Q&A: 2021-2022 Natural Gas Market Conditions and LNG

The U.S. Energy Information Administration is forecasting higher prices for natural gas this winter

1. **Why is the U.S. Energy Information Administration (EIA) predicting a rise in natural gas prices this winter?**

   EIA is projecting higher energy prices across the board this winter including not only natural gas, but also electricity, propane and heating oil. COVID-19 dramatically affected demand patterns and stressed the supply chain in 2020, and its lingering effects have played a key role in the predicted higher price of energy and many other commodities this winter. (Source: EIA Winter Fuels Forecast)

2. **How did COVID-19 impact the upcoming winter?**

   The pandemic destroyed global and domestic demand for energy in 2020, sent natural gas prices to near-historic lows (inflation-adjusted) and led to over 100 producer bankruptcies. Just one year later, the U.S. economy is rapidly expanding at a projected rate of 10%. Producers are catching up to this growth, a process that typically takes a few months.

   The growing response by producers is evidenced by production that is up 4 Bcf/day this November compared to November of 2020 – a 4-5% increase in production that will help ease market conditions as more supply flows into the market. EIA projects declining natural gas prices beginning in March. (Sources: Rystad Energy, Moody's Analytics, Platts, EIA)

3. **What about weather?**

   Both summer and winter weather play a role in projected natural gas prices. A hot 2021 summer led to higher-than-average use of natural gas for electricity and less natural gas going into storage for later use this winter. In addition, NOAA is predicting a 1% colder winter, which typically results in slightly higher winter demand for natural gas. (Sources: EIA, National Weather Service)

4. **Doesn't exporting America's natural gas as LNG raise prices here in the United States?**

   Exports are not the driver of higher prices this winter. In fact, the growth of LNG exports can help provide stability to the ebb and flow of the U.S. natural gas market. Multiple studies commissioned by the Department of Energy under both Democratic and Republican administrations have concluded that U.S. LNG exports economically benefit U.S. manufacturers, support job growth, improve labor income, increase U.S. household purchasing power and provide increased government revenues to help fund schools and roads, among other essential services. (Sources: NERA; ICF International)

5. **Are U.S. LNG exports growing too much for the market to handle?**

   The U.S. natural gas market can easily absorb this winter's projected LNG export growth of about 1.7 Bcf/d. In fact, the natural gas market has weathered far greater increases in winter demand without a material impact on prices. To put these numbers in perspective, total daily demand for natural gas this winter is projected to only grow about 1 Bcf/day on average compared to last winter – that is less than 1% growth.

6. **If LNG exports continue to grow in the future, will there be enough natural gas for domestic customers?**

   There will be ample natural gas for all. The future supply of natural gas is an enormous number that keeps growing with each successive assessment of the resource. In fact, current LNG exports represent less than 1% of U.S. proven reserves of natural gas and about 0.001% of the total estimated U.S. natural gas resource base. (Sources: EIA, U.S. Potential Gas Committee)

7. **Would limiting LNG exports benefit consumers?**

No, it would set a dangerous precedent and throw domestic and global markets into an uproar by creating an uncertain environment for production and harming relationships with U.S. trading partners by failing to honor contracts. It would even have negative impacts on U.S. climate action by undercutting our position as a world leader in reducing emissions. Just as use of natural gas at home is helping to reduce U.S. emissions, use of U.S. LNG abroad is helping to substantially reduce worldwide emissions by replacing high-emitting fuels like coal and providing a reliable partner for renewables.

8. **What role does storage play in meeting winter demand?**

Storage is an important part of the winter supply portfolio. In some parts of the U.S., natural gas can be stored in underground storage facilities. Storage enhances physical reliability and also helps customers to manage their costs, since gas is usually purchased and injected into storage when it is in least demand and thus at its lowest price in April through October. This winter, storage is 3% lower than the 5-year average but within the recent historical range. The United States has the world's largest natural gas storage capacity, with over 4 trillion cubic feet. (Source: EIA)

9. **Why are prices so different among different regions?**

Over the last 12 years, the average price of natural gas has decreased significantly across the U.S. due to the arrival of abundant shale gas in the market. But even with higher natural gas prices projected this winter, prices are considerably lower than they were a decade ago. However, during periods of cold weather and high demand in the Northeast, prices in the Northeast's daily spot/cash market often increase more sharply than other regions because of a lack of available pipeline capacity compared to other regions.

Investment in new infrastructure is needed to deliver more natural gas to the Northeast. But instead a cumulative 4.7 Bcf/d of pipeline capacity in the Northeast has been cancelled or delayed since 2018.

10. **What is the difference between "spot" prices, "wellhead" prices and other kinds of natural gas prices?**

Wellhead prices and **citygate** prices refer to the price paid at a physical point of sale. "**Spot**" (also called "cash" or daily) prices, **futures** prices, and **short- and long-term** contract prices refer to the expected term of delivery of the natural gas. Ideally, customers try to diversify their natural gas supply portfolios with a mix of gas from different supply regions acquired under different circumstances including spot market gas, short-term and longer-term contract gas, supplemented by gas from storage and peaking arrangements so that they limit their exposure to daily swings that can occur in demand.

11. **What is the difference between "interruptible" and "firm" transportation?**

Businesses that can accommodate occasionally having their natural gas supply interrupted, or that can significantly reduce their consumption when notified by the provider, can get better rates for natural gas transportation by having **"interruptible"** service. Typically, an interruptible customer is a large industrial or commercial customer with the ability to use other fuels or temporarily halt operations. In some regions, even power generators choose to have interruptible transportation service for natural gas. In contrast, **firm** customers contract for a steady natural gas transportation service.

12. **How can customers protect themselves against higher prices?**

There are strategies utility and industrial customers can use to acquire a diverse natural gas supply portfolio, thereby, mitigating exposure to the sensitive daily spot market. These customers can purchase natural gas from a variety of regions and sources; use a balance of daily spot market, short- and long-term contracts; and use available financial hedging tools.

Sources: U.S. Energy Information Administration *Winter Fuels Forecast*, updated Nov. 2021 ("EIA"); EIA *U.S. Crude Oil and Natural Gas Proved Reserves*, Dec. 2021; EIA *Weekly Natural Gas Storage Report*; EIA Natural Gas Supply Association *2021-2022 Winter Outlook for Natural Gas*, updated Nov. 2021; U.S. Energy Information Administration *Historical Henry Hub Natural Gas Spot Prices*; Rytad Energy, Bankruptcy-hit US operators sets to lose a quarter of oil production in 2021, Dec. 16, 2020; National Weather Service Climate Prediction Center *Three-Month Outlook Official Forecasts*, Oct. 2021; Platts *Gas Daily Market Fundamentals*, Nov. 24, 2021 ("Platts/Bentek"); ICF International, *Impact of LNG Exports on the U.S. Economy: A Brief Update, 2017*; NERA, *Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports*, 2018; Energy Ventures Analysis, *Winter Outlook for Natural Gas*, Oct. 2021; Moody's Analytics *Economic View United States GDP Forecast*, Sept. 30, 2021; Potential Gas Committee, *Potential Supply of Natural Gas in the United States Biennial Report*, Dec. 31, 2020.