High winter natural gas prices and ratepayer impacts.


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Natural gas markets are seeing renewed pricing strength not seen since prior to the last recession (2008-2009).

Current market tightness is function of a variety of factors that includes: (a) COVID recovery; (b) negative investor sentiment; (c) environmental, social, and governance ("ES&G") pressure; (d) federal administrative agency policies/actions that are strongly anti-fossil fuel; and (e) geopolitical tensions (competing gas demand).

Winter will be important transition period – storage numbers are dramatically improving but weather could upset these trends easily.

Important implications for utility ratepayers – in the past, very large base rate increases have been offset with PGA decreases – is that cushion gone (?)

Raises considerable short run and longer run questions about the continued role of natural gas and the energy transition.
Natural gas supply trends
Natural gas production and reserves are at levels not seen since the 1970s and both U.S. natural gas production and reserves are now at an all-time recorded peak.

Source: U.S. Energy Information Administration.
Natural gas drills closely follow the natural gas spot price. Price decrease that started in 2008 has **reduced natural gas drilling attractiveness**.

Source: U.S. Energy Information Administration; and Baker Hughes.
Monthly U.S. natural gas production

U.S. natural gas production now above 2019 prior-peak levels.

- Nov 2020 = 99 Bcf/d
- Jul 2022 = 107 Bcf/d

Source: U.S. Energy Information Administration.
Drilled but uncompleted (DUCs) are well below historic levels – clearly indicates draw down on potential “just in time inventories.”
Growth in “free gas” has hit a steady state level – pandemic does not appear to have significantly altered this free gas production rate.

Note – while relative “free gas” production remains strong, overall crude production is down by 2 MMBBls/d.
Natural gas demand trends
Natural gas demand from the electric power industry has increased over 50 percent in the last 10 years.

Source: U.S. Energy Information Administration.
Natural gas demand from the **electric power industry** has continued to rise in the last two years.

Source: U.S. Energy Information Administration.
Natural gas demand from the **industrial sector increased 23 percent** in the last 10 years but **decreased in 2020 and 2021** due to COVID.

Source: U.S. Energy Information Administration.
Natural gas demand from the **industrial users** fell in 2019 and part of 2020. It has recovered, but feeling some **pain from inflation, exchange rates, and global tensions**.
Industrial production and purchasing indices have been consistently increasing since the lows of April 2020.

Source: Federal Reserve Bank of St. Louis.
World trade in **LNG as grown considerably** over the past decade. Lastly three years has been considerable (over 24 percent).

European natural gas prices are astronomical but expected to return to more normal levels over longer run (?)..

Still elevated levels until post-2026.

Note: Spot-LNG” refers to LNG that are traded on a cargo to cargo basis and does not mean term contracts of LNG (so-called long, medium, short-term contracts). In addition, for spot-LNG, the price of which is linked to a particular price index (for example the Henry Hub link, and the JKM link) is excluded from these statistics. Objects of these statistics are spot-LNGs the prices of which are determined at the time of contract (so-called “fixed price”).

Source: Bloomberg.
U.S. LNG exports rebounded quickly and strongly post COVID, reached a high of 8 Bcf per day in the beginning of 2020. (recent decreases due to Freeport outage)
Large recent surge in European exports.
Ratepayer impacts
Base rates (electric) have increased almost 63.6 percent since 2007, compared to fuel rates that have decreased 21 percent.

Note: EIA data used from 1995 to 2017, S&P data used to estimate 2018-2021 for electricity
Base rates (natural gas) have increased 25 percent since 2007, compared to fuel rates that have decreased by 26 percent.

Base rates = 50%  
Fuel rates = 193.5%

Base rates = 25.3%  
Fuel rates = -26.1%

Source: U.S. Energy Information Administration.
Base rates for electric and natural gas have followed similar trends since 2005.

Source: U.S. Energy Information Administration, S&P Global
Note: EIA data used from 1995 to 2017, S&P data used to estimate 2018-2021 for electricity
Fuel rates for electric and natural gas have followed similar trends since 2005, with a recent spike for fuel rates in both electric and natural gas.

Source: U.S. Energy Information Administration, S&P Global
Note: EIA data used from 1995 to 2017, S&P data used to estimate 2018-2021 for electricity
Conclusions
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• High natural gas prices are already being felt in utility rates: both electric and natural gas. This, coupled with current energy capital investments will place considerable continued pressure on total rates.

• These trends are not likely to dampen for some time – continued infrastructure proposals with even moderate commodity prices will put continued pressure on rates.

• This will be harmful for lower-to-moderate income ratepayers since bills are increasing and real income is falling.

• Prices are likely going to follow weather (here and in Europe).

• Raises considerable short run and longer run questions about the continued role of natural gas and the energy transition.