



PROMOTING THE SAFE,  
EFFICIENT USE OF  
PROPANE GAS.

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April 7, 2009

Commissioners James Boyd and Karen Douglas  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814

Dear Commissioners:

On behalf of the Propane Education and Research Council (PERC) I am pleased to offer these comments regarding the California Energy Commission initiative to promulgate an Investment Plan for the Alternative and Renewable Fuel and Vehicle Technology Program. PERC was authorized by an act of Congress to provide employee and consumer safety and training, to conduct research and development of clean, efficient propane utilization equipment, and to educate and inform the public about issues related to the use of propane.

Since full operations began in 1998, PERC has focused its engine fuel efforts on improving the energy efficiency and environmental performance of propane-fueled vehicles and equipment. Significant progress by PERC and other industry organizations has been made in recent years to bring to market fully certified vehicles that are supported with manufacturers' warranty, service and maintenance. Today's propane fuel systems offer a standard of reliable, efficient performance and emission reductions that were absent just a decade ago.

Propane has long been recognized as an alternative fuel under the Clean Air Act. It is one of the mostly widely used alternatives to gasoline and diesel. In a well-to-wheels comparison, propane produces fewer greenhouse and other harmful air emissions than ethanol, gasoline and diesel.

Propane offers an immediate and cost-effective opportunity to expand the use of alternative fuels with a clean, efficient, reliable fuel that is both safe and affordable. While the Commission's draft plan acknowledges that more expensive and less proven transportation propulsion systems will need to undergo further research, development and demonstration, propane offers the Commission the opportunity to make immediate progress toward reducing emissions and expanding the use of alternative fuel vehicles, even as other technologies are made ready for commercialization. A growing number of certified propane-fueled vehicles are ready for deployment now and in the coming months.

A key reason for propane's cost-effectiveness is that propane fuel systems operate at about one-tenth of the pressure of compressed natural gas and hydrogen fuel systems. That makes propane refueling infrastructure more affordable to acquire, easier to install, and less costly to operate. In turn, the affordability of propane infrastructure can enable the Commission, with the right investment plan provisions,

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to get an alternative fuel infrastructure in place at much less cost than is possible with other alternative fuels.

Because propane liquefies at low pressures, it is possible to store more fuel onboard vehicles compared to other compressed gases, offering greater vehicle range. Modern propane fuel systems take advantage of this unique property to inject propane as a liquid into the combustion chamber to achieve effectively identical horsepower and torque as conventionally fueled engines, with fewer emissions of carbon monoxide, carbon dioxide, nitrogen oxide, and particulate matter.

Compared to emerging diesel technologies, propane provides a more cost effective means to eliminate the particulate matter that is so harmful to young lungs. Perhaps that is a factor leading a growing number of school districts, including several in California, to acquire CARB- and EPA-certified, propane-powered, Blue Bird school buses. These American-built buses were first marketed in 2008 and gained a respectable share of all school bus sales in the United States, including more than 400 in California. Including support in the investment plan for acquisition of propane-powered school buses and related refueling infrastructure will offer school districts the opportunity to replace older, more polluting vehicles with clean, reliable buses at less cost than is possible with other alternative fuels.

In addition to buses, substantial progress has been made in recent years to commercialize propane-powered trucks and vans. Working with Roush Performance Products, in cooperation with Ford Motor Company, PERC expects to bring to market this year and next at least six new CARB-certified, OEM-supported Ford F-series trucks and E-series vans. These American-built light and medium duty vehicles will offer meaningful emission reductions and reliable performance. Also, CleanFuelUSA and others currently offer liquid propane injection on a number of General Motors light- and medium-duty trucks, vans, and buses.

PERC's research and engineering initiative includes important work on small off-road engines used in commercial mowing. We have been able to demonstrate substantial emissions reductions compared to gasoline-powered equipment, and a growing number of domestic outdoor equipment manufacturers now offer these clean, efficient propane products. Because it uses a closed refueling system, non-toxic propane also eliminates the environmental impact of fuel spillage and evaporative emissions that result from gasoline refueling. Next month, the EPA will bestow its "Award of Excellence" on LEHR, a California company, for its development and commercialization of an incredibly clean, propane-powered, hand-held weed trimmer for homeowners; other propane-powered equipment for the commercial landscape market are coming to market soon. The Commission should consider incentives in the investment plan to support propane units to replace gasoline commercial-grade mowers, which can produce more emissions per hour of operation than the typical sedan.

Supporting alternative fuels takes more than good technology, it requires an educated workforce to service and maintain that technology. Through PERC, the propane industry has exceptional workforce and consumer safety and training products available to educate those who handle or use propane. The PERC-produced "Propane Emergencies" program is widely used by state fire service academies and other emergency responders to learn about propane and how to respond to and manage incidents. Through the Western Propane Gas Association,



the industry in California regularly works with law enforcement and fire service agencies to conduct live training exercises to enhance preparedness and incident management skill. These educational resources are available to support greater use of propane in California.

Propane can contribute substantially to achieving the goals and objectives for which the Alternative and Renewable Fuel and Vehicle Technology Program was established. I strongly encourage the Commission to not only include propane in the plan currently under consideration, but to ensure that the program requirements are consistent with the types of propane vehicles that are available and to provide funding levels for propane vehicles comparable to the funding levels provided to other alternative fuels.

Finally, as an organization with resources to support research, development, and deployment of propane-fueled equipment and vehicles, please consider PERC as a potential source for matching funds to extend the impact of the Commission's investment plan.

Most respectfully yours,

A handwritten signature in black ink, appearing to read "Roy Willis", with a stylized flourish at the end.

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