PIOGA Pennsylvania Independent Oil & Gas Association

JUST THE FACTS

Shale Gas Impact on Energy Prices Significant, Lasting

The benefits of the shale energy revolution in the United States over the past decade, including the exponential growth of natural gas from the Marcellus and Utica formations in the Appalachian Basin, have spanned across the nation's economic, environmental and social landscapes.

In the preceding decade, the outlook for our country's energy future was close to a crisis, particularly for our natural gas supply. Price spikes during the years 2000, 2003, 2005 and 2008 saw Henry Hub rates soar between $15.77/MCF (Feb. 2003) to $19.93/MCF (Sept. 2005), resulting in preliminary plans to build facilities to import liquified natural gas from overseas at considerable expense.

This doomsday scenario turned into a new day between June 2008, when Henry Hub prices went from $16.09/MCF, and August 2009, when they hit $2.99/MCF. Twelve years later, we tend to take this drop in energy prices, including natural gas, electricity and gasoline, for granted, but it is worth recalling what it means to families, businesses and other consumers. Here are some important facts.

Growth of Natural Gas as Electricity Source

The first important element behind more affordable energy in the U.S. is the increased use of low-cost natural gas to produce electricity over the past ten years. Statistics from the Energy Information Administration reflect the steady increase in the use of natural gas for electricity production in the U.S. between 2010-2020, growing from 988 billion kilowatt hours (kWh) of production in 2010 to 1,617 billion kWh in 2020. The percentage of total electricity supply from natural gas, among all sources, grew from 23.8 percent to 40.3 percent during that time. This 16 percent growth in a decade follows a far more modest eight percent increase (15.8-23.8 percent) during the previous decade (2000-2010).

Residential Natural Gas Prices

The average price of natural gas delivered to residential customers in the U.S. between 2005-2008 was $13.35/MCF, with spikes even higher during certain months of the year. Adjusted for inflation, American consumers could have expected to be paying more than $17/MCF in 2021 if the status quo was maintained. Rates began falling in 2009 as supplies increased and have remained at consistently reduced levels. Residential customers in the U.S. paid an average of only $9.65/MCF for natural gas at the start of 2021. The Pennsylvania Public Utility Commission (PUC) has estimated that the average customer in the state using natural gas for heating has seen their costs reduced by $1,200 annually, a significant amount for many working families. At the national level, the American Gas Association has estimated a family is saving almost $900/year with lower natural gas bills.

Residential Electricity Prices

Retail electricity prices on a national level are influenced by many factors, including sources used for generating the energy, transmission costs, allowable infrastructure investments and related items. Taken as a whole, however, average costs for consumers have stayed below the rate of inflation since the emergence of natural gas as a more significant source of electricity. The average high cost during the summer months between 2007-2009 was 11.7 cents/kWh, while the same high rate

between 2018-2020 was 13.26 cents/kWh, or about 12 percent below the rate of inflation. A comparison of average electricity costs in 2019 for mid-Atlantic states shows Pennsylvania with far lower rates than its neighbors, at 9.81 cents/kWh, with Delaware (10.52 cents/kWh), Maryland (11.24 cents/kWh), New Jersey (13.42 cents/kWh) and New York (14.34 cents/kWh) all higher. Only Ohio (9.58 cents/kWh) has rates comparable to those paid by Pennsylvania residents.

Pennsylvania Low-Income Utility Terminations

Many low-income individuals and families in Pennsylvania have benefited from reduced energy costs, evidenced by the reduction in termination rates as compiled by the state PUC. Between 2007-2009, the average termination rate for low-income electricity customers in the state was 18.1%, and the rate during the same period for natural gas users was 14.9%. Between 2017-2019 (eliminating 2020 during the COVID pandemic and moratoriums on utility terminations), those same rates were 14.1% for electricity and 11.2% for natural gas – reductions of 23% and 25% respectively. The result: thousands of Pennsylvania families who can better afford to pay their energy bills.

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Source: PJM Interconnect News Release, June 2, 2021

Future Regional Electricity Prices

In early June, PJM Interconnection announced the successful procurement, through its annual capacity auction, of competitive and affordable power supplies for the 65 million people PJM serves. Prices were significantly lower than in the previous auction. According to PJM's June 2 news release:

> "This year's auction procured 144,477 MW of resources for the period of June 1, 2022, through May 31, 2023, at a total cost of $3.9 billion. This total is $4.4 billion less than in the previous auction, for the 2021/2022 Delivery Year, when adjusted for changes in Fixed Resource Requirement (FRR) elections. The auction produced a price of $50/MW-day for much of the PJM footprint, compared to $140/MW-day in the most recent auction in 2018. Prices are higher in some regions due to transmission limits."

The Turnaround in Action

Dominion Energy's Cove Point LNG Facility near Lusby, MD tells the story about our nation's natural gas supplies. Originally opened in 1978 to import natural gas from Algiers, the facility was then used for storage of U.S.-produced gas in 1994. Cove Point began receiving imported natural gas again in 2003, but the facility was re-engineered starting in 2013 to begin exporting natural gas produced in the Appalachian Basin. It has a daily send-out capacity of 1.8 BCF, and is the second-largest LNG export facility in the continental U.S.

The Facts Are Clear

Energy independence in the U.S. made possible by the shale gas revolution has been instrumental in reducing energy cost for residential, commercial and industrial consumers. The benefits in energy cost savings for these sectors is primarily due to the use of clean, reliable natural gas to produce electricity, which also provides greater energy security for our nation. The current administration's current and future energy policies threaten these benefits we currently enjoy. Please join PIOGA in continuing to defend those benefits and our national security.

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