



PROPANE EDUCATION &
RESEARCH COUNCIL

STRATEGIC PLAN

2017-2019

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THOMAS VAN BUREN
PERC Chairman



ROY WILLIS
President & CEO

Dear Propane Colleagues:

As we prepare this strategic plan, we do so with keen awareness of the factors that both favor and challenge our industry.

We are blessed with abundant domestic supply, yet face uncertainty as this supply is available to an emerging international trade that can be volatile and upend traditional measures of inventory security.

The longstanding bedrock of retail propane demand – residential and commercial use – has declined in recent years due in large part to forces beyond our industry’s control, like warm winters and improving appliance and structural efficiency. Still, this is not a time for resignation, and our plan gives highest priority to providing tools, resources, and brand stewardship that support and enable forward-thinking propane companies to grow demand organically in the residential and commercial market segments.

Clearly, there are many challenges that we must tackle. Chief among them is the public’s perception of propane, often seeing propane’s value as limited to rural life, agriculture, or the backyard grill. The public is generally unaware of its low emissions benefits and many disdain propane along with other fossil fuels. Improving consumer awareness of and favorability toward propane is fundamental to growing demand in all propane market segments, and that is the core objective of PERC’s strategic initiative on consumer education.

The marketplace is increasingly competitive, particularly in those regions where natural gas utilities are expanding into propane country, occasionally with state and local government support and subsidies. Government policies have also disadvantaged propane and favored solar, wind and geothermal competitors, even as electric heat pumps technology improves and gains market share. Developing new propane products is essential to our industry’s future.

Our recent efforts at developing and commercializing new technologies have added significantly more than \$1 billion in value to our industry. We are fortunate to have these propane-consuming products that add new customers and help create a more diverse demand that is less weather dependent. Still, there is more to be done, and this strategic plan commits PERC to working with the industry, manufacturers, and others throughout the value chain to develop and deploy new propane-fueled appliances, equipment and vehicles.

The propane industry, despite the challenges and obstacles, remains strong due to a longstanding collaborative spirit among industry members, companies and organizations. It fuels a sense of optimism that, working together, any obstacle can be overcome and every opportunity capitalized. More fully engaging with the industry to better serve it is a primary strategic initiative for PERC under this strategic plan.

The one initiative that best represents our industry’s collaborative spirit is safety and training. The industry’s enduring commitment to safety and training is brought to life by each of us. Yet, developing the industry’s safety and training programs begins with a dedicated corps of volunteers. These men and women give countless hours, share their experience, work with top educational and subject matter experts, and consult with legal and regulatory authorities to create state-of-the-art training resources. That training most often is delivered at the grassroots by state organizations and funded in part by assessment rebates. Nurturing that commitment to safety and training for our workforce and for consumers, emergency responders, service technicians and other key trades is foundational to the PERC strategy.

In summary, our new strategic plan defines PERC as a unique service organization responsible for leading the industry’s innovative product development efforts, for providing marketing and communication tools and resources to support company-led growth across multiple market segments, for developing and disseminating training and safety programs, and for fostering a collaborative industry community to optimize the value of every assessment dollar.

The goals and initiatives set forth in this strategic plan are ambitious and achievable. Yet, like all plans of action, it will naturally evolve as it is implemented to address a dynamic marketplace and changing consumer and industry needs. We welcome your feedback on this plan as we enter the implementation phase. Your energy, ideas, and involvement are key to success.

Respectfully yours,

Thomas Van Buren and Roy W. Willis

2017-2019 STRATEGIC PLAN

An Introduction.

The Propane Education & Research Council (PERC) undertook this strategic planning effort to reaffirm its core functions under the Propane Education and Research Act of 1996 and to make modifications necessitated by the reinstatement of PERC's legal authority to conduct consumer education following passage of the Propane Education and Research Enhancement Act of 2014.

More than a guidepost for fulfilling of its functions under federal law, this strategic plan represents PERC's vision for the future. It envisions PERC as an organization that aspires to support propane businesses, which fund PERC, in their objective to expand the safe, efficient use of propane and to do so in ways that advance consumers' interest in clean, affordable energy.

The plan serves PERC's fiduciary responsibility by providing guidance to Council members to aid in resource allocation beyond the annual budget process. It introduces and makes an initial effort at the recalibration of PERC's investments and rebalancing programmatic priorities. More important, the plan offers clear objectives that stakeholders can use to evaluate PERC's performance.

This plan was developed in large part by volunteers from the Council, the Advisory Committee, and the industry. Their efforts were supported by the PERC staff.

ASPIRATION STATEMENT

Provide tools, resources, and brand stewardship that support the propane industry's efforts to expand and grow the safe, efficient use of propane through consumer education, training, technology development, and the commercialization of new products.

STRATEGIC IMPERATIVES

For PERC to contribute its best value to the people it serves, it is essential that it focuses on four broad strategic imperatives that reflect its vision for the future as well as the strengths of the organization. These imperatives are:

- Consumer Awareness
- Product Development
- Safety & Technical Training
- Industry Engagement

Each of the plan's four imperatives points to opportunities for the propane industry. In fact, over the years, PERC has initiated programs and projects to serve the industry in each area. That experience and performance informs this strategic plan. At the same time, in an industry as diverse and dynamic as ours, there undoubtedly will be initiatives and priorities that arise that are important to success but may not be anticipated in the strategic plan. As we move forward, it is essential that we remain open to the opportunities that arise yet may not be explicitly stated in this plan.



01

CONSUMER AWARENESS

Promote the key features and benefits of propane to drive brand familiarity and favorability among current customers and consumers willing to consider propane as a preferred source of energy for various applications.

Consumers are bombarded daily with marketing messages through channels and devices that seem to grow more numerous and targeted as time goes by. To serve propane's diverse customer base, PERC employs both business-to-consumer (B2C) and business-to-business (B2B) marketing efforts.

The B2C efforts target residential homeowners to drive awareness and build familiarity and favorability among current and prospective users of propane with the goal of encouraging consumers to add propane appliances to their homes. In the residential segment, we also employ B2B marketing efforts aimed at construction professionals and trades.

In addition to the construction professionals and trades, PERC's B2B marketing efforts are focused on decision makers in commercial, agricultural, fleets, material handling and outdoor power equipment market segments. A significant part of those efforts is centered on supporting the product launch and initial marketing efforts for products that PERC has supported through its commercialization programs.

The ProudlyPropane.com and Propane.com websites are important resources to our B2C and B2B marketing efforts, respectively. PERC will continue to direct consumers to those sites, ensuring they will find relevant and fresh content. PERC will maintain marketing resources for propane marketers and others on the propane catalog at Propanecouncil.org. Where appropriate, PERC will also attend, exhibit and speak at trade shows and events to reach these key audiences directly, to showcase propane technologies, and to create greater awareness of propane's benefits.

HOMEOWNERS

OBJECTIVE

PERC’s consumer marketing program will target residential consumers currently using propane and potential customers in propane country who are considering buying, building, or remodeling homes or replacing an appliance. The campaign will engage propane marketers, state PERCs and foundations, and allied businesses that can influence, serve, and provide quality counsel to consumers at all stages along the buying decision.

EMPHASIS

- Homeowner campaign advertising
- Owned and social media outreach
- Earned media through concerted public relations efforts

OPPORTUNITY

Competition for residential energy customers is fierce. Natural gas utilities are expanding rapidly into propane territory and support their expansion with substantial marketing budgets to keep their messages in front of consumers year round. Electric utilities use aggressive sales techniques, such as water heater giveaways or discounted appliance packages, to capture market share in new home construction. Additionally, propane marketers compete with one another for customers, especially the home-heating customers who make up the core market for propane. The pressures of competition with other propane marketers, together with declining sales volumes due to a



series of warm winters and efficiency gains in new appliances and buildings, make it difficult for an individual marketer to afford large scale media campaigns to differentiate their company from other propane companies, much less promote the general benefits of propane.

PERC will deploy a multi-media B2C communication strategy that includes television, radio, print, social media and digital advertising to reach homeowners. PERC will use the knowledge of its research, industry leaders, and partners to successfully shape campaign strategies and tactics that can aid marketers in their efforts to acquire and retain customers.

To make better use of increasingly scarce resources, the campaign will promote propane while engaging state PERCs and foundations to expand the reach and frequency of the campaign messages and engaging marketers to tie into the campaign their individual company marketing efforts. To measure the campaign’s impact, PERC will periodically survey homeowners to determine the impact of, and improvements to be made to campaign messages and features.

CONSTRUCTION PROFESSIONALS

OBJECTIVE

PERC’s consumer awareness effort targeted to construction professionals will focus on increasing the number of propane appliances installed for new construction and replacements, and for equipment used on the jobsite and support continued expansion of propane’s use in the market through direct outreach, training, and product development and commercialization.

EMPHASIS

- Outreach to construction professionals (Builders, Plumbers, HVAC, Architects)
- Rebates/Incentives for residential applications, both directly through PERC and those offered through the state associations

OPPORTUNITY

The residential and commercial markets are forecasted to see improvements over the next three years as the overall economy continues to grow. A significant portion of this new construction will happen outside the footprint of natural gas lines, due to the location of available land for development. The improving market conditions and increased activity offer great opportunities for propane in residential and commercial applications.

PERC’s investments in detailed market research, such as the Residential Opportunities Insight from MetroStudy, better enable the industry to target areas of new construction, remodeling

activity, and population growth more efficiently with a greater understanding of consumer segmentation and preferences. Engaging with active propane companies to utilize this market intelligence is a high priority for PERC.

Through the B2B marketing outreach, targeted advertising, trade show presence, and incentive programs, PERC will maintain strong relationships with decision makers, manufacturers, and other influencers in both the residential and commercial markets. PERC will also nurture its reputation among construction-related associations, trade professionals and vocational schools for research, resources, training programs, and commercialization assets. Likewise, PERC will continue to be a resource for propane marketers engaged in the residential and commercial construction and renovation segments.



PROPANE AUTOGAS



OBJECTIVE

PERC’s consumer awareness efforts in the propane autogas market will use a targeted marketing and outreach approach to promote new and existing propane autogas vehicles to fleet decision makers by employing the Total Cost of Ownership (TCO) messaging strategy that showcases the lifetime benefits of propane autogas performance, reduced maintenance, and lower repair costs that are essential to growing market share and combatting low gasoline and diesel prices.

EMPHASIS

- Focused school bus market outreach
- Provide market development resources for propane industry use
- Concerted outreach encouraging propane industry adoption of propane vehicles

OPPORTUNITY

When acquiring vehicles, fleet managers look to the total cost of ownership (TCO) that includes not only the cost of the vehicle, but also the cost of fuel, oil changes and routine service items, refueling infrastructure installation and upkeep and maintenance facility modifications.

The TCO message is especially attractive to state officials seeking a cost-effective means to secure environmental benefits. Over the years, PERC has made significant investments to develop and certify engines for the propane autogas vehicles. The propane autogas B2B campaign will leverage those investments by highlighting the real-world experience of those who have adopted and deployed propane fleets, by addressing challenges and barriers to greater propane autogas adoption, and by supporting the commercial launches of both OEM and aftermarket vehicles in the market. PERC will target fleet managers, school transportation directors and private contractors, dealers/distributors, as well as providing the propane industry with the resources and tools needed to sell more propane autogas and grow demand in their service areas.

The propane industry operates a substantial fleet that includes bobtails, service trucks, rack trucks, and other light- to medium-duty vehicles — all of which could be replaced by new propane autogas powered versions or converted to propane autogas. The replacement or conversion of these vehicles provides a significant opportunity for the propane industry to increase annual demand by over 175 million gallons and resulting in over \$140 million in fuel savings alone over diesel. PERC actively will communicate the opportunity for propane marketers to use propane autogas in the industry fleet while continuing efforts to develop new engines and vehicles specific to the industry’s needs.

AGRICULTURE



OBJECTIVE

PERC’s consumer awareness objective in the agriculture market is to aid in growing propane demand by facilitating communication among customers and influencers in the agriculture and propane industries, highlighting the operational and financial advantages of new technologies and the benefits of propane as an energy source.

EMPHASIS

- Promote propane irrigation applications
- Promote propane’s use in structure heat
- Increase engagement with co-ops and extension agents

OPPORTUNITY

Agriculture is an important market segment for the propane industry, so important that the writers of the Propane Education & Research Act mandated that 5 percent of PERC assessment collections be dedicated to funding products and services for the agriculture market. The agriculture market currently accounts for approximately 10 percent of propane demand.

There is significant diversity in agriculture operations across the country, and propane’s B2B messages will be tailored to the specific energy needs of end-users, and targeted geographically and chronologically to have optimum impact on purchasing decisions. The B2B program will also use direct communication with marketers, equipment manufacturers, distributors, and dealers, and others who impact agriculture decisions, such as extension agents and consultants.

In recent years, PERC has provided investments to diverse manufacturers to develop new propane-fueled agriculture technologies that benefit the agriculture industry and offer new demand opportunities for propane marketers. In the coming years, PERC’s consumer education efforts in the agriculture market segment will emphasize the benefits of propane in irrigation applications, and the use of propane for structure heat. PERC will use a multi-faceted approach to reach agriculture consumers and to engage with propane marketers in their effort to grow demand with these high-volume users who, in most uses, offer increased summer load.

OUTDOOR POWER EQUIPMENT

OBJECTIVE

PERC’s consumer awareness goal in the outdoor power equipment markets is to support the adoption and expanded use of propane equipment coming out of the industry’s product development and commercialization efforts for professional landscape, golf, turf, light duty construction, and utility vehicle applications through targeted marketing and increased industry engagement.

EMPHASIS

- Outdoor power equipment outreach
- Lawn & landscape dealer engagement

OPPORTUNITY

PERC will continue to build on the growing momentum in the commercial mowing market that has yielded 12 highly active manufacturers offering over 150 propane models.

PERC’s B2B activities will support stakeholders’ sales efforts to drive increased propane demand through sales of both new OEM propane models and certified aftermarket conversions of outdoor power equipment. The industry’s participation at the annual Green Industry Expo and nurturing our productive relationship with the Outdoor Power Equipment Institute are vital to success in this market segment and will remain a hallmark of PERC’s program.

In 2017 and beyond, PERC will focus on



expanding the network of equipment dealers that sell and service propane power equipment. To that end, PERC will continue to develop and promote the Propane Equipment Dealer Point locator tool, which connects propane marketers and potential consumers with qualified, knowledgeable, and motivated dealers in their area.

PERC’s marketing, outreach and engagement efforts will also continue to build upon the propane industry’s small engine development investments and success working with equipment manufacturers to incorporate those propane engines into their products, which range from commercial mowers to light duty construction equipment.

MATERIAL HANDLING

OBJECTIVE

PERC’s consumer awareness objective in the material handling market is to promote the benefits of new and existing propane products and their ability to meet increasingly strict emissions requirements.

EMPHASIS

- New product promotion – next generation engines for forklifts and port tractors
- Dealer and distributor outreach

OPPORTUNITY

In 2016, PERC focused its efforts in the material handling market on conducting voice of customer research and understanding the rapidly changing industry dynamics. The result of that research showed that propane continues to provide advantages in top purchase drivers -- sustained power throughout operation, no power loss throughout shift, and time-to-refuel advantages. Manufacturers are showing a renewed interest in internal combustion forklifts and specifically targeting propane technology as the most appropriate path forward.

For 2017 and beyond, PERC will continue to defend and expand propane’s position in the material handling market through direct customer outreach, highlighting applications where propane can displace more complex and expensive options like Tier 4 diesel and CNG, and continued commercialization support of

new and advanced propane-fueled technologies such as the 8.8L and 3.4L engine platforms.

The material handling outreach & marketing program will specifically target key sales channels with education, training, and sales support to 1) preserve and expand propane use in class 4 & 5 lift trucks, where propane equipment holds a majority market share, 2) establish a foothold in class 6 that is largely dominated by diesel equipment, 3) support expanding propane equipment use in port applications, and remain engaged with the Industrial Truck Association as a conduit to manufacturers and distributors.

To further quantify propane’s role in the materials handling market, PERC will also finalize technical market research, including research on the health, safety, and environmental benefits of propane fueled material handling equipment compared with equipment of other fuel types.





02

PRODUCT DEVELOPMENT

Support the research, development, and commercialization of propane appliances, equipment, and vehicles.

The Propane Education & Research Council has a unique and vital role as a technology incubator on behalf of the propane industry. From the outset, PERC has maintained a program to fulfill its statutory mandate to support research and development of clean, efficient propane equipment. The initial program was modest. In 2009 when the Department of Commerce restriction forced PERC to shut down its consumer education function, the Council undertook a major transformation of the organization, adopting an aggressive commercialization strategy focused on partnering with manufacturers to bring new propane-fueled equipment, appliances and vehicles to market.

In close coordination with the Advisory Committee, PERC will continue research, development and deployment efforts to enhance existing propane-fueled products and to bring to market new applications that have the potential to expand the use of propane. Since 2012, PERC has invested \$43.7 million in product development that, in turn, has attracted over \$134.6 million in co-funding from manufacturing partners. Together those investments have built and brought to market more than 55 different propane-fueled products, from school buses, lawn mowers and work trucks to grain dryers, generators and irrigation engines. By the end of 2016, more than 216,000 units of these different products have been sold into the market and are creating value for our industry. Considering fuel consumption rates and the estimated gross margin on each product or customer type, these investments will bring an estimated \$1.625 billion in added value to our industry over the useful life of those products -- even if we never sold another unit.

These products continue to sell and will bring additional value for years to come. These products also contribute to PERC's consumer awareness activities by providing real world examples of innovative, efficient, and environmentally conscious products that demonstrate how using propane helps reach the energy and environmental goals that consumers increasingly seek.

While developing new products is essential to fulfilling PERC's mission, it is but a part of a broader commercialization strategy that demands a cross-functional discipline that calls upon 1) PERC's consumer awareness group to help promote the products (as discussed in the preceding section), 2) our safety and training group to ensure that appropriate instructional materials are available for those who use or service those products (as discussed in the following section), and 3) our industry engagement group to provide the tools, resources, training and marketing materials the industry needs for its sales and service efforts in the field (as discussed in the final section).

PROPANE AUTOGAS

OBJECTIVE

PERC will support growth in the Propane Autogas market through the development and commercialization of new engines, vehicles, and aftermarket technologies and to level the playing field for refueling infrastructure user experience and treatment in code requirements.

EMPHASIS

- OEM engine development
- Emission research
- Infrastructure development and code refinement

OPPORTUNITY

In recent years, PERC has partnered with engine manufacturers of record and aftermarket fuel system providers to develop and certify an array of engines for both on-road and off-road applications that have seen varying degrees of commercial success. The more successful on-road engines and fuel systems power light duty vehicles.

There is an opportunity to build medium-duty engines with the combustion system design and structural integrity necessary to deliver on the full promise of propane as a low carbon, low NOx fuel of the future that will attract a broad class of users. The propane engines and fuel systems currently available in the medium-duty truck space are few and some have limited power density and efficiency. There is an opportunity to bring new engines



to market that; take greater advantage of propane's unique fuel properties and better provide the performance generally expected by fleet managers, especially within the propane industry.

Leveraging research on direct injection fuel system technology conducted on PERC's behalf by the Southwest Research Institute, PERC will continue to work with a respected engine manufacturer to develop a demonstration engine optimized for high efficiency propane operation suitable for application in the evolving medium-duty truck landscape. The high compression ratio, spark-ignited engine concept will incorporate an advanced spark ignition combustion system design, purpose built medium-duty class engine structure, and an engine cooling package optimized for operation with a direct injection propane system.

Additionally, PERC will continue to support the infrastructure improvements necessary for growth in the on-road market and will work with manufacturers and the industry to support developments and advances in the fueling infrastructure, refueling systems, and connections. PERC will also collaborate with other industry organizations to ensure refinements are made to appropriate codes to reflect the advances and to provide comparable consumer refueling experience.

AGRICULTURE

OBJECTIVE

PERC's product development objective in the agriculture sector is to increase propane demand through the development and certification of agricultural applications that meet or exceed the needs of the market.

EMPHASIS

- Irrigation & stationary engine development
- Structure heat application development
- Mobile refueling solution

OPPORTUNITY

The positive propane supply outlook and competitive propane prices provide a timely opportunity for gaining market share in the agriculture market with irrigation engines, on-farm grain drying, greenhouse heat, animal heat, water heat, and power generation. This equipment is often used for ten to twenty years or more, so seizing these opportunities will produce long term benefits.

PERC will continue to collaborate with the propane and agriculture industries to develop products that will preserve or increase demand for propane-fueled equipment in the agricultural market, with a priority given to products that use significant amounts of propane and those that use propane in the summer months.

Federal emission regulations provide several opportunities for propane-powered engines to displace diesel models. PERC will continue its

work with engine manufacturers to increase propane offerings, adding higher horsepower options, and developing engine types to serve more agricultural applications and other off-road equipment.

With continued competitive propane prices and increasing electrical rates, there are increased opportunities to replace diesel irrigation engines with propane engines and for propane-fueled power generation in California and other states particularly for irrigation. PERC will continue to develop solutions for this area. PERC will also work towards the improvement of a mobile refueling solution to serve these often remotely located facilities.

As agricultural businesses build new animal and greenhouse buildings, and upgrade heating systems in their existing structures, it is important that propane heating solutions offer improved convenience and efficiency compared to other options, including biomass, geothermal, natural gas, and fuel oil. PERC will seek technical advances that make propane products more convenient, more efficient, and safer for agricultural businesses.



OUTDOOR POWER EQUIPMENT



OBJECTIVE

PERC will develop, test, and commercialize additional off-road products and engage the propane industry in marketing and sales opportunities in the outdoor power equipment markets.

EMPHASIS

- Equipment affordability
- Top 3 OEM golf equipment

OPPORTUNITY

Through 2019, PERC will continue engine research, development, and commercialization across a broad spectrum of horsepower and torque applications to address opportunities in outdoor power equipment market segments. Off-road engines of less than 1.5 liter are key area of focus for PERC’s research and development efforts. These engines are used in many applications, from heavy-duty utility carts and low speed vehicles to light-duty mobile construction equipment and forestry products. Market data suggests a sizeable opportunity for propane to capture significant gains in these markets given the right combination of partners and products. PERC’s efforts will focus on identifying the best partners and applications to meet the needs of users.

Market data commissioned by PERC and others point to significant opportunities for alternative fuels in engine markets traditionally dominated by diesel engine platforms. The impact of federal emission regulations and the higher cost of ownership for diesel engines provides opportunities to take the existing stable of propane engines and work with equipment manufacturers to incorporate these engines into new market segments. Propane can make significant inroads into off-road power equipment by targeting applications using engines less than 2 liters (50 to 125 horsepower). Additional opportunities exist for further deployment in off-road applications of the 8.8-liter engine that PERC helped to develop and certify.

PERC’s 2015-2016 golf demonstration project produced strong performance results and good testimonials. PERC will continue to promote the results of that program in an effort to attract major manufacturers to further develop the equipment, as well as courses interested in products currently available in the market.

MATERIAL HANDLING



OBJECTIVE

PERC will work with OEMs to develop and commercialize the next generation of propane powered engines and forklifts that meet or exceed all current/pending regulations and maintain propane’s position in this key engine fuel market.

EMPHASIS

- Displacing diesel
- Hybrid forklift development

OPPORTUNITY

Economic research as well as market insights provided by the Industrial Truck Association suggest a continued demand for propane in specific applications and areas where diesel has traditionally been the preferred fuel source.

Propane has an advantage in displacing diesel in the higher capacity Class 5 applications due to the additional costs and technical complexities impacting Tier 4 compliant diesel engines. Class 7, or rough terrain forklifts, represents a significant opportunity for propane if appropriate engines become available. Development of low HP/high torque boosted

engine applications for allied markets will enable product development costs to decline.

However, the loss of market share to electric forklifts, regulatory challenges, and the changing dynamics of the material handling industry present significant challenges for propane. The California Air Resources Board continues to push for “zero-emissions” regulations starting in 2020 and continuing to 2023 intended to displace internal combustion engines used in indoor/outdoor application with electric models. Refueling a propane forklift is faster than recharging or exchanging batteries in an electric forklift and propane doesn’t require expensive or complicated battery infrastructure, nor are propane forklifts subject to increasing peak electric (kW/hr) costs in specific regions which may drive electric users to seek out alternative options. That said, there may be opportunities for propane to compete with or work alongside electric models through hybrid applications. PERC has invested in preliminary investigation of hybrid applications, and pending positive result of that work will continue to push development of hybrid applications.

RESIDENTIAL & COMMERCIAL

OBJECTIVE

PERC will continue to investment and support the development and deployment of a propane gas heat pump.

EMPHASIS

- Affordable gas heat pump or other similar application

OPPORTUNITY

Product development in the residential and commercial market segments represents a low priority for PERC, not because those market segments are unimportant, but rather because the appliances typically deployed therein are developed by manufacturers without a need for

PERC encouragement or investment. PERC's primary role in this market has been, and will continue to be supporting the marketing of new products to consumers and construction professionals. PERC will continue to coordinate with manufacturers worldwide to stay on the forefront of advancements within the market, ready to respond if a need arises.

There is a potential opportunity for the development of an affordable and competitive gas-driven heat pump. While gas heat pump technology exists, it tends to cost more to purchase, install, and operate compared to electric heat pumps. Taking costs out of the systems and improving operating efficiency has been and continues to be the primary focus of PERC's product development aims on gas heat pumps.



TECHNICAL INNOVATION & IMPROVEMENT

OBJECTIVE

PERC will investigate potential improvements to equipment, materials, and processes related to the production, storage, transportation, delivery, and handling of propane, to advance safety, support commercialization of new products, or to provide technical and scientific information to support the industry's operational needs and regulatory compliance.

EMPHASIS

- Regulation compliance
- Emissions quantification
- Coordination with industry partners to identify industry needs

OPPORTUNITY

Providing research related to fundamental industry operations is an important undertaking that serves the industry's broader strategic goals. This work includes, but is not limited to investigations of fuel quality, economic and safety issues arising from new technologies, quantifying and comparing propane emissions, testing equipment and component performance, and providing scientific research to support the industry's response to, and compliance with regulations.

This research, particularly regarding regulatory compliance, requires close coordination with the industry and its national and state organizations to identify specific needs. Quantifying emissions

of greenhouse gases and criteria pollutants from propane use in various appliances, equipment and vehicles is essential for both regulatory compliance and to support positioning propane as clean energy resource. One potential need for this research arises with regulatory initiatives by the Environmental Protection Agency (EPA) and numerous states to expand controls on electricity generation, as was proposed by the Clean Power Plan. Although it is uncertain whether or to what extent this proposal will be implemented, it may provide an opportunity for increased use of propane equipment through direct power generation or replacement of electric appliances. Presenting verifiable scientific data for this and other regulatory schemes requires continued coordination and collaboration among all the industry's organizations.





03

SAFETY & TECHNICAL TRAINING

Provide effective training programs and related communications on the safe use and handling of propane and propane equipment for consumers, the industry workforce, commercialization partners, and emergency responders.

Developing and delivering quality consumer safety and workforce training programs are among the most important roles PERC performs. Building on years of progress, PERC remains focused on maintaining high standards in the development of educational and instructional materials that serve the needs of consumers, the industry's workforce, emergency responders, and others who use, install, service or operate propane-fueled appliances, equipment and vehicles.

WORKFORCE TRAINING

OBJECTIVE

PERC will continue to develop and maintain the core workforce safety training programs to advance and maintain a professional propane workforce.

EMPHASIS

- CETP online and blended learning
- Safety Talk resources for marketers
- Industry recruitment & training efforts

OPPORTUNITY

PERC will ensure that the industry’s core workforce training program - the Certified Employee Training Program (CETP) - fulfills the needs of the industry and is up to date with codes and regulations.

PERC will deploy greater use of information technology to lower the cost and expand access to CETP courses and related workforce training. PERC will also collaborate with state associations to build upon pilot projects to offer “blended learning” CETP programs that incorporate online and classroom instructions. A multi-media approach will be taken to deliver safety messages to propane companies and consumers.

To address the shortage of quality entry-level drivers entering the propane workforce, PERC will give priority to creating a driver training program, which can be delivered by marketers in-house, to prepare a prospective entry-level



driver to pass a commercial driver’s license exam. PERC will also explore partnering with the military to attract transitioning veterans to the propane industry as drivers to fill the growing need for skilled personnel in that role.

TECHNICAL TRAINING

OBJECTIVE

PERC will advance the understanding and acceptance of propane applications through the training of technicians, first responders, and related audiences.

EMPHASIS

- Emergency responder training
- Construction professional training
- Engine mechanic training

OPPORTUNITY

PERC is committed to maintaining the Propane Emergencies program, our longest running safety training program, which is used by 27 state firefighter training agencies and propane marketers across the country. It is designed to help emergency responders, especially firefighters and members of hazardous materials response teams, develop the skills necessary to manage a propane emergency in transportation or at fixed facilities. PERC will continue to partner with the International Association of Fire Chiefs (IAFC) and others in the first responder community to promote *Propane Emergencies* and to focus on training on autogas vehicles and other specific propane applications.

Expanding construction professionals’ knowledge of propane and the skills required to select, install, and service propane appliances is vital to the industry’s efforts to grow propane use in residential and commercial buildings.

Deployment of PERC’s newest technical training product, “Overview of Propane Distribution Systems for HVAC and Plumbing Professionals,” is a top priority. That effort will involve targeted outreach to the propane industry, individual plumbing and HVAC professionals, appliance installation companies, and technical school curriculum developers and teachers.

Technical training will be offered to support the industry’s market development efforts with an emphasis on the continued deployment of the award winning “Propane Autogas Technician Training” program, developed by the National Alternative Fuels Training Consortium (NAFTC). PERC will continue outreach to automotive schools to increase adoption of the course, making any updates to the course curriculum and developing stand-alone training on specific related skills, such as safe tank purging methods.



SAFETY MESSAGING

OBJECTIVE

PERC will increase consumer awareness on the safe use of propane appliances, equipment and vehicles.

EMPHASIS

- Safety materials for marketers' use
- Safety videos and other products for consumers
- Anti-DIY & Safe Grilling materials
- Compliance reviews for new products

OPPORTUNITY

Advancing the safety of customers is a core value of the propane industry. In support, PERC will provide and maintain a series of materials to engage consumers in propane safety information and to support marketer outreach to customers, including duty to warn materials.



To encourage the use of these materials, PERC will offer key consumer safety materials to the industry at competitive rates.

PERC will also develop a series of short videos targeted to consumers on the value of using propane and how to do so safely. These videos and other safety products, will be designed for use on marketer's websites or to be sent directly to consumers. Similarly, PERC will offer safe grilling materials in a variety of formats, such as the "Propane Kids" coloring books and website, and assets from the successful campaign directed at do-it-yourselfers. These and other materials will be available through the propane catalog at propanecouncil.org.

PERC will continue systematic review of all safety materials to identify those most in need of updating and modernization and to develop a schedule for future updates and material reviews. Safety materials related to many propane technologies have already been identified for modernization. To increase market penetration of propane technologies, PERC will update forklift operator safety & training materials to better represent new products and procedures.





04

INDUSTRY ENGAGEMENT

Inform, educate, promote and collaborate across the industry on PERC programs and resources.

PERC is a unique industry organization that exists to serve the propane industry and through it propane consumers. The roles that PERC performs – national marketing and advertising, supporting new product development, and creating and providing safety and training programs – are different than the business activities that most propane companies perform. Thus, the value of what PERC does is best realized when marketers are aware of and use the tools, resources, and brand assets that PERC provides. Essential to ensuring PERC products and services are industry-driven is the Advisory committee, whose leaders and the majority of its members are propane marketers who lead development of PERC products and services.

Effective engagement requires PERC to engage proactively with marketer companies, national and state industry associations, and allied businesses and individuals. The objective is to create value through a shared vision of opportunities and challenges, to collaborate developing programs and projects to address them, to become more efficient in delivery of services, and to avoid duplication of effort.

PROPANE MARKETER COMPANIES

OBJECTIVE

PERC will engage and coordinate with propane marketers to increase their awareness and use of PERC-provided resources, to encourage participation in program development and implementation to foster dialogue that yields actionable information regarding PERC products, services, and programs. PERC will attend, speak and exhibit where appropriate at industry events and state meetings.

EMPHASIS

- Marketer Technology & Sales Training (MTST)
- In-person meetings with marketer leadership companies where appropriate
- Voice of marketer surveys
- Curate and promote online content
- Collaborate with state associations as liaison to marketer engagement
- Encourage marketer participation and advocacy at industry meetings and events

OPPORTUNITY

To ensure PERC programs are industry-driven, PERC will undertake initiatives to build upon and expand its relationships and dialogue with propane companies. One initiative, the Marketer Technology & Sales Training, will provide market intelligence, technical data, and instructional materials to support company-led market growth initiatives. PERC also will periodically conduct surveys to solicit input from propane companies, and will seek opportunities to increase marketers' awareness



of and engagement with PERC programs and drive greater use of online resources. PERC shall facilitate peer to peer discussions by encouraging marketers, especially those most engaged with PERC's Advisory Committee or specific programs, to talk about and, when appropriate, advocate participation in PERC programs or projects and/or use of PERC resources. PERC will also work with states as a conduit to marketers.

STATE ASSOCIATIONS, FOUNDATIONS & PERCs

OBJECTIVE

PERC will engage with state-level industry stakeholders to promote understanding of the Council's research and development, commercialization, market development, safety and training, and consumer education activities.

EMPHASIS

- Foster relationships with association staff and member leadership
- Support conferences and annual meetings through speaking opportunities and collateral materials
- Align the Partnership with States Program with the national campaign

OPPORTUNITY

PERC will facilitate productive relationships with staff and marketer leaders of state associations through participation at board meetings, membership meetings, conventions, trade shows, and other association-sponsored events to share information about PERC resources and programs and to learn about issues and needs. PERC will leverage opportunities at conferences, membership meetings and other events to distribute PERC-developed resources that inspire and equip marketers to help drive demand for propane, to use PERC training resources, and communication initiatives. PERC will work with the states to align the Partnership with States matching funds programs with the national consumer campaign to expand the number of consumers it reaches and the

number of the time consumers see the propane messages. PERC will cohost with NPGA an annual staff leadership summit to provide states with an opportunity to benchmark best practices and resources, to receive updates on national and states issues and initiatives, and to share ideas and feedback on industry matters.

The Council's new Industry Outreach Committee will provide an additional forum for discussions of the industry opportunities and challenges.



NATIONAL ASSOCIATIONS

OBJECTIVE

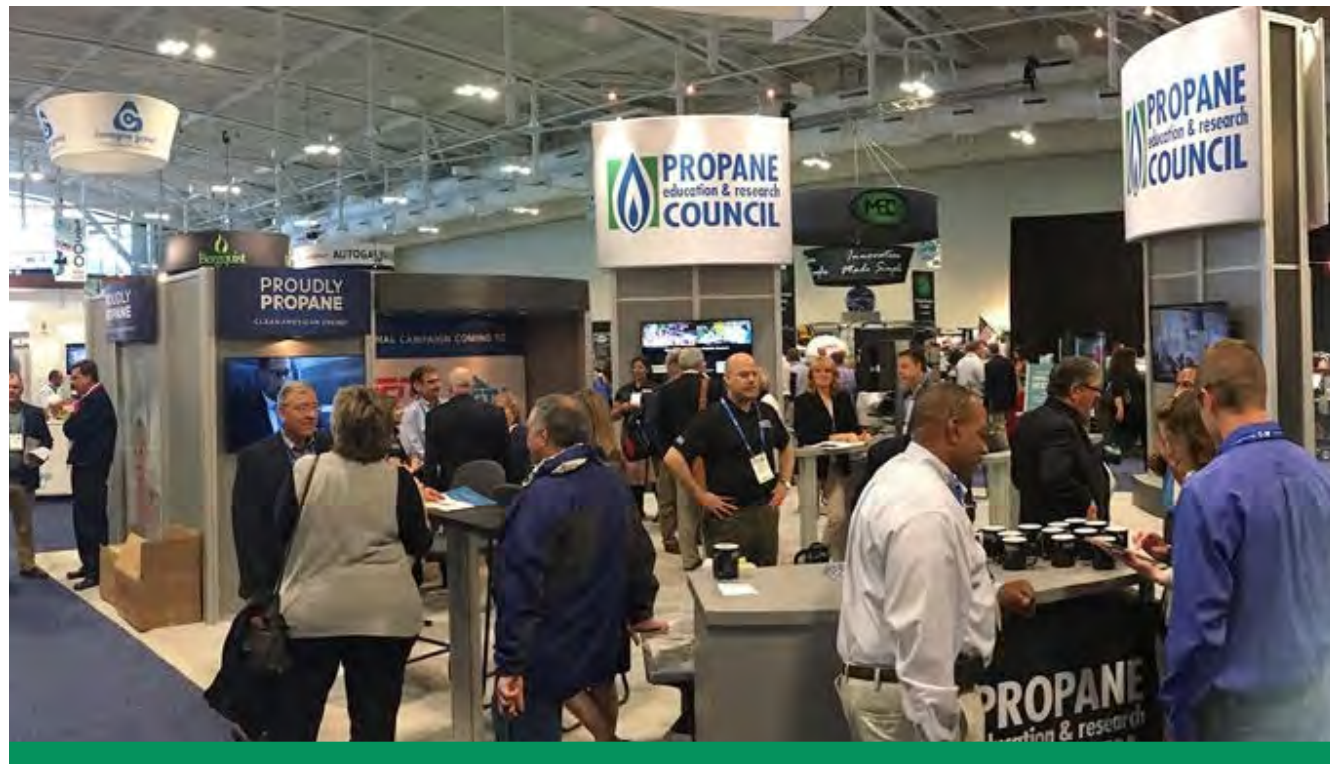
PERC will foster a strategic alignment and an effective allocation of resources primarily among the propane industry's three national nonprofit organizations to support collaboration and to enable the parties, consistent with the priorities and their individual roles and responsibilities, to better serve and promote the interests of the industry, consumers, and the public.

EMPHASIS

- Create opportunities for information sharing

OPPORTUNITY

The three national nonprofit organizations have long had a partnership agreement funded by PERC to encourage collaboration and avoid duplication of services. Reviewing and updating the agreement to reflect the current environment, responsibilities, and priorities will allow for more responsible use of PERC funding.



EMPHASIS FILTER STRATEGIC INITIATIVE Consumer Awareness

STRATEGIES	Residential Consumer	Res/Com Construction Professional	Ag	Autogas	OPE	Material Handling
EPMPHASIS	Homeowner Campaign Paid Media	Construction Profession Campaign (+HVAC Plumbers, Etc.)	Work with Co-ops/Extension Agents	School Bus Market Outreach	Lawn and Landscape Dealer Outreach	New Product Promotion
	Earned Media		Irrigation Promotion	Propane Industry Fleet Outreach and Adoption		Dealer and Distributor Outreach
	Campaign Microsite and Social Media	Rebates for Appliances	Structure Heat Promotion	Marketing Collateral		

EMPHASIS FILTER STRATEGIC INITIATIVE Product Development

STRATEGIES	Autogas	Res/Com	Ag	OPE	Material Handling	Tech Op Research
EPMPHASIS	OEM Engine Development	Affordable GHP or Similar Application	Irrigation and Stationary Engines	Top 3 OEM Golf Equipment	Hybrid Forklift	Regulation Response
	Emissions Research		Structure Heat	Affordability of Equipment	Emissions and Economics Research	Emissions Quantification
	Infrastructure Code and Development		Mobile Refueling			Fuel Quality
						Coordination with Industry Partners to Identify Industry Needs

EMPHASIS FILTER STRATEGIC INITIATIVE Safety & Technical Training

STRATEGIES	External Audience Training	Industry Workforce Training	Safety Messages
EPMPHASIS	First Responders	CETP Online / Blended Learning	Safety Videos
	Construction Pros (HVAC, Plumbers, etc.)	"Safety Talk" Resources for Marketers	Anti-DIY
	Engine Mechanics	Propane Industry Recruitment	Safe Grilling
	Dispenser Operators		Compliance Reviews for New Products

EMPHASIS FILTER STRATEGIC INITIATIVE Industry Engagement

STRATEGIES	Companies	State Associations	National Associations
EPMPHASIS	Marketer Technology & Sales Training (MTST)	Staff and Member Leadership Outreach	Create Opportunities for Bilateral Information Sharing
	Curating Online Content	Conference / Annual Meeting Support	
	Align with States to be Frontline with Marketers	Align PWS with National Campaign	
	Utilizing Volunteers During Industry Conferences		
	Marketer Surveys		

APPENDIX A: THE PLANNING PROCESS

TASK FORCE ESTABLISHMENT

At its meeting in July 2016, the Council formed the Strategic Planning Task Force, chaired by Drew Combs and composed of Council Members and the Advisory Committee Chairmen and Vice Chairmen. Additional effort was made to ensure that the members represent a wide demographic of the industry, MLPs, independent marketers, suppliers, innovation-conscious marketers, and co-ops.

FORCE RANKING

The first action was to understand the current budget and initiatives. The Propane Council Staff Officers presented the strategies and initiatives divided into two categories, Tier One tactics and Tier Two tactics. Given that significant resource prioritization was needed to fund a consumer campaign with the existing activities, the majority of remaining activities fall into Tier One. The Strategy Task Force reconvened in September 2016 to force rank the tactics and strategies based on the information provided by PERC staff and their varied experience in the market and to determine the emphases that should be stressed in each of the priority areas. The priorities were divided into high, medium, and low categories.

OPERATIONAL ALIGNMENT

Upon the completion of the initial Task Force analysis, it became apparent that, not only did the imperatives need to be modified to provide greater clarity and coordination among the

consumer awareness activities, but staff must be aligned similarly as well. Council President & CEO went about realigning the staff while the Task Force continued to evaluate the tactics and priorities. The new staff alignment was announced mid-December 2016, taking effect January 1, 2017.

STRATEGIC FILTER

After the priorities were restated, separating product development and consumer education, each member of the task force then updated their high, medium, and low rankings. To create a quantitative means of evaluating current and future tactics, the strategic priorities rankings were given a number value (High=10, Medium=5, and Low=1). Since there was not consensus across all members, an average of all scores was used. All tactics that directly served an emphasis were given an additional 10 points. A filter was created to incorporate the scores and allow for further analysis of the tactics and identify those that fell into the lower range of prioritization.

ONGOING STRATEGIC REVIEW

Strategic planning and review will be an ongoing activity and the emphases will change over time, thus creating a living and breathing strategy. While through this initial year we are tipping the balance toward the consumer awareness imperative, we aim to find a balance among all of PERC's imperatives within the ongoing strategies. This plan and its resulting filter tool will be just one more tool to assist the Council in setting the strategic direction and determining where resources will be committed. Other tools include: ROI, cash flow, regulatory requirements, etc. The strategic plan and filter tool will be transferred to the Council's Project Portfolio Subcommittee; with the strategies and emphases reviewed on a periodic basis.

APPENDIX B: STRATEGIC PLANNING TASK FORCE AND PROPANE COUNCIL

STRATEGIC PLANNING TASK FORCE

Drew Combs (Chairman)
CHS, Inc.

Scott Brockelmeyer
Ferrell North America

Daniel Dixon
AmeriGas Propane LP

Bruce Montroy
Bergquist, Inc.

David Reynolds
Blossman Gas, Inc.

Brandon Wade
Wade Sales & Service

STRATEGIC PLANNING RESOURCE TASK

Ron Batey
CHS, Inc.

Grace Willis
Propane Education & Research Council

PROPANE COUNCIL

Thomas Van Buren (Chairman)
Ferrell North America

Drew Combs (Vice-Chair, Marketers)
CHS, Inc.

Bruce Leonard (Vice-Chair, Producers)
Targa Liquids Marketing & Trade

Robert Chalmers (Treasurer)
Meritum Energy Holdings

Robert Barry (Secretary)
Bergquist, Inc.

Kasib Abdullah
BP

Eugene Bissell
Public Member

Steven Breckon
Lone Star NGL

Casey Cramton
Dead River Company

Gregg Dighero
EnCana Oil and Gas USA, Inc.

Daniel Dixon
AmeriGas Propane LP

Randall Doyle
Blossman Gas, Inc.

Roxanne Fowles
MarkWest Energy Partners, LP

Robert Freeman
Freeman Gas Co.

Sam Hawley
Enterprise Products Operating LLC

Robert Hemsworth
DCP Midstream

Glenn Luce
Aux Sable

Douglas Rinke
Public Member

Richard Williams
Suburban Propane Partners LP

David Wiseman
Williams Energy Resources LLC

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