand for propane in residential construction and renovation. “That market is much smaller than it was just a few years ago, but once it rebounds — and it will, albeit slowly — propane demand will grow along with it.”

And that’s not the only reason for optimism. “We expect new propane appliances, equipment, and vehicles to drive significant growth in propane demand. But that will happen only if marketers get behind them,” encouraged Willis.

For a transcript of the Willis interview, log on to www.propanecouncil.org, click “news” and “The Outlook for Propane and PERC in 2011.”

Commercialization of Propane-Fueled Heating-and-Cooling System Nears

The propane industry and its research partners are closing in on what some call propane's holy grail — a propane-fueled heating-and-cooling system. PERC has approved funding for a proposal to undertake the final steps in the development and commercialization of an 11-ton rooftop heat pump air conditioner.

The propane-fueled, engine-driven unit, being developed by

Blue Mountain Energy, is expected to serve as the platform for other heating-and-cooling products. The project will include commercialization activities for the NextAire family of gas heat pump products offered by IntelliChoice Energy.

Log on to www.propaneresearch.com to learn more about research and development programs like this one at PERC.

Next Phase of New Micro-CHP System Demonstration Project Is Under Way

Ten field demonstration sites are planned this year in the next phase of Yanmar America Corp.'s Energy System Division's propane-fueled, micro-CHP (combined heat and power) project.

PERC President and CEO Roy Willis cut the ribbon at the ceremony commissioning two demonstration units at Yanmar headquarters in Adairsville, Ga. He was joined by executives from Yanmar and officials from the Cartersville-Bartow County Chamber of Commerce.

Willis has said this is one of PERC's highest research project



priorities. PERC co-funded the project with Blossman Gas, Georgia Power, and Yanmar to develop, certify, demonstrate, and commercialize the 10-kilowatt system.

PERC Pulls Plug on Energy Guys; Existing Campaign OK for Propane Marketers through 2011

PERC has phased out the Energy Guys campaign at the national level. The Council stopped using Energy Guys images by the end of 2010.

Under PERC's new agreement with Dan Warner, the actor who portrays Propane, and John Hemphill, the actor who portrays Electricity, propane marketers, state propane associations, and other industry members can continue using existing Energy Guys collateral through Dec. 31, 2011. But they cannot create new Energy Guys collateral, and must stop using all Energy Guys images after December 31, 2011.

PERC introduced the Energy Guys to the propane industry in 2004. The next year, the Advertising Club of Metropolitan Washington named the Energy Guys the best television campaign of the year.

PERC Action Could Increase Annual Propane Demand by Millions of Gallons

PERC has approved a proposal to develop an off-road terminal truck that will use an 8-liter propane engine in propane bobtail trucks and school buses.

The \$2 million project will help fund the development and certification of a propane-fueled terminal truck to be built by Capacity of Texas, the world's second-largest manufacturer of terminal trucks and a subsidiary

of Allied Specialty Vehicles, which also owns Collins Bus Corp., another PERC manufacturing partner.

With estimated sales of 250 to 500 trucks a year, the project could increase annual propane demand by 10 to 20 million gallons and establish a foothold for propane in a lucrative off-road market. The truck will be powered by a propane-fueled 8-liter General Motors engine developed

by Powertrain Integration for a Freightliner project funded by PERC.



Groundbreaking Energy Alternatives Powered to Market by PERC

The Propane Education & Research Council is enthusiastic about the applications, mechanics, and market potential of the Freewatt Plus and the Generac EcoGen. Both products are being brought to market as part of PERC's research and development program, which is devoted to developing propane-fueled equipment in partnership with manufacturers. For more information about what these innovations can mean to your business and to your customers, visit propaneresearch.com.

Freewatt Plus

Provides heat and generates electricity with higher efficiency and lower emissions levels than conventional heating and power generation alternatives.

Research and Development


- Assessed the performance, economic, and environmental benefits of the unit (**Docket 12199**).
- Supported a one-year field demonstration of 10 units in the upper Midwest and Northeast (**Docket 15625**).

How It Works

- As the propane-fueled generator produces power, coolant pulls heat away from engine components, preheating air entering the Energy Star furnace (warm-air) or heating water in the Energy Star boiler (hydronic).
- Auxiliary burners supplement the heating capacity of the engine generator.

Market Potential

- 3.7 million annual sales of furnaces and boilers.
- Each unit consumes about 1,500 gallons of propane per year.



High Efficiency	Converts 90 percent of fuel energy to heat and power.
Reduced Fuel Consumption	Consumes 60 percent less fuel than a typical power plant for similar generation output.
Low Emissions	Reduces carbon dioxide emissions by up to 30 percent.
Improved Comfort	Provides continuous, low-level heat, improving indoor air quality and comfort.

Available in warm-air (pictured above) and hydronic versions.

Generac EcoGen

Provides quieter, cleaner, more fuel-efficient off-grid power generation than traditional alternatives and is ideal for use in renewable hybrid systems.

Research and Development


- Developed the generator set to support energy-efficient, off-grid power generation from renewable sources (**Docket 15490**).
- Currently demonstrating seven units in a variety of settings (**Docket 16412**).

How It Works

- When the amount of power generated by wind or solar energy falls below a preset level or when site demand exceeds available power, an inverter automatically signals the generator's Generac Overhead Valve Industrial (OHVI) engine fueled by propane to drive its alternator and produce electricity.

Market Potential

- More than half of surveyed generator dealers expect renewable energy to represent 11 percent of their sales by 2020.
- Each EcoGen unit could consume more than 650 gallons of propane per year.



High Efficiency	Has a maintenance interval of 500 hours (about one year).
Extended Operating Life	Has an expected normal operating life that is three to four times longer than many competitive engines.
Continuous Power Capacity	Maintains a continuous power capacity of 6 kilowatts.
Improved System Performance	Offers higher reliability and efficiency when integrated with wind and solar energy resources in a hybrid system.
Reduced Noise	Generates only 52 decibels of engine noise under normal operating conditions.

PERC PRESS

PERC's Brian Feehan on Air, Online, in Print

Propane-fueled vehicles were the stars of the "Alternative Fuels Spotlight" segment in a recent episode of the television show "MotorWeek" that aired on Public Broadcasting System stations and the Discovery HD Theater channel.

"MotorWeek" promoted propane as one of the three most popular transportation fuels, citing commercial fleets that have already turned to propane as a "clean and affordable alternative," with "lower cost per mile, cleaner air, and lower maintenance costs."

The segment explored the use of propane-fueled trucks, taxicabs, forklifts, emergency vehicles, and school buses. It featured an interview with Brian Feehan, PERC vice president, touting propane as a "cost-effective, alternative solution."

The episode is now available in "MotorWeek" archives at www.video.pbs.org. Click "MotorWeek" under the programs tab. Scroll down to "full episodes" and find the original airdate of December 4. The "Alternative Fuels Spotlight" is featured about six and a half minutes into the episode.



Feehan also wrote an article in the online edition of Landscape & Irrigation magazine on propane mowers. Log on to www.landscapeirrigation.com, click "articles and archives," and search for "The Power of Propane."

Propaneville Farms Receives New Top Nods

PERC's Propaneville Farms has earned more recognition. The virtual propane-fueled farm tour, available on www.agpropane.com, has won a prestigious Gold Addy Award in an interactive media category from the Advertising Club of St. Louis.

Mark Leitman, director of agriculture programs, said PERC is "thrilled" by the accolade. "We designed the website to be engaging so visitors would want to learn more about new propane-fueled equipment for the farm," he explained.

The Gold Addy recognizes the highest level of creative excellence in

media. Propaneville Farms features propane equipment in six areas, including weed control, engine power, and pest control.

Recently, Leitman served as the special guest on a Kansas Agriculture Network's "Ag Issues" program. He touted several new PERC projects, including Propaneville Farms, as well as Propane FEED (Farm Equipment Efficiency Demonstration; more information on www.agpropane.com). The interview aired on the Kansas Agriculture Network's 27 affiliate stations, reaching more than 182,000 listeners.



Propane Builder Website Wins Digital Strategy Award

PERC's residential building website, www.buildwithpropane.com, has won a Gold Pearl Award for best overall digital strategy. The award from the Custom Content Council recognizes the site's integration of training, news, and research in an easy-to-navigate format. PERC promotes the site through a monthly e-mail newsletter, *Propane Energy Update*.



PERC Videos, Tutorials, Webinars: New Ways to Spread Word

For the propane industry, safety is our highest priority, and it shows in the many consumer safety materials available to marketers.

PERC has worked closely with the propane industry to create a comprehensive collection of consumer safety materials that you can use to deliver important safety messages to your customers and neighbors. The video features consumer safety materials in a variety of formats, including brochures, interactive e-learning modules, and radio advertisements. Check out the full lineup of courses at www.propanetrainingacademy.com.



"Propane in Your Community" explains the uses, benefits, and strong safety record of propane and propane facilities to homeowners, business owners, and government officials in your community.

The brochure and customizable PowerPoint presentation remind



audiences that many of their neighbors rely on propane at home, at work, on the road, and on the farm. Buy copies of the brochure (PRC 006500) from the Propane Marketing and Resource Catalog at www.propanemarc.com or by calling 866-905-1075. The PowerPoint presentation deck is available at www.propanesafety.com.

And here's a sampling of the webinars now available on www.percthirdthursday.net:

- Engine Fuel: Representatives of Impco Technologies discuss equipment that allows transportation and industrial engines to run on propane.
- Liquid Propane Injection: Albert Venezia, chairman of Icom North America, updates the company's new EPA-certified bi-fuel propane engine system using liquid propane injection.
- Propane Mechanic Certification Process: Bob Rodriguez, manager of specialty programs at the National Institute for Automotive Service Excellence, takes a closer look at the development of a new ASE test for propane engine mechanics.

Partnership with States Promotes Safety, Training, Product Development

The deadline is nearing for state propane councils and foundations to apply to get a big boost from a national program designed to stimulate investment in propane safety, training, and research and development. PERC's Partnership with States program offers a dollar-for-dollar match for the following programs:

- Engine fuel road shows.
- On-road vehicle purchase and placement data collection.
- Demonstration vehicle data collection.
- Commercial mower purchase and placement data collection.
- External professional training.
- Propane Emergencies program.
- Consumer safety messages.
- Safe appliance installation rebates.

State propane councils and foundations must apply by June 30, 2011, to receive partnership funds. Log on to www.percgms.com.

Looking Ahead: 2011 Council Meetings

April 15: Atlanta

July 13-14: Portland, Ore.

October 13-14: Washington

December 7-9: Houston

Did You Know?

Propane-fueled mowers reduce greenhouse gas emissions by nearly 50 percent compared with gasoline-powered mowers.

PERC Training Full Speed Ahead

Hazmat Training for Propane Employees

Federal regulations require employees who handle or transport hazardous materials to get hazmat training in the first 90 days of their employment and refresher training every three years thereafter.

The "Initial OSHA & DOT Training: First 90-Day Employee Hazmat Training" program is now available in a textbook and an e-learning DVD from PERC. Among the topics:

- Propane security: personnel security, unauthorized access, en route security.
- What to do after a crash involving a propane delivery vehicle.

- Materials of trade exemptions.

Order copies of the textbook (PRC 009016) or the e-learning DVD (PRC 009015) at www.propanemarc.com or by calling 866-905-1075.

For more information on the training, go to www.propanesafety.com.



Marketer Technology Training Supports Research, Development

The first PERC Marketer Technology Training of 2011, held in Bloomington, Minn., drew more than two dozen marketers. The program supports the industry's research and development efforts by giving you tools and information you can use to help customers adopt propane applications that can increase propane demand year-round. The Bloomington event, hosted by the Minnesota Propane Association, featured modules on tankless water heaters and commercial mowers. The next confirmed program is scheduled for May 19 in Concord, Va., and others are being added all the time.

Go to www.propanecouncil.org/MTT for details. In 2010, the program trained nearly 500 propane retailers across the country.



PERC Designs Training Opportunities for Architects at Reinvention Symposium

The 7th Annual Reinvention Symposium in New Orleans provided an ideal venue for PERC to offer free propane training to architects, who were able to earn up to 18 continuing education credits approved by the American Institute of Architects. As a sponsor of the event, PERC also held a visible role at the Residential Architect Leadership Awards Luncheon.

Alternative Fuel Workshops Train Fleet Managers on Sustainability

PERC and the other members of the Alternative Fuels Trade Alliance continue their nationwide training program this year. Alternative Fuels Educational Workshops started in March 2010 and 12 have taken place in Indiana, Virginia, Alabama, Arizona, New York, and Texas, and in the major cities of Denver, San Diego, and Seattle.

The 14 training seminars, including two scheduled for 2011, were made possible by a \$1.6 million grant from the Energy Department. More than 600 fleet managers, media, marketers, auto dealers, policy makers, first responders, safety managers, station owners, and the general public attended. Nearly 1,000 watched one of the sessions live online. The workshops focused on alternative fuel quality, infrastructure, available vehicles, safety, the latest technologies, and the environmental impact of propane autogas, ethanol, biodiesel, and compressed natural gas.

Remaining workshop sites for 2011 are Orlando, Fla., and Kansas City, Mo. Register at www.altfuelsalliance.org.

Archived webcasts also are available on that website. For more information on PERC and its propane autogas programs, visit www.autogasusa.org.



PERC on the Road

2011 International Builders' Show Attracts 50,000

Construction professionals from around the world found a focus on propane at this year's National Association of Home Builders' International Builders' Show (IBS) in Orlando, Fla.

PERC offered three free 30-minute "Meet the Expert" sessions and a 90-minute training course throughout the week. The sessions covered standby generators, residential water and space heaters, and custom outdoor innovations with gas, among other topics.

Also at IBS, PERC was a sponsor of the KB Home GreenHouse, a net-zero home designed by Martha Stewart that was part of Builder magazine's Concept Home Series. The home featured an underground propane tank that fueled the outdoor fireplace and grill, the indoor fireplace, the dual-range and oven in the kitchen, and the backup generator.



See www.builderconcepthome2011.com.

Also rolling into IBS was the propane-fueled Roush CleanTech E-350 cutaway van that will be used on the TV show "Man Caves." The van was featured in the Ford booth.

Two new studies by Newport Partners LLC were commissioned by PERC and unveiled at IBS. They evaluate the economic and environmental impact of residential water heating and efficient upgrades to existing homes. Download the analyses at www.buildwithpropane.com.

Propane Marketers, Firefighters to Gather in New York State

The next Propane Emergencies Industry Responders Conference will be held June 20-21, 2011 at the New York State Fire Academy in Montour Falls.

The conference, sponsored by PERC in partnership with the New York Propane Gas Association (NYPGA), will bring propane marketers and emergency response professionals together to share ideas and perform live propane exercises and demonstrations.

Go to www.propanesafety.com and search for "Montour Falls" to find the save-the-date brochure.



Your News, Your Way Daily Email News Roundup

Designed specifically for propane industry professionals, PERC SmartBrief is a free *daily* email newsletter. It provides the latest news on propane markets, the energy sector, and leadership and management. Read news that matters to leaders in the propane industry.

- Find summaries of the top stories handpicked from hundreds of publications.
- Get exclusive updates on industry activities and events.
- Stay on top of research and development, training, and safety programs.

Weekly Email Newsletter

Get a *weekly* roundup of PERC news every Friday in *The PERC Update*. It's the perfect complement to the daily PERC SmartBrief.

Sign up now for PERC SmartBrief and *The PERC Update* on www.propanecouncil.org.

Did You Know?

More than 15 million vehicles operated on propane autogas in 2009.



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Would you like to read about a particular compliance question in an upcoming newsletter? Send your suggestions to Stuart Flatow, PERC vice president in charge of safety and training, at stuart.flatow@propanecouncil.org or call (202) 452-8975.



www.npga.org

EPA Proposal to Streamline Alternative Fuel Vehicle Conversions

The Environmental Protection Agency is proposing to amend the current regulations for aftermarket fuel conversions, which took effect on September 21, 1994 (40 CFR part 85 subpart F). This proposal updates regulations that apply to manufacturers of light-duty vehicle and heavy-duty highway vehicle and engine clean alternative fuel conversion systems. The proposed revisions would streamline the compliance process while maintaining environmentally protective controls.

Current EPA regulations require vehicle and engine conversion systems to be covered by a certificate of conformity to gain a regulatory exemption from potential tampering charges. EPA evaluated this

requirement and believes it is appropriate to introduce new flexibilities for all clean alternative fuel converters and expand the compliance options in certain conversion situations. EPA proposes to amend the regulatory procedures in 40 CFR part 85 subpart F and part 86 to establish these new compliance options.

The proposed approach builds on the concept that it is appropriate to treat conversion requirements differently based on the age of the vehicle or engine being converted. Testing and compliance procedures would differ based on the age category of the vehicle or engine that is converted: new and nearly new, intermediate age, or outside useful life.

Overview of Proposed Alternative Fuel Vehicle Conversion Program Elements

Vehicle/Engine Age		Conversion Manufacturer Requirement			Certificate Issued?
Category	Applicability	Example for 2010 ¹	Demonstration	Notification	
New	Model year \geq current calendar year - 1	Model year 2009, 2010, 2011, and $<$ useful life mileage	Exhaust, evaporative, and on-board diagnostics (OBD) testing ²	Certification application	Yes
Intermediate age	Model year \leq current calendar year - 2 and $<$ useful life	Model year 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, and $<$ useful life mileage	Exhaust and evaporative testing and OBD attestation	Data submission ³	No
Outside useful life	Exceeds useful life	Model year 2000 and older or $>$ full useful life in mileage	Seeking comment on three options	Compliance application	No

Note:

¹ This example is for light-duty Tier 2 vehicles that have a useful life of 10 years or 120,000 miles.

² Exhaust and evaporative refer to all exhaust emission testing and all evaporative emission and refueling emission testing required for new vehicle certification, unless otherwise excepted.

³ EPA is proposing that the compliance notification process for intermediate age and outside useful life conversion would be an electronic submission of data and supporting documents.

The propane industry has weighed in on this proposal in support of EPA's efforts to streamline the vehicle conversion process. Most conversions occur in the vehicle fleet segment and enjoy federal or state funding. Consequently, because these funds are often applicable only to EPA-

certified vehicles, EPA was advised that the proposed changes should not preclude the ability of those entities that wish to convert their fleets through outside funding because certificates of conformity were no longer issued.

Pipeline Agency Looks to Incorporate Special Permits in Hazmat Regulations

The Pipeline and Hazardous Materials Safety Administration is proposing to amend the hazardous materials regulations (49 CFR Parts 171-180) to incorporate provisions contained in certain widely used or longstanding special permits that have an established safety record. Special permits allow a company or an individual to package or ship a hazardous material in a manner that varies from the regulations so long as an equivalent level of safety is maintained. When adopted, the revisions provide wider access to the regulatory flexibility offered in special permits and eliminate the need for numerous renewal requests, thereby reducing paperwork burdens and facilitating commerce while maintaining an appropriate level of safety.

The administration has already finalized one rule-making that incorporated long-standing special permits into the regulations, and it is now in the midst of a second rulemaking addressing another set of special permits. The second round includes two special permits used by members of the National Propane Gas Association relating to farm carts (SP-11209) and transportation of a consumer storage tank with more than 5 percent propane in the tank (SP-13341).

If SP-11209 and SP-13341 are adopted by the administration and incorporated directly into the hazmat regulations, then there will no longer be a need to obtain special permits in the future.

Energy Department to Use Full-Fuel-Cycle Analyses to Evaluate Efficiencies, Emissions

2

Acting on recommendations of the National Academy of Sciences, the Energy Department proposes to modify the methods it uses to estimate the likely impacts of energy conservation standards on energy use and emissions for covered products and covered equipment. The department also plans to expand the energy use and emissions information made available to consumers. Specifically, it proposes to use full-fuel-cycle measures of energy and greenhouse gas emissions, rather than the primary energy measures it currently uses. The department proposes to work collaboratively with the Federal Trade Commission to make energy and emissions data available in a way that will help consumers make cross-class comparisons.

Primary energy includes energy consumed on site and any energy losses that occur in the generation, transmission, and distribution of electricity. The point-of-use method for measuring energy consumption considers the use of electricity, natural gas, propane, or fuel oil by an appliance at the site where the appliance is operated. Point-of-use measures of energy consumption presented in the physical units typically used

for the relevant fuel (or electricity) are used for setting energy conservation standards. Before choosing an energy conservation standard, however, the Energy Department performs several analyses to estimate the likely impacts of candidate standard levels. The department now uses primary energy measures of energy consumption in several of these analyses.

Under the proposal, the Energy department would use a full-fuel-cycle measures of energy and emissions called the GREET model in the impact assessments included in future energy conservation standards rulemakings. GREET, which stands for Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation, was developed for the department by Argonne National Laboratory to help users compare the total energy use and GHG emissions of vehicle technologies and different fuels.

The proposal is welcome news to the propane industry, as a recent study funded by PERC to evaluate the impact of propane on greenhouse gases used the GREET model. The propane industry has long supported the concept of full-fuel-cycle analyses.