

R&D: Planning for the Future

Necessity is the mother of invention, and so it goes that the propane industry relies on invention—in this case research and development—to create new fuel sales opportunities and stay competitive in the marketplace, as well as to meet and exceed customer expectations and government regulations.

By ensuring the viability of propane-powered forklifts beyond 2007, assessing and improving the propane fuel supply chain, and creating ways for airports nationwide to maximize the benefits of propane, PERC's Research and Development Advisory Committee (RDAC) programs help the propane industry continue its leadership role and continue to drive fuel sales in these important markets.

Forklift Fuel Systems Technologies Study

PERC recently announced that initial test results show propane fuel control systems being tested at the Southwest Research Institute can meet 2007 EPA standards for both steady state and transient operating conditions. The goal of the 2007 EPA standards is to reduce emissions as well

as introduce transient testing protocol.

The results are from the first phase of a \$1.39 million research study funded by the propane industry to assess fuel system technologies and fuel quality issues relative to large spark ignition (LSI) non-road engines. The tests analyzed closed-loop carburetion incorporating three different forklift catalysts. Tests monitored the fuel systems' air/fuel ratio, which requires precise control in order to meet both steady state and transient operating conditions. Researchers are now conducting the critical durability testing on the systems.



Propane powers majority of Class 4 and 5 lift trucks nationwide.

Fuel Supply Chain Projects

Five research grants totaling more than \$675,000 will be awarded before January 2005 to study aspects of the propane fuel

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Agriculture Commodity Study Complete

With a record 1.6 billion gallons of propane used in 2002 by farmers in the United States, propane-fueled technologies are rapidly emerging to meet the agricultural community's demands for weed control as well as drying, heating, and irrigation solutions.

To prioritize investments in these technologies, the propane industry recently completed a research study of the top 33 commodities tracked by the U.S. Department of Agriculture.

"PERC's Agriculture Advisory Committee identified a need for valuable market information to direct investments for new propane agriculture technologies and applications as well as help increase utilization through communications programs," says PERC Agriculture Programs Manager Mark Leitman. "This data now gives the committee an easy-to-use tool for assessing which agricultural commodities and propane applications hold the greatest potential for return on investment."

The extensive project analyzed market size, production costs, trends and issues,

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www.propanecouncil.org

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PROPANE
EXCEPTIONAL ENERGY[®]

Safety and Training Program Welcomes the 21st Century

Safety and Training is moving from pen and paper to mouse-clicks and computer screens, providing the propane industry with instant access to the latest information available.

www.propanesafety.com is the propane industry's newest electronic warehouse of safety and training information. The website is designed to be the first stop for propane professionals and emergency responders looking for safety and training materials.

The website includes information from the Propane Regulatory Compliance Program, including a searchable compilation of all federal compliance regulations from the U.S. Department of Transportation, Occupational Safety and Health Administration, and U.S. Environmental Protection Agency that

apply to propane marketers. Other sections include the GAS Check® program, a resource library and a registration area for the National Trainer Database, which provides objective information to help groups find a trainer in their area.

Featured on the website is the Propane Emergencies program, with 20 scenarios providing guidance on dealing with situations ranging from battling a fire involving a stationary tank to handling an overfilled tank. The Propane Emergencies section also includes the program's textbook, instructor guide, and instructor's workshop area with teaching tips.

And in response to industry demand for additional flexibility, the Propane Emergencies Marketer Outreach Toolkit is now available in CD-ROM format,

while the Propane Emergencies training video is now offered on DVD. The DVD and CD-ROM are packaged together in a single jewel case.

The materials were developed by PERC and the National Propane Gas Association in cooperation with Hildebrand and Noll Associates, Inc. to help propane marketers build relationships with local law enforcement and emergency responders as well as conduct walk-through training sessions of propane facilities.

The Toolkit, a condensed version of the Propane Emergencies educational curriculum, uses PowerPoint presentations and video segments to help propane marketers conduct a two to three-hour training session for emergency response personnel at a propane facility.

The toolkit is available for purchase through the online *Propane Industry Resource Catalog* at www.propanecatalog.com or by calling customer service at (866) 840-1075.

Agriculture Commodity *continued from page 1*

production models, and producer buyer values of the top 33 commodities as well as the top commodities in the organic market. Commodities were organized into six categories – row crops/small grains, livestock, nuts and fruit trees, produce, specialty, and greenhouse/nursery.

The research indicated that the best opportunities for propane in the overall row crop/small grain category are for grain drying and irrigation pumping. However, the growing organic row crop and small grain industries are expanding production and will likely require technologies for weed and pest control.

According to the study, heating will likely remain the top propane application for livestock, particularly in the broiler industry. While there are not many propane technologies for waste treatment, it is an area where producers have a need as animal waste becomes more regulated.

And because irrigation engines and

small tractors are standard equipment for nut and fruit producers, the commodity study suggests that the propane industry should research developing these applications. For nuts and fruits grown in regions susceptible to frost and freezing, in-field heating is also a viable market for propane.

Produce, which includes fresh fruit and vegetables, is a small, high-value market, and organic produce is popular with consumers. Based on the report, steam cultivation for weed and pest control offers promise for propane, and propane could also play a role for produce items requiring storage needs.

The diversity of the specialty category showcases the potential for propane in a variety of applications. For cotton, propane could emerge as a defoliant, while in organic cotton, propane could be used in weed control. Propane is already a proven energy source for curing tobacco, but it could also be used in hay and peanut production.

In greenhouses, the greatest potential for propane lies in heating, and propane may also have value for weed control, irrigation, and heating at nurseries.

With more than 2.3 million organic acres now in the United States, USDA indicates that organic production will continue to rise as more agricultural producers look to boost farm income through these high-value markets.

Organic producers value propane because it burns cleaner, reduces emissions, and can be used for a variety of applications. These producers also cited propane's reliability and portability as benefits.

The commodity study showed that organic crop producers want weed and pest management technologies, which create growth opportunities for propane's flame and steam cultivation. Propane heating is also a core application for organic livestock producers.

Branded Vehicle Program Wants You!

Help take the *PROPANE Exceptional Energy®* message nationwide by participating in the industry's Branded Vehicle Program.

Promote the propane industry by placing high quality, highly visible propane decals on your company's vehicles. The decals include the *PROPANE Exceptional Energy®* logo as well an image from the Energy Guys ad campaign.

Want to participate? It's simple:

- Order your decals through the *Propane Industry Resource Catalog* at www.propanecatalog.com or by calling customer service at (866) 840-1075.
- Download the decal artwork from the Online Ad Kit at adkit.propanecouncil.org.
- Ask your truck dealer to include decals when you order your truck.

For more information, contact PERC Projects Coordinator Nisha Starks at (202) 452-8975 or nisha.starks@propanecouncil.org.

2003 ANNUAL REPORT NOW AVAILABLE

The Propane Education & Research Council's 2003 Annual Report is now available online at www.propanecouncil.org. In addition to providing the 2003 financial statements and a list of approved state rebates, the 16-page report highlights consumer education, safety and training, research and development, agriculture, and industry programs activities.

In an effort to reduce printing costs, a limited number of copies are available upon request. For more information, contact PERC's Lesley Garland at (202) 452-8975 or lesley.garland@propanecouncil.org.

New Fire Safety Analysis Manual Now Available

Creating the required written fire safety analysis for all LP-gas/propane storage tank installations of more than 4,000 gallons water capacity is now easier with the new *Fire Safety Analysis Manual*.

The manual, developed by the National Propane Gas Association (NPGA) and the National Fire Protection Association (NFPA) through a grant provided by PERC, provides forms and a step-by-step method for completing a written FSA as explained in the 2001 edition of NFPA 58, the "LP-Gas Code," which is the internationally recognized standard for LP-gas installations.

While performing a fire safety analysis still requires a detailed analysis of the facility, its neighbors and the local response community, the new manual offers the industry an important tool for addressing the basic components of a fire safety analysis. This includes evaluating the total product

control system, analyzing hazards within a facility, determining the probable effectiveness of local fire departments, and evaluating the application of water by hose streams or other methods.

In addition to providing a valuable tool for system installers, consultants, and enforcement officials, the manual is also a reference document for code enforcement officials, especially those who may be unfamiliar with propane facilities.

PERC, NPGA, and NFPA are offering the manual as a free download from their websites, and the manual's Appendix A, which includes tables and forms, is available as a separate download. Order printed copies of the manual for \$9 each through the *Propane Industry Resource Catalog* at www.propanecatalog.com or by calling customer service at (866) 840-1075.

After this issue, the Propane Marketer Compliance Newsletter has a new home at www.propanesafety.com. The newsletter will still be available, but to eliminate printing and mailing costs, it will only be available online. And in addition, you will be able to access past issues at no cost. See the Propane Marketer Compliance Newsletter for more details, and visit the propanesafety.com resource library for back issues.

Forklift Maintenance and Training Program Schedule is Here

The program, designed for pre-2002 open-loop forklift models, consists of a one-day course that trains attendees in the proper procedures for maintaining and repairing Class 4 and 5 large spark ignition propane-powered forklift fuel systems. The course includes shop exercises that assess the overall fuel system of a forklift, and a classroom session reviewing technical issues and specifications.

For additional program details or to register online using PayPal, visit www.propanevehicle.org/mainpages/forklifts/fmtp/.

SCHEDULE:

| | |
|-------------------|-------------------|
| November 5, 2004 | Portland, OR |
| November 19, 2004 | Denver, CO |
| December 6, 2004 | Greensboro, SC |
| December 14, 2004 | Memphis, TN |
| January 14, 2005 | Indianapolis, IN |
| January 21, 2005 | Oklahoma City, OK |
| February 11, 2005 | Chicago, IL |
| February 18, 2005 | New York, NY |
| March 14, 2005 | San Antonio, TX |
| March 21, 2005 | Toledo, OH |
| April 8, 2005 | Philadelphia, PA |
| April 22, 2005 | Baton Rouge, LA |

R&D continued from page 1

supply chain. The research grants were developed by the propane industry in response to the possible need to match fuel composition to the requirements of new technologies. Initial results are expected in the first quarter of 2005.

The five independent projects will result in a series of recommended practices and tools that will help ensure propane fuel quality that meets customers' needs. Specifically, the projects are investigating:

- Propane supply chain practices
- Analysis of propane fuel composition used today
- Effects of water and solid contaminants
- Propane hose permeability and leaching study

- Handheld or portable propane fuel composition devices

Vision 100 Program

In December 2003, the propane industry funded a detailed market analysis of major airports that determined 30 percent of airports currently use propane. It also reported that through the Federal Aviation Administration and U.S. Department of Transportation's Vision 100 program, the majority of the busiest airports could receive incentives to use alternative fuels, including propane, to reduce emissions. To take advantage of almost \$300 million in incentives, the Council recently awarded the Propane Vehicle Council a grant to develop and implement a comprehensive plan for a

series of airport-centered propane vehicle and infrastructure projects. The project will create the tools and partnerships necessary to accomplish two primary goals for the industry: increasing the number of gallons used in the transportation sector and capitalizing on the benefits from Council investments in propane engine, vehicle, and infrastructure technologies.

These three programs highlight some of the major work that RDAC is spearheading, but it doesn't end here. Research and development projects continue to advance propane's role in several areas, from energy cogeneration to fuel cells to remote sensing technology. All of this helps keep the propane industry on the cutting edge and expands the horizon for propane marketers everywhere.

Propane Catalog Update

Use the *Propane Industry Resource Catalog* to help your business with the latest collection of Energy Guys-themed merchandise.

The Energy Guys are prominently featured in several new items, including:

- Brochures promoting propane's benefits to manufactured homebuyers.
- Tent cards identifying propane appliances and their benefits in model homes.
- Safe Grilling bill stuffers, hang tags, and cage cards.

- Vinyl banners featuring the "Exceptional Energy" message.
- Life-sized cutouts of Propane and Electricity.

All of these items have been added since the printed catalog was released; so view items by visiting the *Propane Industry Resource Catalog* at www.propanecatalog.com or order by calling customer service at (866) 840-1075.

Calendar

Oct 7-8 - Yosemite National Park, Fish Camp, CA

Council Meeting -
Research and Development Marquee Mission

Nov 16-18 - Washington, DC

NPGA/PERC Conference with
State Executives

Dec 9-10 - Houston, TX

Council Meeting -
Consumer Education Marquee Mission

Propane Education & Research Council

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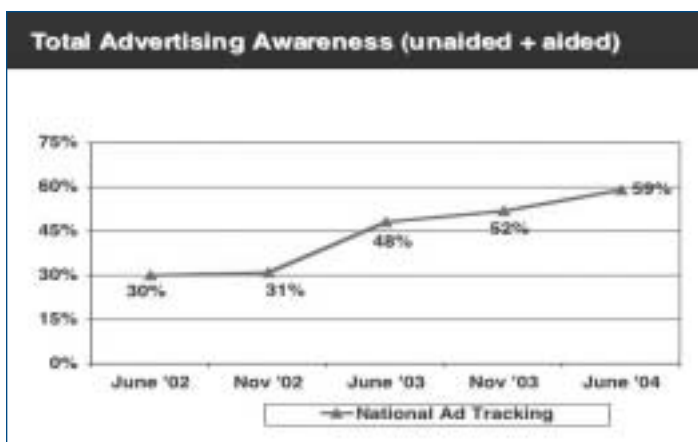
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Consumer Education Mid-Year Report: Campaign Reaches New Highs Despite A Challenging Marketplace

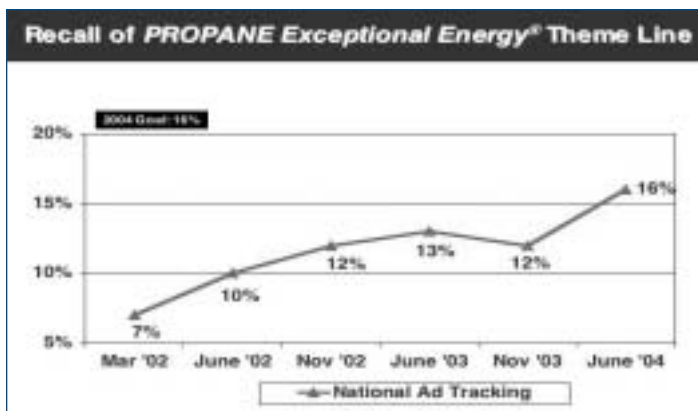
The first phase of this year's campaign began in early February and concluded at the end of May featuring television, radio, online and print advertising, as well as a series of specialized media outreach campaigns.

Awareness of the Energy Guys is High

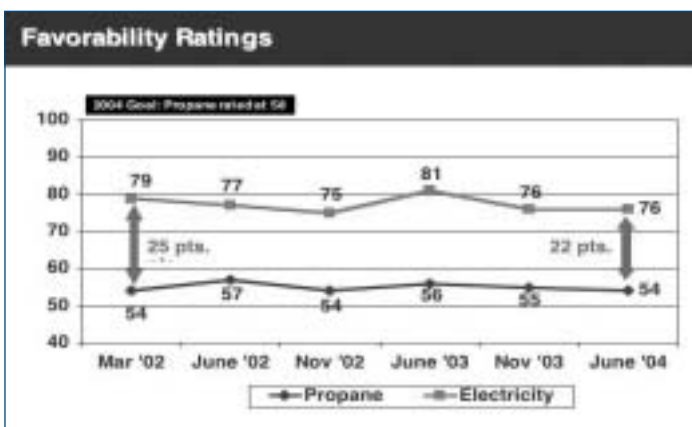


To assess the impact of the advertising and outreach efforts, WirthlinWorldwide conducted hundreds of telephone interviews to assess consumers' awareness of propane news and advertising, their interest in obtaining further information, their general favorability toward propane, and their connection of propane to the key strategic message elements of the campaign.

Continued growth in awareness is anticipated in the coming months. Particularly successful was recall of the *PROPANE Exceptional Energy®* theme line.

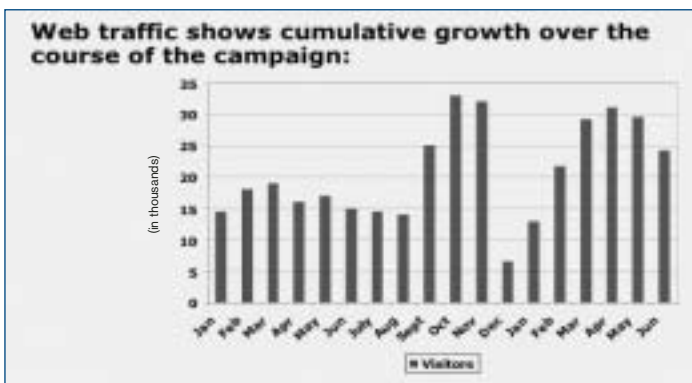


Favorability Measures Holding Steady



Expected increases in the favorability measure did not materialize, however, due to a very challenging energy environment. A comparison of the major energy players showed that while propane measures held steady, other energy industries (including oil and gas), saw favorability decreases. Wirthlin noted price instability, Middle East tensions, and concerns over terrorism as factors contributing to the challenging environment. Other measures that track agreement with the campaign's strategic messages (propane is a good value, reliable, clean, trusted energy source) saw declines for similar reasons.

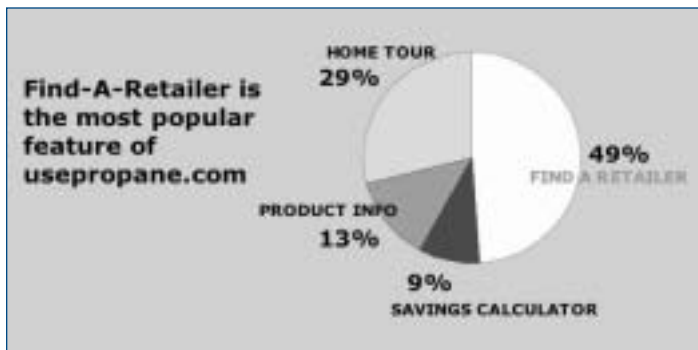
usepropane.com Turns Interest Into Sales



One indicator of the campaign's success is the increasing number of visitors to usepropane.com. The chart above

shows how the number of visits to the web has grown over the course of the campaign.

And those visitors are looking for a propane marketer to talk to, with the Find A Propane Retailer page ranking as the most popular feature on the site.



In the current negative energy environment, advertising is the one message channel that can be completely controlled. Advertising helps steer attention away from potentially negative price issues. Advertising allows the propane industry to tell the story about the benefits of propane above and beyond price – efficiency, reliability, and value.

To help work through the current marketplace challenges, the propane industry is doing three things immediately. We increased our media reach and frequency to ensure that the target audience sees and hears the positive messages more often. We are adjusting the messages to ensure the strongest possible delivery of the “value” message. We are also looking at our public relations activities planned for the fall to see if some efforts should be redirected to help drive home this message of “value” more directly.

The good value message will be strengthened with a heavier rotation of “Cold Turkey,” the hot water spot identified by consumers as having the strongest value message. New radio spots will be added, while existing television spots may be re-edited to deliver a stronger good value message. Online ads are being revised and print copy is being examined to ensure that value is at the core of the message.

Promoting Propane Among Homeowners

Media outreach campaigns have successfully promoted the



benefits of propane to more than 60 million people in print articles as well as on radio and television news programs. The overall campaign is designed to provide media with key propane

messages through a series of seasonal outreach efforts.

Reliability, Tankless Water Heater, and Outdoor Living campaigns produced stories in *This Old House*, *The Washington Post*, *The Charlotte Observer*, and the *St. Louis Post-Dispatch*, among others. Additional outreach efforts focusing on cooking and home heating are planned for later this year.

Messages from the propane industry's Safe Grilling campaign appeared on more than 170 television news broadcasts and in several Associated Press reports. New Safe Grilling sales materials featuring the Energy Guys are also now available in the *Propane Industry Resource Catalog* (www.propanecatalog.com).



Growing Relationships With Homebuilders

Through the National Council for the Housing Industry, PERC is now a liaison to the National Association of Homebuilders on the Design and Custom-Built committees. Also, a grass-roots marketing initiative is now underway that will provide propane marketers with materials to present to local builders.

This summer, the propane industry placed a story in *Nation's Building News Online* about the value of tankless propane water heaters, and another story is expected shortly describing propane-powered temporary construction site heat. In addition, fall stories are expected in top-tier builder publications, including *Professional Builder* and *Builder* magazines.

Increasing Visibility With the Trades

Fleet and forklift media placements have seen steady growth in the last few years. More than 1 million media impressions have already been earned this year by the two trades, including articles in *School Transportation News* and *Material Handling Management*, as well as *The Oregonian* newspaper. The most popular outreach efforts to date have been the propane school bus national tour and the Overnite Transportation forklift case study.

Keeping Everyone Informed

Communication with the propane industry remains a vital part of the campaign's success. Numerous stories have been placed within industry publications such as *Butane-Propane News* and *LPGas* to keep every marketer armed with the tools, skills, and information needed to grow individual propane sales. In addition, PERC's industry newsletter, *In Touch*, is published quarterly and distributed to the industry at large.

PROPANE MARKETER COMPLIANCE

NEWSLETTER

PROPANE
EXCEPTIONAL ENERGY

INSIDE THIS ISSUE

2 Searchable Version of PERC's Regulatory Compliance Guide Now Available on the Internet

3 PERC Compliance Newsletter Goes Online Too

3 FMCSA Revises Driver Medical Forms

Future Issues:

■ Which Regulatory Violations Are Most Frequently Cited by OSHA & DOT?

■ FMCSA Revises Driver Medical Forms

Be sure to keep this final printed version of the *Propane Marketer Compliance Newsletter*. It contains the instructions for accessing this valuable resource electronically in the future via PERC's safety and training website.

Searchable Regulatory Compliance Guide Now Available Online

Is there anyone who wants to spend more time dealing with compliance issues and less time focusing on selling propane and providing services to customers?

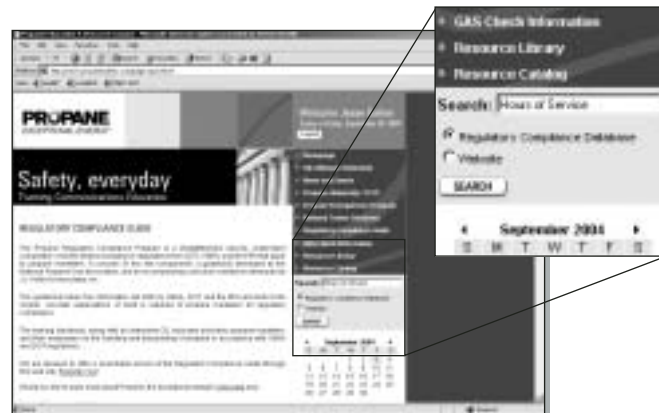
To simplify compliance issues, the propane industry can now use the *Regulatory Compliance Guide* online, one of several features on the propane industry's newly redesigned safety and training website, located at www.propanesafety.com.

Registration Is Simple

New users must sign on to the website at the top right-hand corner of the page. On the first visit, users are asked to provide information in a user profile and create a password.

After completing the user profile and creating a password, an e-mail is sent confirming the new password. From that point forward, when you visit the propane safety website your email address will

appear in the top right-hand corner blank in the **Sign In Here** block. Log in using the password you created.



After logging on, use the links menu and search features that appear in the right-hand column.



Available Online *continued from page 1*

Topic Searches of the Regulatory Compliance Guide Database

The *Regulatory Compliance Guide* takes information from the Occupational Safety and Health Administration, U.S. Department of Transportation, and the U.S. Environmental Protection Agency and translates it into simple explanations of what regulations are required from propane marketers.

To find current regulatory information on topics such as driver hours of service or DOT cylinder requalification, simply type in the topic in the **Search** blank, verify that the dot appears next to **Regulatory Compliance Database**, then press the **SEARCH** button.



The results of your search will appear as shown here. Select the document(s) listed to get the latest regulatory information on the subject.

If another topic search, "Requalifying DOT cylinders," is used, the first document link produced by the search connects you to **Compliance Guide No. DOT 31** as shown to the below.



The search feature can also be used to find other documents and topics available through the safety and training website by clicking on the circle next to **Website** in the **Search** panel.

Propane Marketer Compliance Newsletter Goes Electronic

This is the final printed version of the *Propane Marketer Compliance Newsletter*. But you are not losing this safety and compliance resource because it will be available to you in an electronic format. Producing the newsletter electronically is less expensive and provides additional features for users, including being able to access past issues on demand.

Clicking on the **Resource Library** menu link allows you to access past issues of the compliance newsletter and other useful documents.



The most current issue of the *Propane Marketer Compliance Newsletter* will also be in the **News and Events** linked pages and/or featured in the **What's New?** block at the bottom-center of the website page.

PERC Vice President, Safety & Training Stuart Flatow and Director of Information Technology Meg Guegan are responsible for developing and implementing these new safety and regulatory compliance tools. They anticipate an appreciable savings in document printing and mailing costs while making these resources more useful and available to propane marketers and other propane industry stakeholders.

FMCSA Revises Driver Medical Forms

In accordance with an Advisory Panel recommendation of October 2002, the Federal Motor Carrier Administration (FMCSA) revised the blood pressure guidance in 49 CFR § 391.41, **Instructions for Performing and Recording Physical Examinations**, and the wording of medical forms used by medical professionals to evaluate threshold criteria for driver high blood pressure. The revisions are viewed as an effort to encourage medical professionals to apply the recommended voluntary threshold to more critically evaluate drivers' blood pressures.

The new guidelines define three stages of hypertension and direct the physician or medical professional to certify driver medical qualification for a 1-year, 6-month, or 3-month period corresponding to the severity of the hypertension and the driver's response to medication or other treatment. The effective date for the revised guidelines is September 30, 2004.

To see the October 2002 report, visit www.fmcsa.dot.gov/pdfs/cardio.pdf.

Regulatory Reminders

- Drivers' hours of service rules are subject to change pending the Federal Motor Carrier Safety Administration's response to a Federal Court order. Stay alert for any announcement of interim rules or other alternatives FMCSA and the courts may develop.
- Cargo tank discharge control inspections and tests, along with delivery hose assembly inspections, must be performed and documented monthly.
- Driver vehicle inspection reports (DVIRs) must be completed each day a commercial motor vehicle is operated. Periodically check DVIRs to assure they are completed as required by the Motor Carrier Safety Regulations and that repairs and unsafe conditions are properly corrected and documented.

Do you have compliance issues or concerns that are of particular interest to you and that would be helpful to others in the propane industry if covered in this newsletter?

Send your feedback to Gordon Frey via fax 270-753-9807 or by email to g.frey@its-training.com.



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UPDATE YOUR CONTACT INFORMATION

The Propane Education & Research Council wants to provide you with the latest industry information and tools. Help us deliver these products to you by providing updated contact information, including your email address. Sending newsletters electronically helps us reduce printing costs, which allows us to do more with valuable industry dollars.

Please fill out the form below and **fax to Lesley Garland at (202) 452-9054** or visit **www.propanecontacts.com/form** to update your information.

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