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Before the

SUBCOMMITTEE ON ENERGY AND POWER

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SUMMARY

Temperatures east of the Rocky Mountains have been significantly colder this winter compared with the same period last winter and the previous 10-year average, putting upward pressure on both fuel consumption and the prices of fuels used for heating.

The continuing development of U.S. hydrocarbon resources, resulting in the increasing supply of crude oil, natural gas, and propane and other natural gas liquids has and will continue to present both challenges and opportunities for the use of existing infrastructure and the future development of additional infrastructure.

Propane: U.S. propane supply set record highs in 2013, driven by increased oil and natural gas production, with supplies derived from natural gas production growing faster than refinery-based sources. The location and rate of growth have challenged the existing infrastructure and delivery patterns.

Cold temperatures tightened supplies in the both the Midwest and the East that were already low heading into the winter heating season, in part due to late fall consumption of propane to dry a large and wet corn crop. Residential propane prices in the Midwest more than doubled between the beginning of December and late January, but have declined substantially over the past 5 weeks. (EIA provides weekly residential pricing information during the winter fuels season through the State Heating Oil and Propane Program, a cooperative data collection effort with state energy offices.)

Under market conditions that prevailed from March 2010 to November 2013, prices at Mont Belvieu had been generally above those at Conway, providing a signal for supplies to move towards the Gulf Coast. However, the development of extreme propane shortages in the Midwest in mid-January led to a significant rise in prices at Conway, KS (the main Midwest hub) relative to those at Mont Belvieu, TX (the main Gulf Coast hub) providing a strong incentive for northward flows. High prices in Midwest and Northeast markets also encouraged increased import flows, with more propane flowing into the Midwest via pipeline and additional tanker cargoes coming into Northeast ports. Propane inventory levels in the Midwest and Northeast are still below the five-year seasonal average, but the gap has diminished in recent weeks.

Natural gas: Cold weather this winter contributed to a new record-high withdrawal of natural gas from storage and a surge in natural gas spot prices. Spot prices in the region were 50% above the same period in 2013. New England continues to face some of the highest and most volatile spot natural gas prices reflecting both significant growth in demand for natural gas, particularly for electricity generation, and capacity constraints of pipelines serving the region.

Chairman Whitfield, Ranking Member Rush, and Members of the Committee, thank you for the opportunity to appear before you today.

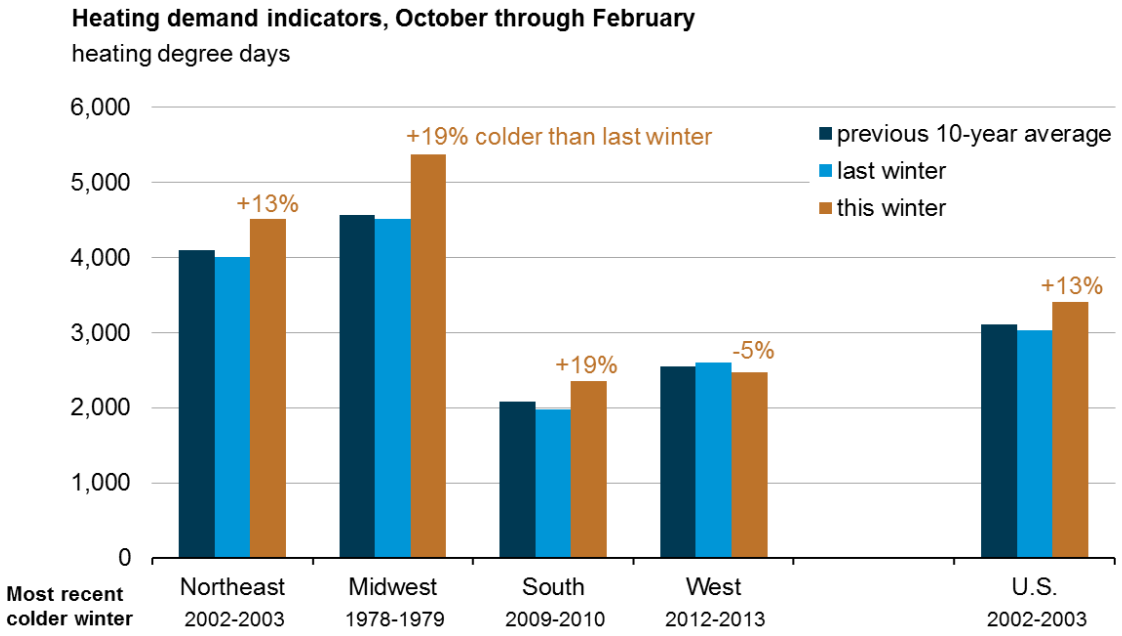
The U.S. Energy Information Administration (EIA) is the statistical and analytical agency within the U.S. Department of Energy. EIA collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding regarding energy and its interaction with the economy and the environment. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government, so the views expressed herein should not be construed as representing those of the Department of Energy or any other Federal agency.

As discussed in my testimony, EIA is active in providing both data and analysis specifically related to winter fuels markets, including forecasts of average heating fuel expenditures by region and primary heating fuel. EIA reports on the status of fuels markets through many channels, including the Weekly Petroleum Status Report, This Week in Petroleum, the Weekly Natural Gas Storage Report, the Natural Gas Weekly Update, the monthly Short Term Energy Outlook and in numerous short analyses in Today in Energy. From October through March, in cooperation with participating States, EIA publishes the Heating Oil and Propane Update weekly. Since January EIA has had a dedicated Energy Market Alerts section on the website and has been working closely with the Department of Energy's Energy Response Organization to provide critical market information to the public officials, industry and consumers.

Every year, the October issue of the Short Term Energy Outlook, which reflects the latest available winter weather forecast provided by the National Oceanographic and Atmospheric Administration (NOAA), serves as the basis for EIA's presentation at the Winter Fuels Outlook conference organized by the National Association of State Energy Officials. All estimates are updated regularly as the winter progresses.

Weather

As we now know, temperatures east of the Rocky Mountains have been significantly colder this winter (October - February) compared with the forecast used in developing the Winter Fuels Outlook, the same period last winter, and the previous 10-year average, putting upward pressure on both fuel consumption and the prices of fuels used for heating. U.S. average heating degree days (HDD) were 13% higher than last winter (indicating colder weather) and 10% above the previous 10-year average. Compared to last winter, the Northeast has been 13% colder, the Midwest 19% colder, and the South 19% colder, while the West has been 5% warmer. For the United States as a whole, this October through February period has been the coldest since 2002-03, while the Midwest has not been colder since 1978-79.



Source: EIA, Short-Term Energy Outlook, February 2014
Note: Based on NOAA actuals through the week ending March 1.

Recent cold weather had the greatest effect on propane prices, particularly for consumers in the Midwest. Cold temperatures tightened supplies in the both the Midwest and the East that were already low heading into the winter heating season, in part due to late fall consumption of propane to dry a large and wet corn crop. Residential propane prices in the Midwest rose from an average of $2.08 per gallon (gal) on December 2, 2013, to $4.20/gal on January 27; retail prices fell back to $3.83/gal on February 3 and $2.78/gal by March 3. To a lesser extent, cold temperatures tightened heating oil supplies and helped drive up retail prices. However, while both average prices and consumer expenditures for homes heated with propane are likely to be substantially higher this winter than last, EIA still expects that U.S. heating oil prices this winter will average slightly below those in the winter of 2012-13.

Developments in wholesale propane and heating oil markets are quickly reflected in retail prices. Higher retail prices for propane and heating oil directly affect the out-of-pocket cost of fuels purchases by customers who use these fuels for heating. In recent years, propane and heating oil prices delivered to residential consumers have been substantially higher than delivered natural gas prices on an energy content basis, a situation that was exacerbated during recent price spikes. For example, the Midwest average retail propane price of $4.20/gal during the week of January 27 was five times the estimated national average delivered price of natural gas to residential consumers during January on an energy-equivalent basis.

EIA has been able to provide current pricing information during the winter fuels season because of our cooperative data collection efforts with the State Energy Offices through the State Heating Oil and Propane Program (SHOPP). For the months of October through Mid-March, EIA provides 50/50 cost sharing for the states that choose to participate to make weekly telephone calls to retail heating oil and propane outlets. EIA creates and maintains the sample for each State and releases the data, which is closely watched by policymakers, consumers, and analysts, every Wednesday as part of the Weekly Petroleum Supply Report.

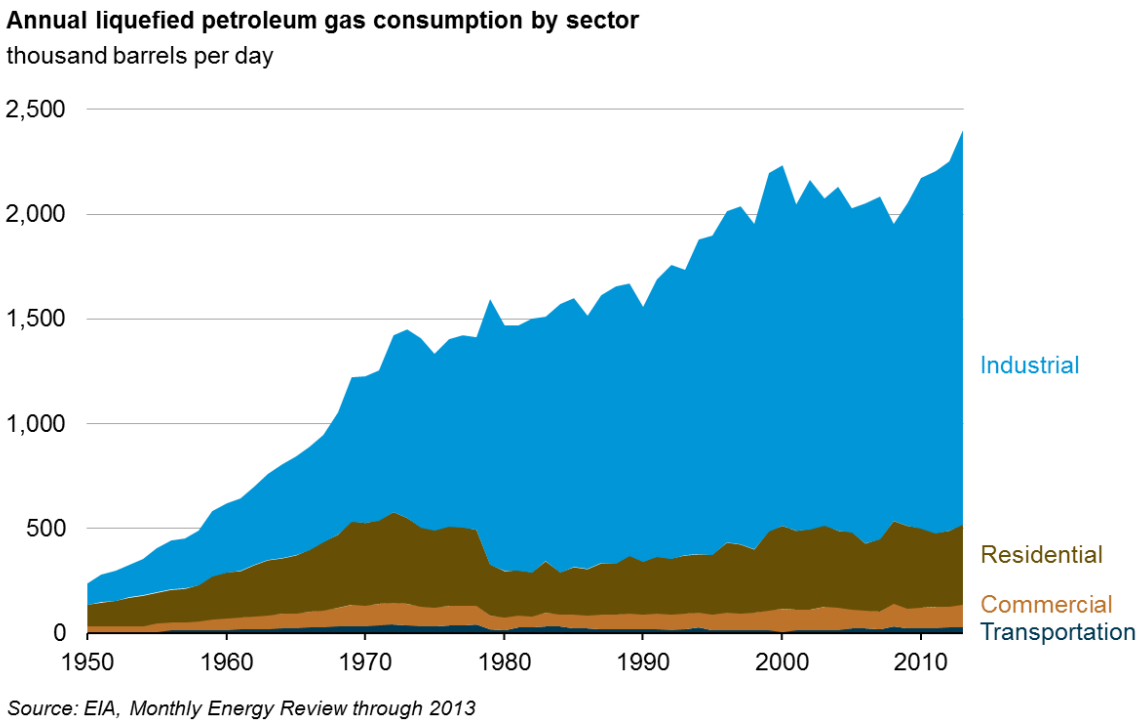
The rest of my testimony will focus on propane markets across the Midcontinent and on the natural gas market, with an emphasis on New England.

Propane

Propane is produced from natural gas at processing plants, usually located in areas where natural gas is produced, at fractionating plants that further process mixed natural gas liquids separated at processing plants, and from crude oil at refineries. Propane from natural gas has been the fastest-growing component of overall U.S. propane production. U.S. supply set record highs on an almost weekly basis in 2013 as a result of increased oil and natural gas drilling.

There are two major hubs for propane in the Midcontinent: Mont Belvieu, Texas (on the Gulf Coast) and Conway, Kansas (in central Kansas). With the rapid growth in U.S. propane supply, domestic production has exceeded domestic consumption, and the United States has become a net propane exporter. Exports from the United States, primarily shipped via tanker from the U.S. Gulf Coast (PADD 3) were 402,000 barrels per day in December. However, the United States has also continued to import significant amounts of propane (121,000 barrels per day in December) via tanker into Northeast (PADD 1) ports, and via several pipelines that carry supplies from Canada into the Midwest (PADD 2) particularly Minnesota and Michigan.

The largest market nationally for propane and propylene is the industrial sector, including agriculture. Propane is also used heavily in the residential and commercial sectors in more rural areas that may lack natural gas infrastructure. Residential and commercial demand has a strong seasonal pattern, with a winter peak to meet heating needs.



Last fall, a record corn harvest increased the demand for propane in the Midwest. Because propane is used for crop drying, a wet growing season in the Midwest combined with the largest corn yield in U.S. history greatly increased the demand for propane. On December 12, 2013, EIA reported in Today in Energy, Propane demand hits a record high for November, "For the week ending November 1, the United States consumed nearly 1.8 million barrels per day—a figure typically not seen until January or February, when the winter heating season reaches a peak. As a result, propane inventories in PADD 2 (the Midwest) were at their lowest level for November since 1996." (Attached as Exhibit A.) The winter heating season began with propane stocks already below the five-year average nationally.

The market for propane in the Midwest (PADD 2) is somewhat fragmented, with low concentrations in rural areas. On average, 7% of homes in the region use propane as a primary heating fuel. The most recent Propane Situation Update (attached as Exhibit B) shows the share and number of homes heated with propane in the Midwest and New England on page 5.

Cold weather hit the Midwest in late December and early January, with heating degree days in the region roughly 15% higher than the 10-year average levels. The states of Indiana, Iowa, Minnesota, Montana, Nebraska, South Dakota, and Wisconsin declared states of emergency to enable more delivery of propane throughout the Midwest.

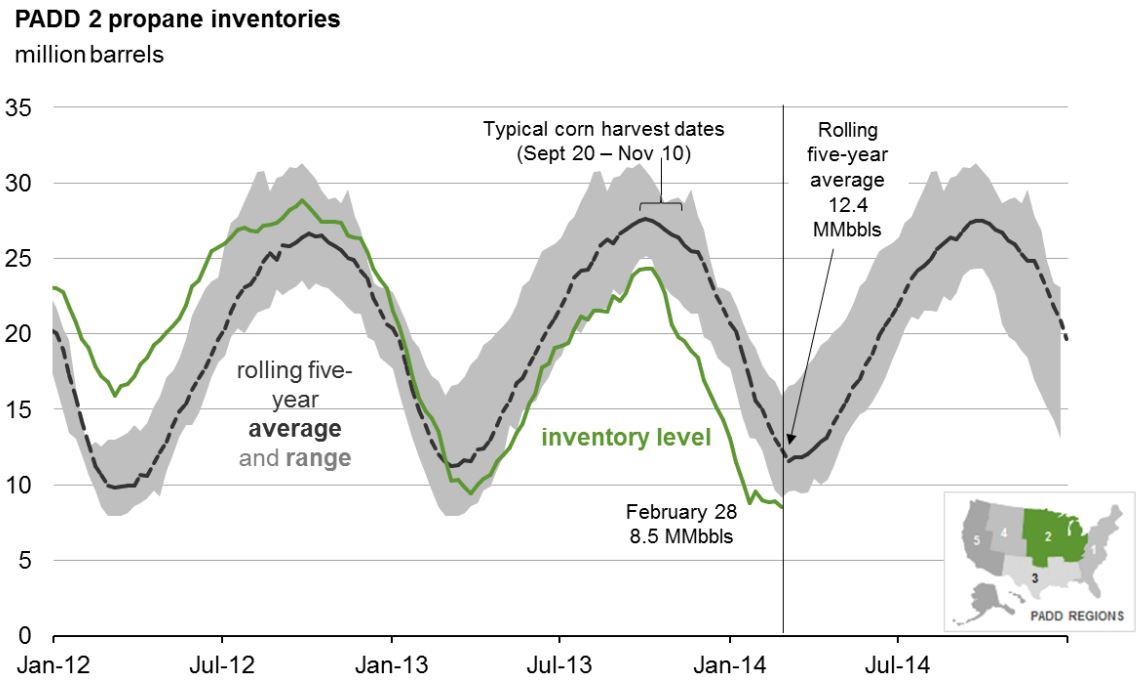
Propane Infrastructure developments

The growth of U.S. production of propane and other natural gas liquids (NGL) has led to several recent and proposed changes in NGL pipeline systems.

Some of the propane supply to the Midwest and Northeast is transported by common-carrier pipelines, which establish shipping schedules in advance and are constrained in rescheduling nominations to meet unexpected shortages in their delivery regions. In early February, the Federal Energy Regulatory Commission invoked its emergency authority under the Interstate Commerce Act, for the first time ever, to direct Enterprise TE Products Pipeline Company (TEPPCO) to temporarily provide priority treatment to propane shipments from Texas to the Midwest and the Northeast.

The Cochin pipeline, which carries propane from Canada into Minnesota, was out of service for planned maintenance in late 2013 related to plans to repurpose and reverse the pipeline as early as mid-2014. Import flows into the Upper Midwest via this pipeline were cut off during this planned outage.

Propane stocks in the Midwest stood at 8.5 million barrels for the week ending February 28, a 4 percent decrease from the previous week. Inventory levels are still below the five-year seasonal average, but the gap is diminishing—levels that had been as much as 8.6 million barrels below the five-year average on January 10 were 3.8 million barrels below the five-year average as of February 28.



Source: EIA, Weekly Petroleum Status Report, data through February 28

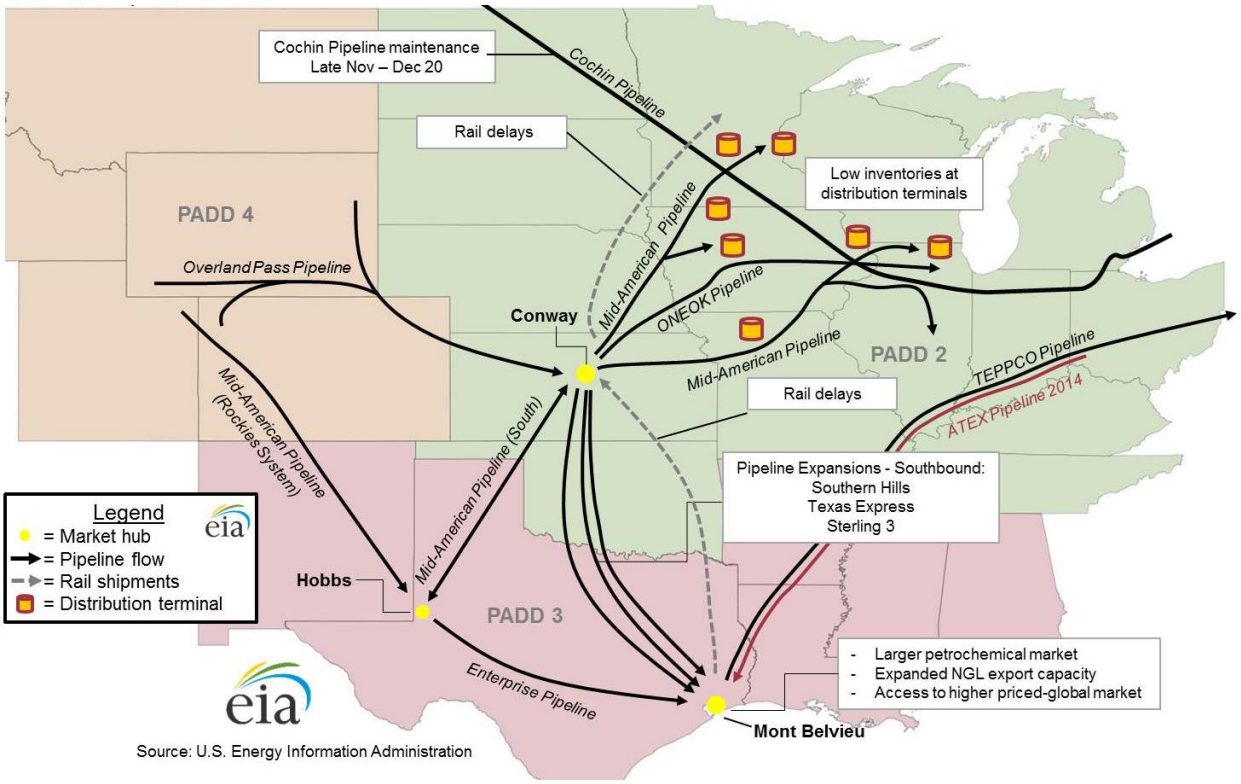
As noted above, Conway, Kansas and Mont Belvieu, Texas are the major propane hubs serving the Midwest and Gulf Coast, respectively. Under market conditions that prevailed from March 2010 to Nov 2013, prices at Mont Belvieu were generally above those at Conway, providing a signal for supplies to move towards the Gulf Coast. Pipelines linking Conway and Mont Belvieu, are set up to carry supplies from north to south – their long-standing orientation. Rail is the primary mode available to carry propane northward from Mont Belvieu to Conway, because there is limited pipeline capacity to move propane south to north from Texas and New Mexico to Kansas.

The development of extreme propane shortages in the Midwest in mid-January, and a significant rise in prices at Conway relative to those at Mont Belvieu, provided a strong incentive for flows of propane from south to north. Those flows, which occurred within the constraints of available infrastructure, resulted in a significant reallocation of supplies, as evident in PADD-level weekly inventory data. The spike in U.S. propane prices also led to increases in imports into Minnesota and Michigan via pipeline connections from Canada, and additional tanker cargoes imported into Northeast ports.

At the beginning of December, spot wholesale prices that are reported daily by Reuters were nearly equal at the trading hubs at Conway and Mont Belvieu, both near $1.20 per gallon. By the beginning of January, Conway was about 18 cents per gallon higher than Mont Belvieu ($1.43 versus $1.25). During January, the price spread peaked at $2.96 per gallon on January 23, with several smaller peaks through the rest of the month. In February, the price spread

diminished and as of March 4 prices per gallon are roughly equal at $1.11 at Conway and $1.10 at Mont Belvieu.

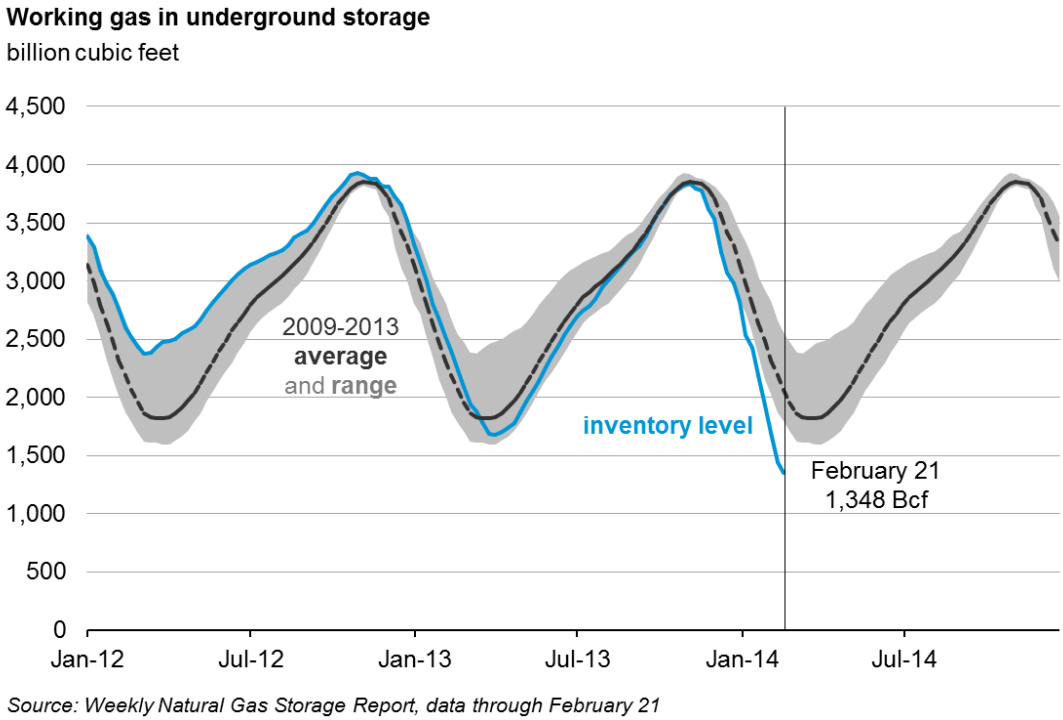
The continuing development of U.S. hydrocarbon resources, resulting in the increasing supply of crude oil, natural gas, and propane and other natural gas liquids will continue to present both challenges and opportunities for the use of existing infrastructure and the development of additional infrastructure in the future.



Natural Gas

Colder-than-normal weather, storage and pipeline constraints, and freeze-offs are key factors that have contributed to particularly high spot natural gas prices in the Midwest, Mid-Atlantic, and Northeast this winter. In areas that rely heavily on natural gas as a fuel for power generation, spot market prices for day-ahead, on-peak, electric power prices also rose to atypically high levels. However, in contrast to markets for propane and heating oil, where wholesale price movements are quickly reflected in retail prices, the retail electricity and gas rates paid by consumers who receive service through their local distribution utilities do not immediately reflect price spikes in the spot market.

Cold weather contributed to a new record-high withdrawal of natural gas from storage and a surge in natural gas spot prices. (Today in Energy, January 17, 2014, Attached as Exhibit C.) Natural gas working inventories on February 21 totaled 1,350 billion cubic feet (Bcf), 910 Bcf below the level at the same time a year ago, 710 Bcf below the previous five-year average (2009-13), and 450 Bcf below the previous five-year minimum. Henry Hub natural gas spot prices increased from $4.32 per million British thermal units (MMBtu) on January 2 to $8.15/MMBtu on February 10. The Henry Hub spot price was $4.81/MMBtu on February 26.

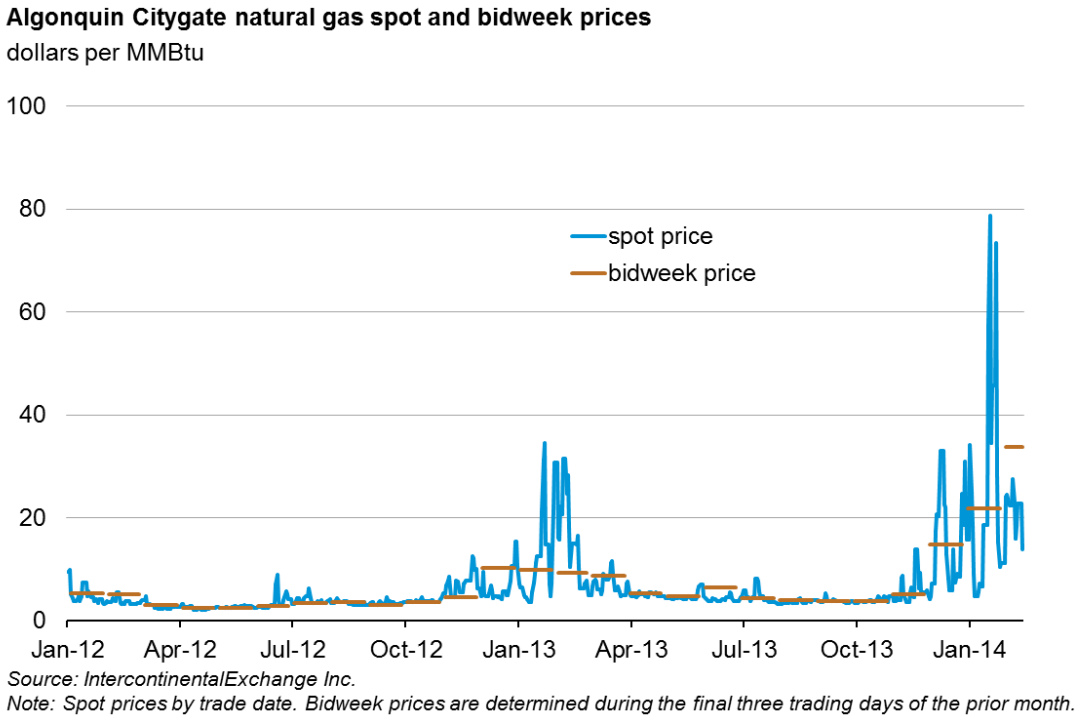


Source: Weekly Natural Gas Storage Report, data through February 21

New England faces some of the highest and most volatile spot natural gas prices. This volatility reflects both pipeline capacity constraints and significant growth in demand for natural gas, particularly for electricity generation, in the region. Reductions in imports of liquefied natural gas (LNG) and Canadian pipeline gas this winter added to the strain on pipelines serving New England that carry domestically–sourced natural gas.

New England spot natural gas prices hit record levels this winter. From January 1 to February 18, the day-ahead wholesale (spot) natural gas price at the Algonquin Citygate hub serving Boston averaged $22.53 per million British thermal units (MMBtu), according to data from Intercontinental Exchange (ICE). This price is a record high for these dates since the ICE data series began in 2001, and 50% above the same period in 2013, when cold weather drove New

England prices to their highest level since 2004.



(From Today in Energy, February 21, 2014)

The challenges faced by natural gas markets in New England are not new. New England spot natural gas prices in the winter of 2012-13 were also higher on average and more volatile than elsewhere in the United States. EIA released a supplement to the Short Term Energy Outlook in January of 2013. (Attached as Exhibit D.) Yet, in contrast to New York and the Middle Atlantic states, as this winter began there were no pipeline expansions underway to relieve capacity constraints that have been affecting the region for some time.*

* Despite increased natural gas production in the Marcellus supply basin and the addition of new pipeline capacity, the Mid-Atlantic region and the New York metropolitan area also faced supply constraints and very high spot market prices during the coldest days this winter.

The February 7, 2014, *Issues and Trends* (attached as Exhibit E) report on natural gas in New England discussed a number of potential ways to lessen the impact of limited peak natural gas supply at peak demand times, including pipeline expansions, additional fuel substitution by electric generators and other gas customers, and demand curtailment. Higher electricity imports from Canada, which could reduce reliance on within-region natural gas generation to serve electricity load, are another potential option.

Thank you for the opportunity to testify before the Committee.