

**One-page summary of  
NPGA's Statement for the Hearing Entitled  
"Benefits of and Challenges to Energy Access in the 21<sup>st</sup> Century:  
Fuel Supply and Infrastructure"**

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NPGA is pleased to present testimony for this important hearing. It is particularly timely, considering that this winter propane retailers in several regions of the country have faced supply constraints of propane used for home heating and agricultural needs.

The propane delivery infrastructure is undergoing a dramatic transition, brought on by the production of previously unimaginable amounts of domestic fuels, including propane. The result has been a change in the historical flow of fuels, which has been disruptive to energy infrastructure and energy markets. The challenges for propane markets during the 2013/2014 winter have been exacerbated by this transformation of the energy delivery infrastructure. These challenges include:

- Dramatically increased propane exports;
- Reversal of propane pipelines which move substances away from propane market areas;
- Competition for rail transportation from other substances causing congestion.

Specifically with regard to the challenges of the 2013/2014 winter heating season, NPGA identifies a number of causes and contributing factors. We entered the heating season with average inventory levels, but consumption in 4Q13 increased by about 570 million gallons compared with the previous year. Demand was also higher due to crop drying and colder than normal weather.

The challenges of the heating season received early and consistent attention from federal and state officials. We were gratified by the response, and thank Energy Secretary Moniz, Transportation Secretary Foxx, the Federal Energy Regulatory Commission, the Small Business Administration, the State of Texas, and the Governors of those states that declared emergencies which allowed drivers to do their jobs unimpeded by hours of service regulations.

In order to ensure that such a winter never happens again, NPGA recommends the following:

- A rigorous and formal review of federal propane export policies;
- FTC investigation to ensure markets are performing properly;
- Improvement of timeliness and reliability of EIA inventory data, particularly on exports;
- FERC increased transparency of petroleum products pipeline operations;
- FERC should apply similar affiliate rules to petroleum products pipelines as exist with natural gas pipelines;
- Laws applicable to federal authority during emergencies should be revised to allow more focused thresholds suitable for narrow fuel emergencies affecting Americans;
- Expedited increases in storage infrastructure, including the Finger Lakes facility in NY.

**Statement of the  
National Propane Gas Association  
Hearing before the Energy and Power Subcommittee  
“Benefits of and Challenges to Energy Access in the 21<sup>st</sup> Century:  
Fuel Supply and Infrastructure”  
March 6, 2014**

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The National Propane Gas Association (NPGA) is pleased to submit this statement for today’s hearing. Our nearly 3,000 members – predominantly small, family-owned businesses – make up an industry that provides propane to fuel homes, farms, businesses and vehicles in all fifty states. The industry employs approximately 40,000 industry individuals nationwide. Propane is a non-toxic gas produced from natural gas processing and crude oil refining. Over 70 percent of propane produced in the U.S. comes from natural gas.

Today’s hearing is particularly timely for the propane industry. During the 2013/2014 winter heating season, which we’re still experiencing, propane retailers in several regions of the country have faced critical supply constraints of propane. The supply challenges in the Midwest have been of particular concern. Propane retailers have chosen to fill customer tanks to less than maximum levels to stretch their limited supplies. Propane suppliers have traveled long distances and waited in long lines at terminals where the availability of supply was unpredictable and where they have confronted historically high prices. These high costs have hurt businesses and, worse, threatened the ability of propane customers to purchase essential heating fuel.

Our testimony today provides examples of how America’s energy future is changing, which in turn challenges existing energy flows and delivery infrastructures. We also present information

on how laws affecting the propane industry were helpful, and also how we believe they could be strengthened. Our core principle in appearing before you today is that we must ensure that America's energy abundance continues to serve American citizens and consumers in a consistent, reliable, and affordable manner.

### **The Propane Delivery Infrastructure is Undergoing a Dramatic Transition**

The delivery infrastructure for fossil fuels — petroleum, natural gas, and natural gas liquids, of which propane is one — is in the midst of an historic transition, which has exacerbated propane supply and delivery challenges this winter heating season. Historically, propane has been produced in the Gulf Coast and the Mid-continent and then transported to consuming regions to the North and East, primarily by pipeline. During the summer, when propane demand is typically low, propane was placed into seasonal storage, primarily in the storage facilities in the Gulf Coast and Kansas. During the winter, propane was withdrawn from storage and shipped by pipeline, rail, and truck to consumer markets. In addition, the Northeast previously imported significant volumes of propane by marine tanker, particularly during the winter.

Over the last six years, the nation's exploration and production community has devoted enormous resources to finding and extracting fossil fuels from shale formations, all of which had previously been beyond economic reach. The result has been the production of previously unimaginable amounts of domestic fuels, including propane. One of the challenges, however, has been that this production has occurred in different areas from those where the nation has previously produced its energy supplies. These include, for example, the Marcellus and Utica

formations (Pennsylvania and Ohio), the Bakken formation (North Dakota), and the Fayetteville formation (Arkansas).

The result has been a change in the historical flow of fuels. The nation's energy infrastructure was built to deliver petroleum, natural gas, and natural gas liquids from Texas, Louisiana and Oklahoma to markets throughout the country. With the influx of energy from shale formations, the nation's energy delivery system has had to make significant adjustments. New infrastructure is being built to bring Bakken crude to market. Natural gas and natural gas liquids are now flowing from the Marcellus both toward Northeast markets and the traditional energy-producing markets of the Gulf Coast. Several petroleum products pipelines are being reversed to transport product toward areas that have traditionally been energy-producing. Natural gas pipelines are being converted to carry petroleum. Propane pipelines that have been underutilized in the past, or used primarily to meet winter demand, are being converted to carry production from the new producing regions to the processing facilities in the Gulf Coast or Canada. Rail carriers and motor carriers are being enlisted to transport products to make up for pipeline infrastructure that has not yet been built.

Additionally, as shipments of heavy crude oil from Canada have increased, demand for diluent, a substance necessary for the processing and pipeline shipment of heavy crude, has increased. Northbound pipelines are increasingly targeting this demand, offering priority service and incentive rates to diluent producers in the Gulf Coast for shipments north to Canadian producing regions. As diluent shipments have increased, the available capacity for northbound shipments of

traditional products, including propane, has been reduced.

These events have been disruptive to energy infrastructure and energy markets. The transition is, however, nowhere near complete. The challenges that have occurred for propane markets during the 2013/2014 winter have been exacerbated by this transformation of the energy delivery infrastructure.

### Cochin Pipeline Reversal

One of the pipelines undergoing transition that most significantly affects Midwest propane delivery is the Cochin Pipeline. The Cochin pipeline system consists of an approximately 1,900-mile, 12-inch diameter multi-product pipeline operating between Fort Saskatchewan, Alberta, and Windsor, Ontario, including five terminals in the U.S. located at Carrington, N.D.; Benson and Mankato, Minnesota; New Hampton, Iowa; and Milford, Indiana. The pipeline is currently capable of transporting 50,000 barrels of propane a day from Alberta into the U.S. Midwest and Ontario.

Historically, the Cochin pipeline has been a major source of propane into the upper Midwest, and about 40 percent of propane in Minnesota came via the Cochin pipeline. However, for approximately three starting in late November 2013, the Cochin pipeline was not in operation. This unfortunate situation made it nearly impossible for propane storage levels in the region to be replenished after the record-breaking crop drying season that saw a nearly six-fold increase in demand for propane. The Cochin pipeline is currently scheduled to permanently halt all propane

transportation in April of this year. The owner of the Cochin Pipeline, Kinder Morgan, is planning to convert the Cochin Pipeline to carry diluent from the U.S. shale plays to the oil sands producers in Canada.

### ATEX Pipeline Reversal

The Appalachian-Texas Pipeline (ATEX) is a new provider of ethane service from the Marcellus region to the Gulf Coast. The pipeline itself is not new, however; rather it is one of two parallel pipelines that run from Mt. Belvieu, Texas to Todhunter, Ohio. What is new is that the ATEX pipeline used to deliver product batches northward as part of the Enterprise TEPPCO system.

The decision to reverse this pipeline to take ethane southward reflects the economics associated with taking the huge increases in shale production of natural gas liquids to market.

Unfortunately, this reversal has caused all northbound product flowing on the Enterprise TEPPCO pipeline to be squeezed onto the remaining northbound pipeline. The elimination of this northbound capacity, along with the introduction of priority diluent service on the remaining northbound line to assist in the processing of Canadian heavy crude oil, has caused congestion and delays for shipments of propane to the Midwest and northeast.

### Borger-Denver Pipeline Reversal

Only last week we learned that the Borger-Denver Pipeline, which runs from Texas through Missouri into Illinois, will be reversing its flow in the near future. In prior years it has regularly done so in the summer (i.e., July), but is now advancing it by a month to March. The result is

that the Jefferson City, Missouri terminal is now empty, and that no more propane will be flowing over the pipe this winter into the St. Louis area and downstate Illinois.

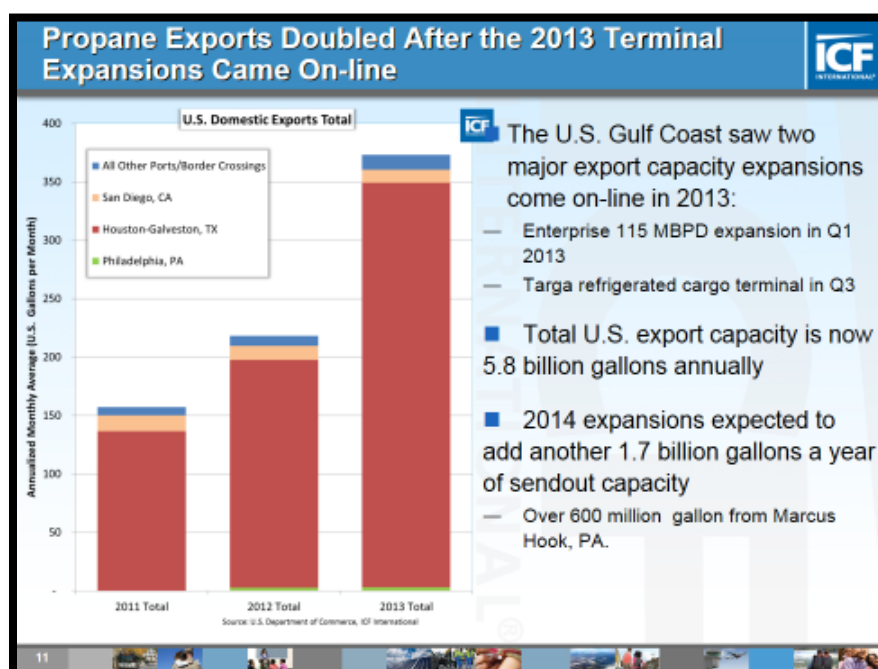
### Rail Transportation

Significant volumes of propane are shipped via railroad, and the propane industry is increasingly reliant upon this transportation mode. Here too, however, competition from other substances for transportation is intense and growing. Many facilities producing natural gas liquids, crude oil, or any of a variety of other products have yet to have access to reliable pipeline service to take their products to market, so they rely on railroads. Some of these products use the same kind of railcars as propane, which places additional demands on the existing pressurized railcar fleet. For those products that don't use the same kind of railcars, additional usage of the railroad infrastructure increases congestion making service less reliable even when railroads desire to prioritize propane shipments.

### **Dramatically Increased Propane Exports Have Changed Market Dynamics**

The fact that America is now considering revising its energy policies to foster exports of natural gas and crude oil shows just how dramatically the shale revolution has turned the supply situation on its head. Unlike crude and natural gas, propane is not subject to any existing export prohibitions or licensing requirements, so exports have increased as fast as contracts could be signed and export capacity developed.

In 2013, U.S. propane production increased by 1.5 billion gallons. However, propane exports increased by 2.0 billion gallons, from 2.6 billion gallons in 2012 to 4.6 billion gallons in 2013. Last year, exports grew to over 20 percent of total U.S. propane production, and they are still increasing. There is no question that exports in such significant volumes were a significant factor during the winter of 2013/2014.

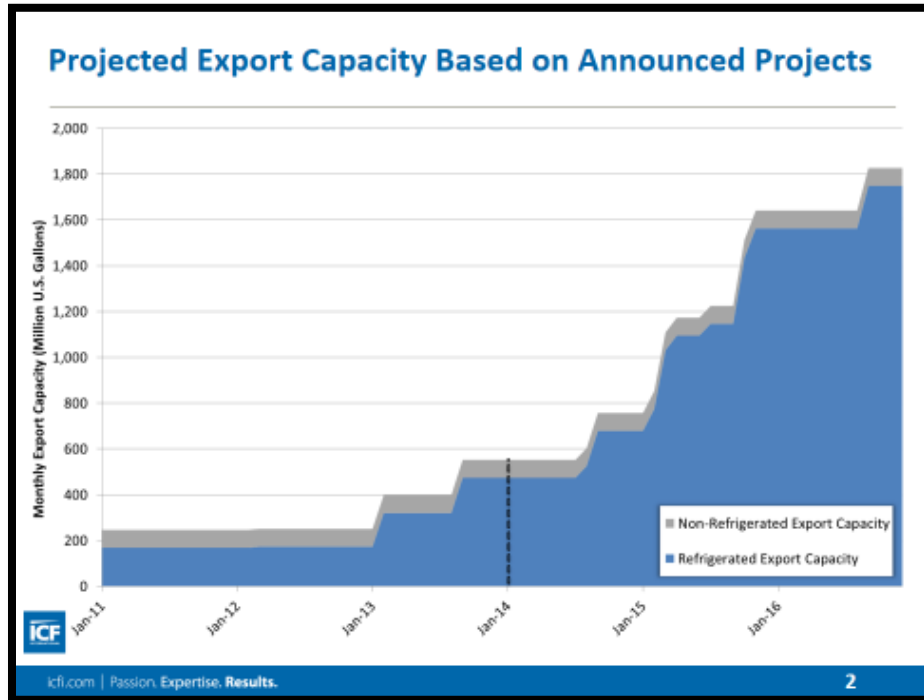


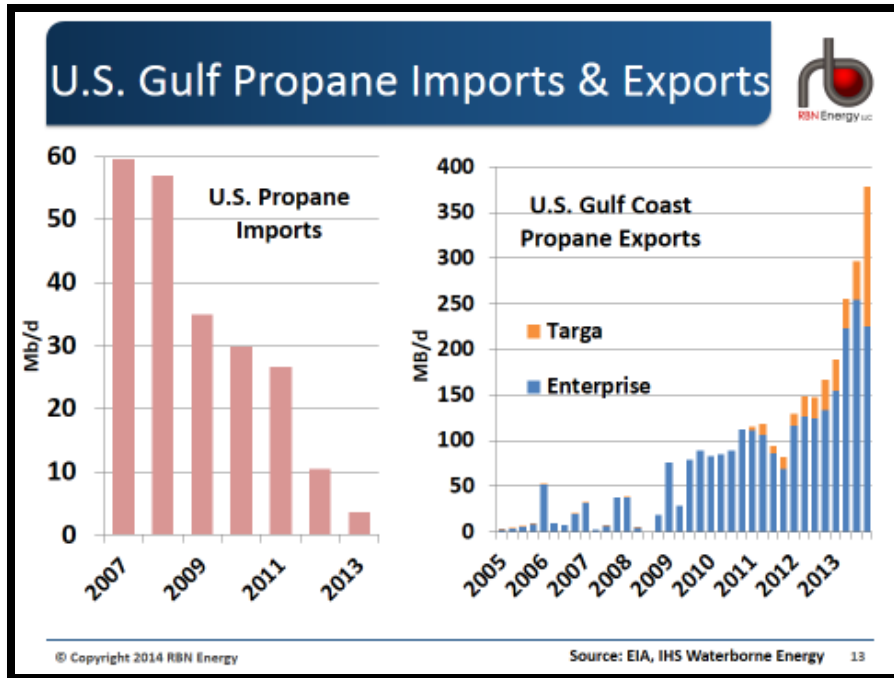
There are a number of factors driving propane exports. Propane is a global commodity, and it is easily shipped. High production levels of natural gas and natural gas liquids depressed prices in the U.S., creating a differential making international shipments attractive. Strong demand from buyers in Central and Latin America, as well as Asia, looking for relatively cheap propane and willing to sign relatively long-term contracts – up to 10 years in duration -- provided an incentive to ship propane overseas. The contracts for these export facilities are designed to ensure a very high utilization rate, with penalty payments incurred if export shipments are cancelled.

American companies looking to serve this market invested heavily in constructing or upgrading



export facilities. The trend of increasing exports shows no sign of easing. Announced plans to construct additional propane export capacity would triple propane export capacity in the next three years.





*This graph shows the countervailing changes in the flow of propane into and out of the United States since 2005.*

### **Causes and Contributing Factors of Tight Supplies in the Winter of 2013/2014**

#### Pre-Season Inventory Levels

The 2013/2014 heating season began with national propane inventories at approximately 67 million barrels, eight million barrels less than at the same time in 2012. Traditionally, the winter heating season starts the first week in October when the U.S. Energy Information Administration (EIA) begins publishing its “Heating Oil and Propane Update,” which is published weekly during the heating season each year. In 2013, national propane inventories were roughly in the middle of the 5-year average as reported by EIA.

While we entered the heating season with average inventory levels, between October 2013 and January 2014 total U.S. propane consumption increased by about 570 million gallons relative to the same period in the previous year. In the Midwest, propane consumption from October 2013 to January 2014 increased by 410 million gallons (9.8 million barrels) relative to the same period in the previous year. In the Northeast, propane consumption increased over the 2012/2013 winter levels (to January) by an estimated 52 million gallons (1.2 million barrels), while the South saw an estimated increase of 122 million gallons (2.9 million barrels). The only region of the country to have seen a drop in propane consumption is the West, where the dry, warm winter is estimated to have caused a decline in estimated propane consumption of 21 million gallons (0.5 million barrels).

During the week ending February 14, 2014, PADD 2 (Petroleum Administration for Defense District - Midwest) inventories were below the 5-year minimum level and threatened to reach the 10-year low reached in Mid-March 2008. PADD 2 inventories are now below the 10-year minimum level. PADD 3 (Gulf Coast) inventories are also approaching the 10-year minimum level. As of February 14, 2014, (reported by the EIA on February 21, 2014), U.S. propane/propylene stocks had fallen by 1.2 million barrels week on week to 26.7 million barrels, 24.4 million barrels (47.7%) lower than a year ago.

### Crop Drying Demand

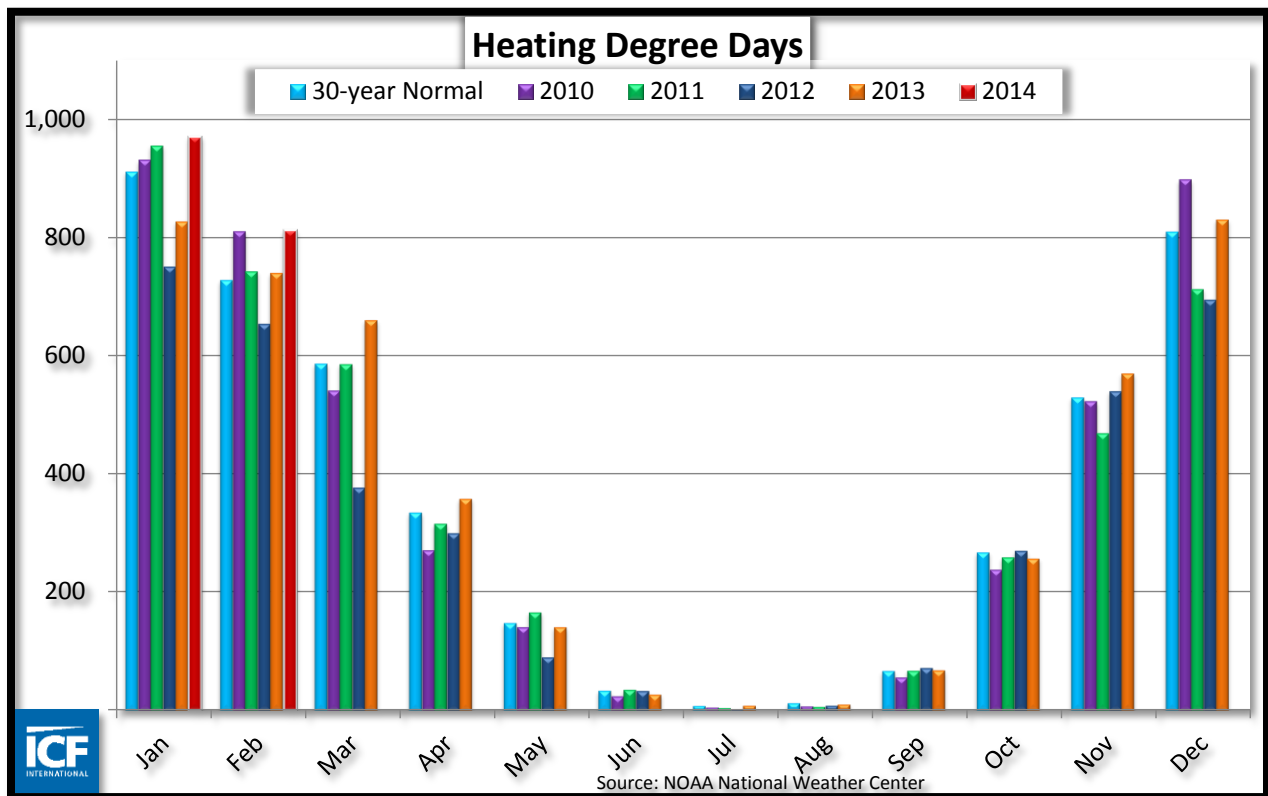
A primary factor leading to low inventories, particularly in the Midwest, was an unusually wet and large harvest that occurred late in the harvest season forcing farmers to use more propane

than anticipated. During the 2013 corn harvest, about 13.9 billion bushels of corn were harvested, a historic record. During the same time, the “Corn Belt” region of the Midwest received above-average rainfall, with the first week of October recording 200 to 500 percent above normal precipitation. Industry analysts estimate total grain-drying demand for propane at more than 300 million gallons in 2013, 235 million gallons above 2012 levels. These factors led to an increased demand for propane late in the harvest season. Compounding this situation was the fact that the harvest was compressed into a much shorter period of time than usual. Suppliers in the Midwest did not have the chance to rebuild propane inventories before the onset of an early and cold winter.

#### Colder Than Normal Weather

With propane supplies already low due to the dramatic increase in agricultural consumption, many propane retailers were undersupplied when the pace of winter home-heating demands rose quickly and significantly. Additionally, consumers in many instances were underprepared for the early, intense winter characterized most notably by the “Polar Vortex” weather phenomenon. The intensity level of winter was particularly unexpected, considering the unseasonably warm winters of the previous two years.

When comparing Heating Degree Days (HDD)<sup>1</sup> to the previous three years, this winter's U.S. total population weighted HDDs through January come in 3.1% above NOAA's 30-year average, 10.1% above the 2012/2013 season, and 15% above the 2011/2012 season. Not only was this winter above historical norms, but heating needs compared to last year's equates to an increased propane demand of 640 million gallons in 2013 relative to 2012, and an increase in propane demand of about 300 million gallons for the October 2013-January 2014 period relative to the previous winter.



### State and federal authorities helped alleviate the situation

<sup>1</sup> According to the EIA, **Heating Degree Days (HDD)** provide “A measure of how cold a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees Fahrenheit. The measure is computed for each day by subtracting the average of the day's high and low temperatures from the base temperature (65 degrees), with negative values set equal to zero. Each day's heating degree days are summed to create a heating degree day measure for a specified reference period. Heating degree days are used in energy analysis as an indicator of space heating energy requirements or use.”

Many people contributed to resolving, and are still working to resolve, the issues posed by this year's heating season. On behalf of the industry and our customers, NPGA wishes to thank these individuals and organizations for their commitment to finding both short-term and long-term solutions.

Many states have granted Hours of Service (HOS) waivers, which have helped immensely. These waivers allow truck drivers to obtain needed propane from far-away places and deliver that propane to customers. On the federal level, the Department of Transportation (DOT) granted four unprecedented regional waivers from HOS. As many as 35 states in the FMCSA's Eastern, Midwestern, Southern, and Western Service Centers were granted these exemptions, providing stability and uniformity throughout these regions. Exemptions in portions of the Eastern, Midwestern and Western Service Centers remain in effect through March 15.

Some of the states have also granted exemptions from weight limits for trucks traveling over state roads. While this does not allow drivers to carry overweight loads on interstate highways, it does help trucks carry additional fuel volumes up to the maximum amount of propane allowed by law even though the vehicle was overweight.

The State of Texas deserves specific recognition for its efforts, which were crucial in getting propane supplies out of the state to the rest of the country. Texas is host to the largest primary storage of propane in the world, and many truck drivers from out of state traveled to Texas to obtain the fuel directly from the storage facilities near Mont Belvieu. Specifically, the state

waived its permitting requirements for out-of-state vehicles, a process that can otherwise take as much as 30 days to complete. This allowed drivers from other states to immediately operate in Texas so they could transport their load back to their home state.

A number of states have taken advantage of the Low-Income Home Energy Assistance Program (LIHEAP) to help consumers. At a time when we've seen unusually high prices, this program has provided much needed assistance to the customers who need it most.

Energy Secretary Ernie Moniz was personally active in asking pipeline companies to prioritize shipments of propane on their systems. He also reached out to several NPGA members to determine what further assistance DOE could provide. DOE's Office of Electric Delivery and Energy Reliability has been helpful and supportive throughout the winter by holding conference calls, on a daily basis at times, with NPGA and other industry stakeholders to address the infrastructure and delivery concerns.

The Federal Energy Regulation Commission (FERC) invoked, for the first time in its history, emergency authority requiring the operator of the Enterprise TEPPCO pipeline to prioritize shipments of propane. This action ensured that an additional 500,000 barrels of propane would move from Texas up into the Midwest and Northeast earlier than regularly scheduled.

The Small Business Administration (SBA), through its individual state offices and loan partners, provided relief in the form of Express Loans and Micro Loans to propane retailers. These loans provided relief to the small propane marketers who, due to the increased cost of propane from

their suppliers and the increased volume of propane required, had reached the limits on their existing lines of credit.

Finally, we are also grateful for the meetings with the Governors of the affected states, and the numerous teleconferences with states' energy, transportation, and agriculture officials that were held, which allowed the sharing of credible real-time information and increased coordination among all parties.

### **Recommendations to Improve Propane Reliability, Resilience and Consumer Protection**

Propane markets in the United States are not regulated except as to issues of safety. Neither the federal nor state governments exercise economic regulation (except as to pipeline transmission), as the market is characterized by intense free market competition and low barriers to entry.

Nevertheless, given the experiences of the winter of 2013/2014 it is evident that there are roles for government to play to ensure reliability, resilience, and consumer protection. NPGA has now launched a broad-based effort with its membership to assess the lessons learned from this winter to determine what action government might take to avoid a future recurrence. Nevertheless, a few areas for government action are already clear, and they are outlined below.

#### Review Export Policies

During the winter of 2013/2014, as supply constraints emerged and as prices spiked, many consumers and members of the propane industry questioned whether these events were caused by the growing exports of propane. Over the past four years, as explained above, exports of



propane from the Gulf Coast have increased dramatically as new export capacity has been developed and brought online. Based on the number of additional projects designed to increase export capacity that are currently under construction or have been announced, this growth trend is expected to continue. NPGA has already commissioned a study to examine the propane export question. Further in-depth analysis is, however, needed, and NPGA will request that the EIA conduct a study of propane supply, demand, and exports similar to the study it conducted with respect to Liquefied Natural Gas (LNG) exports.

Should policy action with regard to exports be deemed necessary, there are a variety of broad options to be considered. Some have suggested that Section 3 of the federal Natural Gas Act of 1938 would empower the federal government to require export licenses. This is unlikely, as it has never been suggested over the last seventy-five years that this statute applies to propane. Another avenue would be a provision of the Energy Policy and Conservation Act of 1975 found at 42 U.S.C. §6212. Arguably, this authorizes the President to control propane exports. Such control might include licensing turning upon a public interest finding, export restrictions tied to prices or demand, or outright prohibition of exports. (NPGA understands that the President's authority under this law has been delegated to the Secretary of Commerce.) This authority has not been invoked in the past, and a formal proceeding engaging all stakeholders would, by the terms of the statute, be necessary. Congress, of course, also has plenary authority to enact a new law that addresses this issue in any fashion that it determines to be in the interest of the United States. Should the federal government move forward on this front, it would be necessary to ensure that any policy adopted is compliant with World Trade Organization principles and the various trade treaties to which the United States is a signatory.

## Ensure Markets are Performing Properly

In January 2014, wholesale prices of propane at a market hub in the Midwest tripled in the matter of a few days. This caused a temporary doubling of retail prices in large areas of the Midwest as reported by the Department of Energy (DOE). While price fluctuations in winter are common as supply and demand balances are achieved, these dramatic increases in propane prices were unprecedented.

On January 23, 2014, Senator Charles Grassley called on the Federal Trade Commission (FTC) to investigate the matter to ensure that these price spikes were not a result of anti-competitive behavior or illegal manipulation. NPGA fully supports Senator Grassley's request and urges the FTC to review the matter expeditiously and thoroughly.

NPGA believes it is an appropriate role of the federal government to assure citizens that markets are operating lawfully and to take appropriate action if they are not. While significant price volatility is common with respect to almost all energy commodities—and is in fact necessary to allow markets to function appropriately—it is important to ensure that unexpected volatility such as that observed this winter was in fact caused by the appropriate functioning of energy markets rather than anti-competitive behavior or market manipulation. Additionally, there may be roles for other federal agencies to play in ensuring that propane production, transmission, and marketing have occurred, and will occur, consistent with free-market principles.

## Improve Inventory Data – Timeliness and Reliability

EIA maintains a number of data gathering programs in the energy area and publishes weekly inventory numbers and trends for propane, among other fuels. EIA data includes weekly residential and wholesale propane prices; propane stocks in barrels and days of supply; regional propane production and imports; and propane demand estimates. Unfortunately, EIA data has not kept pace with changes in the energy sector, particularly with regard to the shale revolution and production of natural gas liquids, such as propane.

Such high levels of production have provided incentives for companies to export significant volumes of propane to such an extent that the U.S. is now the world's largest exporter of propane. Propane export data is available on a per-ship basis by subscription from costly private sources. It would be highly useful to the industry and the public for EIA to expand its data gathering activities to include regular publication of aggregated propane export data. This would provide industry and policymakers with clear knowledge of the trends in propane exports, making appropriate business decision-making more rational and timely.

Significant volumes of propane are owned and stored at proprietary terminals or locations around the United States. The location, size, contract status, and accessibility of these inventories are unknown, which puts the marketplace in a vulnerable position when supplies get tight. In previous years, the petrochemical sector sold propane back into the marketplace when prices rose in response to tight supplies, which performed a balancing role to bring prices back down. The shale revolution has changed this dynamic and greatly increased the complexity of the

relationships among the various natural gas liquids uses and marketplaces. Nevertheless, the fact remains that volumes of propane are stored in proprietary storage facilities in amounts completely unknown to the marketplace. In addition, an unknown quantity of the propane in the available propane inventory reports is committed to exports, and would not be available to the domestic market without paying significant contractual penalties. As a result, the reported propane inventory data overstates inventories that are actually available to the domestic market, and no one knows how big this overstatement might be.

This winter, volumes at Conway, Kansas, approached critically low levels and NPGA was concerned this could lead to significant deliverability problems. NPGA had no way of knowing how low volumes were going to be in part because of the lack of knowledge about proprietary storage levels. When the marketplace does not have good data about supply, prices are affected; this winter was no exception. In the future it would be very helpful to have a better handle on proprietary storage levels, as this would mitigate price spikes, like those seen this winter.

Beginning approximately ten years ago, EIA began collecting and publishing weekly natural gas storage data. There is no question that this data is a key information point that is reviewed and considered by many decision makers in the natural gas industry. The weekly storage report is a key piece of market data for both spot and futures natural gas markets. It also assists in ensuring market transparency and a well-functioning market. A similar data set by EIA would be of great assistance to propane market participants and would assist in ensuring transparency of markets.

The data that EIA currently collects lumps both propane and propylene together. Disaggregating these two commodities would aid in market transparency. Similarly, additional geographical granularity in propane inventory data would be welcomed by markets.

### Increase Transparency in Petroleum Products Pipelines

There has been significant consolidation in the interstate pipeline system regarding propane. Currently, the three largest interstate propane pipelines are owned or controlled by a single company. In a presentation to FERC in July 2013, NPGA presented data estimating the propane deliveries on the key multi-shipper propane pipelines. Of these, a single company shipped approximately 80 percent of propane, while all the others shipped approximately 20 percent. At the same time, there have been significant rate increases proposed on the federally regulated Dixie and TEPPCO pipelines, while the costs for other non-regulated terminalling services have increased as well.

From discussions with NPGA members over the past several months it is apparent that the operation this winter of the nation's petroleum products pipelines—the principal means by which propane is delivered to the market—is at best opaque, and the lack of transparency substantially increased the difficulty of dealing with the propane supply shortages. For example, propane shippers report being unable to obtain capacity on pipelines to deliver product to markets with critical needs while the owner of the pipeline has product available for sale in those markets.

While this opacity may have served a purpose in the past, at this point it may give an undue advantage to a pipeline that is also engaged in selling, marketing, or trading propane. A legislative fix may be needed. In the same vein, the manner in which pipelines operate without providing adequate information to the marketplace in a transparent and timely manner does not allow the market, including propane companies, to respond adequately and adapt to changes in pipeline operations. Rather, it gives an undue advantage to the pipelines, especially those with marketing and other business operations outside the transportation area.

Additionally, the Federal Energy Regulatory Commission (FERC) should increase its oversight of infrastructure changes that have significant impacts on customers, especially when the pipeline industry is becoming more concentrated both vertically and horizontally and when assets that have been dedicated to and paid for by historic shippers such as propane shippers are spun off into unregulated ventures. There are several aspects to this issue. Remedies may require revisions to the Interstate Commerce Act or to policies of the FERC, which regulates interstate petroleum products pipelines under the Interstate Commerce Act.

#### Enact Pipeline Affiliate Rules

FERC has previously adopted rules that apply to natural gas pipelines and electric transmission systems that govern the relationship with their affiliates, referred to as “affiliate rules” or “codes of conduct”. The fundamental purpose of these rules is to prevent the pipeline or electric transmission provider from utilizing its transmission function—which is a regulated monopoly

function—to benefit its affiliates that are market participants, usually energy marketers and traders.

These rules do not apply to petroleum products pipelines, including those that transport propane. Some of these pipeline operators are involved in selling propane, trading in propane, and exporting propane, among other things. NPGA is concerned, particularly after the challenging winter market conditions, that these intra-corporate relationships may have been utilized to the detriment of the interests of consumers. NPGA will be requesting that FERC adopt rules for petroleum product pipelines that are similar to those for natural gas pipelines and electric transmission providers.

In addition, pipelines have been removing certain terminal and storage assets from jurisdictional service and transferring these facilities to unregulated affiliates. The unregulated affiliates then are able to charge dramatically higher prices for the same services. The FERC has allowed these conversions to non-jurisdictional service based on an overly narrow definition of interstate transportation.

NPGA will be requesting that FERC adopt rules for petroleum product pipelines that are similar to those for natural gas pipelines and electric transmission providers. In certain areas, this may also require legislative action.

Review Pipeline Allocation and Information Rules

Throughout the Midwest, Northeast, and South during this winter petroleum products pipelines have been severely constrained as to capacity. Market participants desired to transport propane to markets with critical needs, but the capacity was not available to do so. On many of the pipelines relied on by the propane industry, propane is only one of many products shipped by the pipelines. During pipeline capacity shortages, the pipelines allocate capacity based on summer pipeline usage. Currently, this capacity cannot be assigned to a different party.

According to Section 6 of the TEPPCO LPG pipeline tariff proration policy, which is similar to others in the industry:

In no event will a capacity allocation to a LPG Shipper be used in such a manner that will enhance the allocated capacity of another LPG Shipper beyond the allocated capacity that such LPG Shipper would be entitled to under this Policy. Carrier may require written assurances from a responsible officer of LPG Shipper regarding its use of its allocated capacity stating that LPG Shipper has not violated this Policy. In the event any LPG Shipper shall, by any device, scheme or arrangement whatsoever, attempt to transfer all or any part of its allocated capacity to any other LPG Shipper in violation of this Policy, or in the event any LPG Shipper shall attempt to receive and use such portion of capacity, the portion of capacity allocated to each such LPG Shipper will be reduced in the next Allocation Period after the date that the violation is discovered by a volume equal to two times such attempted transfer.



In addition, under current rules, certain customer information, including shipper and volume information cannot be disclosed by the pipelines, making it impossible to determine who is shipping on the pipeline.

Such provisions prevent shippers of lower-value commodities or shippers with sufficient storage to meet near term requirements from releasing their pipeline capacity to shippers of high-value commodities, such as propane in the winter season, even though it might be to the economic advantage of both to do so. As a result, this winter propane shippers were unable to negotiate deals with shippers of other products such as diluents headed to the Canadian oil sands producers to increase propane shipments and reduce shipments of other products.

As this became apparent, FERC recognized the need to meet the essential needs of consumers and employed its emergency authority under the Interstate Commerce Act for the first time to ensure that an additional five hundred thousand barrels of propane were moved to Midwest and Northeast markets. NPGA commends FERC for its prompt action. Going forward, however, there may be other mechanisms to avert a recurrence. Certainly, affiliate rules, mentioned above, will give market participants confidence that the market is functioning in an above-board manner. In addition, FERC may be able to adopt mechanisms from other areas of its regulatory portfolio, including natural gas pipelines in order to ensure that market mechanisms are available to resolve pipeline allocation issues, instead of relying on emergency orders from FERC.

NPGA will be requesting that FERC adopt rules for petroleum product pipelines that are similar to those for natural gas pipelines and electric transmission providers. In certain areas, this may also require legislative action.

### Revise Thresholds for the Use of Federal Emergency Authority

NPGA has worked closely with a number of federal agencies that maintain oversight over the supply, transportation, and distribution segments of the propane industry to obtain relief from their applicable regulations. However, NPGA believes revisions to the thresholds for triggering an agency's emergency authority would permit greater flexibility in addressing supply and infrastructure issues in the future. NPGA has identified several areas where the limited authority of the Department of Transportation (DOT) and DOE hampered their efforts to facilitate a rapid response to the evolving supply, transportation, and distribution crisis. Congress should review and revise these impediments to prompt action.

1. The Robert T. Stafford Act (P.L. 93-288, as amended)

The Stafford Act establishes the criteria under which the federal government responds to significant emergencies. An emergency declaration can only be requested of the President by the governors of the affected states. When requested, the Federal Emergency Management Agency performs an analysis to determine if the declaration is needed. If an emergency is declared, states must share a portion of the costs. Despite the severity of the propane situation this winter, this “all or nothing” aspect of a Stafford Act determination proved too high a threshold for state

governors to embrace, and it foreclosed needed assistance to propane retailers and their consumers.

Among the many actions taken by NPGA this winter, it sought a waiver of the federal weight limits for trucks hauling propane on interstate highways. These limits are established by the DOT's Federal Highway Administration (FHWA). The purpose of the NPGA request was to allow trucks to load propane to the maximum permitted filling capacity of the truck. Due to highway weight restrictions, these trucks could only fill to within about fifteen to twenty percent of the maximum permitted level, essentially leaving the filling terminals with about 1200 to 1400 gallons less than they could carry with a waiver in place.

The FHWA has no statutory authority to grant a waiver from the weight restriction regulations. Unfortunately, the only mechanism by which a waiver could be granted would be for the President to declare an emergency using the authority provided him under the Stafford Act. Yet, as mentioned above, governors were unwilling to invoke the Stafford Act to lift weight restrictions given the other costs of doing so. Given the nature of the fuel emergency that existed, NPGA strongly supports amending the Stafford Act to provide for more limited waiver authority. Specifically, the Secretary of Transportation, perhaps in consultation with the Secretary of Energy and Governors, should have the authority to grant a waiver from the weight restrictions, either under the Stafford Act or under other legislation. This narrow action would go a long way toward ameliorating a fuel emergency or disaster without all of the complications and costs of a full-fledged Presidential emergency declaration.

## 2. The Jones Act

The Jones Act requires that all maritime shipments of any kind between U.S. ports (in the “coastwise trade”) be aboard U.S.-flagged vessels. In our case, a marine shipment of propane from a port on the Texas Gulf Coast (PADD 3) to ports in New England (PADD 1a), for example, would have to be aboard a U.S.-flagged vessel. The challenge in meeting this requirement is that there are currently no U.S.-flagged ships available to carry propane, leaving American consumers literally out in the cold.

Waterborne transport has the potential to be a critical component in addressing the overall supply and distribution challenges facing the propane industry in the Northeast. A shipment of American propane from Texas, where the world’s largest underground propane storage is located, to New England would have made a significant impact on the supply issues in that region of the country, and also would have freed up transportation assets, including pipeline capacity and rail cars to deliver propane into the Midwest and other regions of the country. However, given propane production trends, a ship capable of transporting propane from the Gulf Coast to the Northeast likely would be utilized only a few times each year, and in some years, such as 2011/2012, would not be utilized at all.

Unfortunately, obtaining a waiver from the Jones Act is generally acknowledged to be nearly impossible. In order to obtain a waiver, the request must be made to the Department of Homeland Security’s (DHS) Customs and Border Protection (CBP) agency. Once a waiver request is received, CBP consults with the DOT’s Maritime Administration (MARAD) to

determine if a U.S. ship is available. CBP also consults with DOE to assess the energy and fuels supply situation. This review and consultation is a time-consuming and arduous process.

During the last several months, NPGA has been engaged with DOE on propane supply and distribution matters at a frequency of at least three times a week, if not daily. DOE had the greatest knowledge of the state of the industry supply and would have been best positioned to grant a waiver from the Jones Act for a *de minimis* period of time. NPGA believes that in the context of fuel emergencies DOE should be given the authority to grant such waivers from the Jones Act.

### 3. Hours of Service

The DOT Federal Motor Carrier Safety Administration (FMCSA) establishes Hours of Service (HOS) regulations that specify the number of hours that truck drivers may drive a commercial motor vehicle and that they may be on-duty. The HOS regulations were changed in 2013. The most significant change for long-haul drivers in the propane industry pertained to the “34-hour restart” provision. This provision permits drivers to “restart” their driving service if they have been off-duty and have not driven for 34 consecutive hours. Most importantly, FMCSA 2013 change required that the 34-hour period must also include two 1 a.m.-to-5 a.m. off-duty periods, in contrast to the previous requirement, which permitted 34 consecutive hours off duty. NPGA believes that the 2013 change resulted in a reduction of productivity of up to fifteen percent. During the 2013/2014 winter, this loss in productivity reduced the amount of fuel delivered.

NPGA believes that the 2013 change resulted in no additional increment of safety, but this winter it resulted in a detriment to propane consumers.

During the height of the winter supply and distribution issues, FMCSA did issue regional waivers from HOS regulations for the Eastern, Midwestern, Southern and Western Service regions, which waived the 34-hour restart requirement and expedited propane shipments.

Nevertheless, NPGA believes there is no evidence to suggest there is a reduction in safety by reverting to the previous requirement of 34 consecutive hours off duty (as opposed to requiring two 1 am to 5 am periods), and we would recommend the reinstatement of the previous regulatory requirement.

#### Expedite Increases in Storage Infrastructure

If there is one lesson learned from the 2013/2014 winter propane market conditions, it is that the infrastructure network was inadequate to meet consumer needs. There are a number of facets to this, and government can assist in ensuring that essential human needs are met.

#### Underground Storage

Since 2009 NPGA has argued that permitting and constructing expanded underground propane storage in the Finger Lakes area near Reading, NY is essential to meeting Northeast propane needs. We have called on Governor Cuomo to approve the facility, which would add over 88 million gallons of propane storage in a region where demand far exceeds local supplies. New

Yorkers, and the entire New England region in general, are highly dependent on propane shipments from outside the region. New York is at the tail end of the TEPPCO pipeline, which delivers propane from major primary storage facilities in Mt. Belvieu, Texas. As discussed above, TEPPCO recently reversed part of its line to deliver ethane south to the Gulf Coast from the Marcellus-Utica Shale regions. This has inhibited the pipeline's capacity to deliver propane supply to New York.

We have seen a number of challenges confronting the propane supply chain, ranging from pipeline shutdowns to rail strikes in Canada to ships not coming in on time from overseas. Supply lines can and do break during the winter, and they have caused shortages in the past. This winter, propane marketers have found themselves needing to drive long distances to obtain supply. Drivers have obtained supply from destinations as far away as Apex, North Carolina, and Sarnia, Ontario. Having additional secure propane storage in New York would help ensure that fuel is available nearby. The propane industry is proposing to address these issues in a responsible way through initiatives like the Finger Lakes storage facility.

It is important to note that the mix of fuels used in New York is changing, and many fuel oil customers are shifting to cleaner-burning propane. It is cleaner in the house, and it is cleaner for the environment when it is consumed. As the propane industry expands in New England, we need to be able to store adequate supplies of propane reasonably close to serve these new customers.

Approval of the Finger Lakes facility will also improve the resilience of the propane infrastructure in the southeast and Midwest regions of the United States. In recent weeks, a major propane storage facility in Sarnia, Ontario, has seen very high demand due to its close proximity to both the New England and upper Midwest regions. Sarnia storage is now quite low, which compounds other low storage in Michigan and surrounding states. Similarly, the propane storage facility in Apex, North Carolina, has been supplying significant volumes into New York and New England. Earlier this winter we understood that the Apex facility was practically empty, which had implications for the Southeast. Were the Finger Lakes facility to be in operation, it would dramatically reduce New York's demand for propane stored in Sarnia and Apex. Approval of Finger Lakes would have cascading benefits far beyond New York and New England.

#### Agriculture Storage Incentives

Unexpected demand by the record-setting crop-drying season caused a significant draw-down of propane supplies, particularly in the upper Midwest. This caused propane inventories to be lower than nominal as a colder-than-normal winter swept in. Storage at agricultural facilities is not particularly significant, requiring marketers to make multiple trips to some facilities sometimes as often as daily in the event of a large harvest. This experience has highlighted the significant impact that minimal storage at agricultural sites can have on the overall propane infrastructure, so we support incentives for farmers and crop dryers to increase their on-site storage capability. Such increased storage would have multiple benefits, including resilience in



the face of unexpected demand; reducing the frequency marketers need to fill the storage; and more closely matching the capabilities of the crop drying equipment itself.

### Permitting and Siting

Adequate propane storage at the tertiary (customer) level is critical as we enter the crop drying and heating seasons. Unfortunately, it is sometimes difficult to expand the propane storage infrastructure in the face of local opposition. Propane storage is highly regulated through building and fire codes, and the engineering of systems is standardized to a significant degree. The propane industry works closely with state and local officials to ensure a comfort level with propane storage, and this is an ongoing process. It is critical for state and local officials to allow propane storage to be built, maintained and expanded, so that the growing customer base of propane consumers can be served safely and efficiently.

### **Assessing Industry Practices and Opportunities for Industry Education**

The difficulty in meeting unexpected propane demand efficiently this winter can in part be attributed to industry business practices that have taken hold in response to shifts in market conditions over the last 20 years. Consumer propane sales have fallen by more than 24 percent between 2000 and 2010. Moreover, retail propane jobs fell by more than 20 percent during the same period. This has been the result of a number of factors, including competition from other energy sources, as well as improvements in appliance and building efficiency.

Consumer education plays a role in lessening the risk of supply shortage. NPGA believes it is critical for consumers to build a relationship with a local propane supplier and to buy their fuel well in advance.

Propane customers typically fall into two categories: “keep full” customers, those who enter into a contractual agreement with a propane retailer to keep their tanks full; and “will call” customers, those who choose not to enter into a contract with a retailer and instead choose to buy their propane supply on their own. The “keep full” customer benefits from the security that their energy needs will be met, and retailers benefit from the certainty of being able to plan ahead for their customers’ fuel needs. “Will call” customers must manage their own supply level, price shop for fuel, and ensure their system is in proper working order. “Will call” customers typically have a lower priority compared to “keep full” customers when system demands are high. Such customers are much more vulnerable to market variability and supply disruptions – like the ones resulting from this winter’s supply, demand, and infrastructure challenges. NPGA will redouble its efforts to encourage consumers to build a relationship with a retailer in their area to make sure that their energy needs are met.

Many consumers can also fill their tanks in the summer, planning ahead for winter heating. This can also have the added benefit of lower off-season propane prices. Unfortunately, many propane customers are unable to afford to tie up their available cash by refilling their tanks during the summer. For these customers, one additional way to increase certainty of propane supply in the winter heating months is for customers to enroll in a budget plan with their

marketer. This allows the costs of fuel to be spread over the entire year, making it more affordable than paying for a full tank all at once.

### **Conclusion**

As we analyze the causes of the problems encountered during the winter of 2013/2014, NPGA's goal is to ensure that such a situation never happens again. NPGA has established a Supply and Infrastructure Task Force charged with conducting a comprehensive post-winter analysis to identify causes and contributing factors, and analyze, debate, and provide recommendations to the NPGA Executive Committee for future efforts and strategy as it relates to propane supply, distribution and infrastructure. We intend to pursue the Task Force's policies and recommendations aggressively, and we anticipate that our efforts will focus on public policies, industry operations and practices, and consumer needs. We look forward to keeping you informed of our progress as we move forward.

NPGA and its member appreciate the opportunity to present their perspective on these important issues to the Committee.

Thank you.

## **A Propane Primer**

Propane is a naturally occurring hydrocarbon commonly found in the production stream of oil and natural gas wells. With the chemical formula  $C_3H_8$ , it is one of the least complex hydrocarbons (technically an alkane). It is closely related to methane (natural gas), which, with the chemical formula  $CH_4$ , is the least complex of the hydrocarbons. Chemically, only ethane ( $C_2H_6$ ) separates natural gas and propane. More complex hydrocarbons include butane, pentane, hexane, and octane. The molecular proximity of propane to methane has important real-world consequences, as we will discuss below.

Like natural gas, propane is colorless, odorless, and tasteless. (For both products the smell that people associate with them is artificially added at the retail level.) Both are gaseous at normal temperatures and pressures. As a result, both are readily usable as fuels in a number of applications. While natural gas liquefies at -162 Centigrade, propane liquefies at -42 Centigrade. With pressure, propane becomes a liquid at somewhat higher temperatures—hence “liquefied petroleum gas” (LPG), another name for propane. An important consequence of the difference in the temperatures at which the two compounds liquefy is that propane can be stored and transported in relatively lightweight containers and with much greater ease and economy than natural gas (in either a gaseous or liquefied state). While large volumes of propane are transported by petroleum products pipelines, it is also commercially feasible to transport it by rail, truck, ship, and barge. Technically those modes are possible for natural gas, but they are not generally economically feasible—on a retail basis—because natural gas, whether compressed or liquefied, requires much heavier storage containers and higher pressure or lower temperature. At ordinary temperatures and pressures natural gas is lighter than air, while propane is heavier than air.

Propane is produced (as with other more complex hydrocarbons) through two processes. First, it can be extracted from natural gas streams in natural gas processing plants. Second, it can be produced by refiners as part of the crude oil cracking process. Today the former method of production accounts for more than seventy percent of domestic supply. North American supplies of propane are adequate to meet the entire U.S. demand. Unlike customers of gasoline, diesel fuel, and heating oil, propane customers are not dependent upon supplies from foreign nations. (Although some propane is imported, the volume is dramatically less than the volume of exports.) Propane is in essence a byproduct, and, from a commercial perspective, production varies not so much with the demand for propane as the demand for the products of which it is a byproduct (natural gas and refinery products).

The nation is in the midst of a boom in natural gas production, largely involving the production of natural gas from shale formations. Because natural gas liquids draw higher prices in the market than natural gas on a British thermal unit (Btu) basis, producers are aggressively seeking shale gas that is rich in hydrocarbon liquids. As a result, domestic supplies of propane will be plentiful for the indefinite future.

Propane has applications in residential and commercial markets for heating (furnaces, boilers, and gas logs), water heating, cooking, and clothes drying. It is well known across America, even

among those who do not use it as a primary home fuel, as a fuel source for barbecues, outdoor stoves, heaters, and the like. About fourteen million American families use propane for these various applications. Approximately six million households heat with propane. Similarly, propane has wide usage as a cooking fuel in recreational vehicles and boats. Additionally, propane commands a significant market as a transportation fuel, for forklifts, buses, vans, trucks, and cars. Indeed, there are more propane vehicles on the road than either electric or natural gas vehicles. Propane is also used as a fuel in the industrial sector both for space heating and process applications. Propane is used on nearly one million farms for irrigation pumps, grain dryers, standby generators, and other farm equipment.

Propane is a low-carbon fuel. At the point of combustion it produces 62 kg of CO<sub>2</sub>/MMBtu, compared to 53 kg for natural gas, 71 kg for gasoline, and 93 kg for bituminous coal. Factoring in upstream emissions, propane produces 74 kg of CO<sub>2</sub>/MMBtu, compared to 65 kg for natural gas, 91 kg for gasoline, and 221 kg for electricity. (The large number for electricity reflects the significant thermal loss in generation and the thermal loss in transmission and distribution.) A key fact in regard to carbon emissions is that when propane is released (*i.e.*, fugitive) into the atmosphere, it has essentially no greenhouse gas (GHG) effect because it deteriorates rapidly. In contrast, natural gas released into the atmosphere is approximately 25 times more potent than CO<sub>2</sub> as a GHG.

Propane accounts for approximately two percent of the primary energy consumed in the United States, compared to 29 percent for natural gas, 28 percent for coal, and 41 percent for petroleum products. Yet propane accounts for only one percent of the nation's GHG emissions.

Propane is essentially “portable natural gas.” Most propane today is produced alongside natural gas. It is used in the same applications as natural gas. Propane has an emissions profile similar to natural gas but with the added benefit of not being a GHG itself. Propane has the important benefit of being easily transportable to areas where there is no natural gas infrastructure.