Winter 2023 Market Update Webinar
Q&A

Compiled: Sept. 26, 2023

The following are answers to the questions our presenters received from participants during the Winter 2023 Market Update webinar.

Winter weather and related impacts

Last winter was very warm. Is there a historical trend for the winter weather that follows an extremely warm winter? Are we "due for a cold winter?"

There is no statistically relevant correlation between the previous winter's weather and the upcoming winter, nor is there a strong correlation from season to season. There is a lot that goes into and can impact the outcome of a winter forecast. Some things to consider:

- The El Niño Southern Oscillation (ENSO) phase has the biggest influence on the overall winter outlook. Even though last winter was very warm, La Niña winters usually favor more cold volatility.
- There has been a tendency for winters to run warm over the past 10-15 years, regardless of atmospheric setup, with the top five warmest winters (as calculated using GWHDDs) all occurring since 2011. Of these five winters, one was an El Niño winter, two were La Niña winters, and two were neutral.

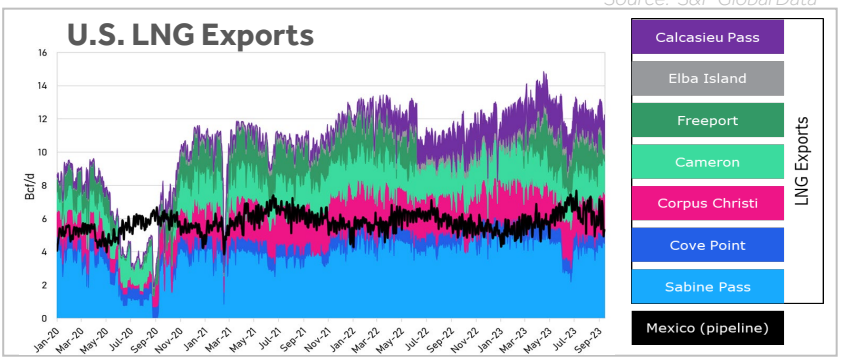
How could Algonquin basis respond to a generally warm winter across USA & Europe?

If it's warmer in the Northeast region during the winter, it could help with reducing the demand for gas from Algonquin, which would help cash pricing and, in some cases, futures pricing, if the warmth is sustained. If it's cold winter internationally, this could increase the price for LNG, thus creating what we call "gas-on-gas competition" between LNG and increased prices of the LNG that arrives in the Northeast.

Would a cold winter in Europe result in increased U.S. LNG exports?

U.S. LNG terminal exports are very much dependent on long-term contracts, with volumes often decided and contracted before plants are built. A cold winter would incentivize higher efficiency to increase total output from existing facilities, but it's not like we can create a new LNG plant and have it running before the cold time passes. As long as Europe is relying more heavily on U.S. exports, and the spread between our gas and their buy is large enough, we will see incentives to continue creating more LNG plants to meet the demand. A cold winter, if anything, would highlight the importance of LNG sector growth, but it wouldn't immediately change the output for this winter. Next winter could be a different story though.

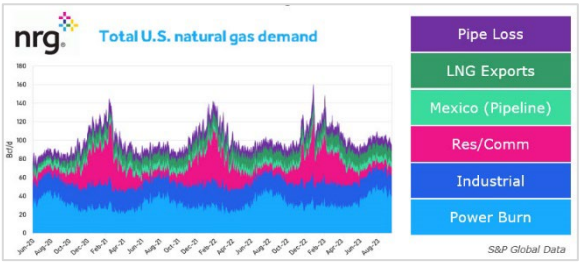
Source: S&P Global Data



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How much natural gas does the U.S. export via LNG and the Mexico pipeline?

It's important to note that while demand is growing for U.S. LNG exports, we are limited by the domestic capacity of our LNG facilities. For example, if prices skyrocketed in Europe and demand was 3 trillion Bcf/day, we could still only export the amount we can process. Currently that processing amount (capacity) is around 14.9Bcf/day, but it's expected to grow over time, with projections of 20 Bcf/day by the end of 2025, and around 28 Bcf/day by 2030. These forecasts can change but increases are still projected.



In terms of what we export to Mexico, the current max is around 6.9 Bcf/day. That number is growing as the infrastructure to accept American gas is growing throughout Mexico, however, it is difficult to precisely predict the quantity and timeline of the additional Mexican export capacity. It's interesting to note that Mexico's demand period tends to coincide with the hottest months of the year, since they use natural gas primarily for power generation and cooling. Demand internationally tends to coincide with the coolest months when it's needed for heating.

What are the reasons for the increasing number of OFOs the gas market is seeing?

An OFO, or operational flow order, is an event called for an LDC that requires us to flow gas as close to our customers' expected usage or a certain percentage of their maximum daily (contract) quantity. During these events there can be penalties for using significantly more or less, along with price volatility.

This is more regional consideration, but assuming a particular region has experienced more OFOs, this could be the result of the decline in intra- and interstate pipeline construction since the start of the pandemic. This situation can limit the amount of gas that can be moved through pipelines and create OFO situations. And, it's not just total supply constraints, but also operational constraints, including problems with limited capacity or pressure in the pipeline.

Pricing

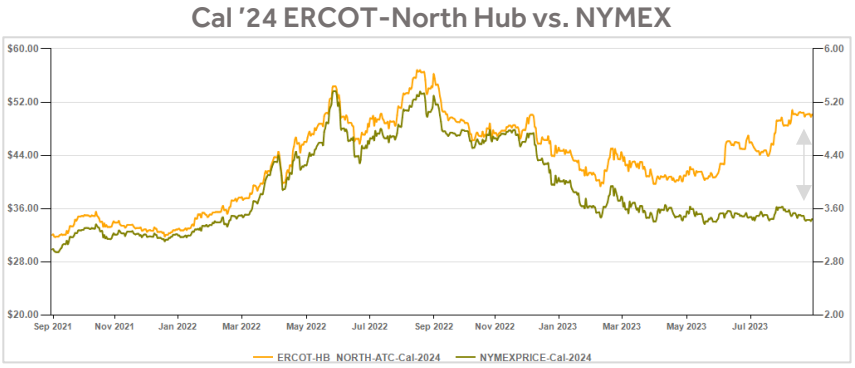
Currently the supply and demand are looking good for gas. Why are we seeing price increase in Cal 2024?

Generally, NYMEX Cal '24 hasn't seen a massive increase in prices over the last year, in fact it's the opposite. Prices have fallen off from where we were in 2022 (also illustrated in the NYMEX plot line in the chart below). However, if you're comparing 2018 prices to 2023, Cal '24 prices have gone up. But recently they are down from the highs we saw last year going into winter. You also need to consider your basis price, which varies greatly across U.S. regions, as that will factor into your final contract rate—not just the price of commodity.

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Natural gas has been a major driver of electricity pricing over the years—why is it not as much now?

Natural gas is still the primary driver of power prices across every part of the country. The difference is that Texas specifically has seen a growing reliance on wind generation, creating volatility in available supply. There is enough capacity, but some of it is intermittent or non-dispatchable, so creating peaking electricity with generators who were not planning on running has created a premium in the index and pushed up longer-term prices. So there's now a divergence specifically between ERCOT power prices and NYMEX.



Why is Chicago Citygate pricing lower than other citygates?

The Chicago Citygate is centrally located between two major supply regions—the Marcellus shale region and the imports from Canada. This positions them to import cheap gas, since nearby is pumped cheaply. The region doesn't have a ton of its own production, but it happens to have a lot of local storage, so there is plenty of available gas. This makes gas "cheaper" in this region than in other parts of the country.

NYMEX has shown weakness and lacked volatility over this summer. What are key factors that could push the market out of its recent range?

Either falling production or strong winter weather could push the market up.

Geopolitical

What considerations around energy do you think will emerge during the upcoming election year?

Since there are many areas of energy that can be impacted by the party in power, some topics that may surface—both at the federal and local level—include:

- **upstream** - drilling, drilling permits, leasing, inflation, U.S. energy independence, foreign relations
- **midstream** - infrastructure/pipeline development
- **downstream** – anti-fossil regulations, electrification, renewable subsidies/development

When the Fed raises interest rate again, will energy markets be affected and how?

We typically don't see immediate impacts when the Fed raises rates, but the topic of "break even" for energy producers is broached in that subject. When interest rates go up, the cost to break even for producers tends to be increased due to the investment costs required for rigs. This means interest rate hikes can have bullish impacts on energy prices over time.

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Regional considerations

Now that changes have been made in ERCOT to address the issues faced in 2021 during Winter Storm Uri, if we do have such conditions again, will there be less impact?

Weatherization on the electric and gas side, as well as the procurement of more ancillary services—which tends to elevate real-time prices and incentivize curtailment before scarcity conditions—may help keep the lights on during a weather event. However, the lack of a resource adequacy solution could mean that outages still occur.

Please check our ERCOT market update webinar and Q&A from earlier this year to learn more about the ERCOT market redesign and new ancillary services products.

What is the status of deregulation in Lubbock, Texas?

According to details released by ERCOT and the Public Utility Commission of Texas (PUCT), shopping is expected to begin the first week in January (2024), with customers moving to service with their new supplier starting the first week of March (2024).

When is the Mountain Valley Pipeline expected to come online and will it impact prices for Northeast markets if/when it does?

Current forecasts predict that the MVP pipeline will come online around January 2024. It's supposed to be able to help supply the regions around Virginia, but along the Transco pipeline. This should help alleviate some of the gas-on-gas competition we see between New York/New Jersey and the Mid-Atlantic region/Northeast. This means that it should be able to help alleviate some of the pricing pressure in the Northeast, although it's already been priced in. As long as nothing changes, the expected influence on gas flows should be accounted for and prices shouldn't change much when the pipeline comes online.

What's the status of the PJM capacity auction?

PJM's long-term reserve margin forecast suggests an eventual supply and demand imbalance. As a result, PJM has placed capacity auctions on hold as it seeks to better align market rules with changing market conditions. Essentially, the current construct was resulting in price signals that were not well aligned with the observed and anticipated risks to ensure resource adequacy and reliable service over the next several years. The December 2022 capacity performance event (Winter Storm Elliott) exacerbated these observations and risks, which may have been more significant than many understood.

In February 2023, PJM began to examine alternative solutions through their Critical Issue Fast Path stakeholder process to enable improvements in key capacity market areas, including:

- Enhanced risk modeling
- Evaluation of potential modifications to the Capacity Performance construct and alignment of permitted offers to the risk taken by suppliers
- Improved accreditation to ensure that the reliability contribution of each resource is accurately determined and aligned with compensation
- Synchronization between the RPM and Fixed Resource Requirement (FRR) rules

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What's the status of the PJM capacity auction? [con't]

PJM's Board is examining a variety of options and is anticipated to announce the next steps imminently, with a target of filing tariff and rule changes at FERC in October.

The following is the PJM RPM auction schedule through 2027/28 (Docket No. ER23-1609-000 approved by the FERC on 6/9/2023). PJM will update with specific dates in advance of scheduled auctions.

Delivery Year	Auction	Opening Auction Month/Year
2025/26	BRA	Jun 2024
2026/27	BRA	Dec 2024
2025/26	3rd IA	Feb 2025
2027/28	BRA	Jun 2025
2028/29	BRA	Dec 2025
2026/27	3rd IA	Feb 2026
2027/28	2nd IA	Jul 2026
2027/28	3rd IA	Feb 2027
2028/29	2nd IA	Jul 2027
2028/29	3rd IA	Feb 2028

Buying strategies and considerations

What market factors are most likely to affect a buying strategy?

The market factor that is mostly likely to affect your buying strategy is the change in prices that you're not expecting. That is why buyers should always have someone watching the market for them. Some things that we watch that can impact prices:

- Near-term: weather is a key driver
- Longer-term: the impact of falling rig counts (impacting production) and LNG exports (impacting demand)

We're also keeping an eye on the war in Ukraine and the U.S. presidential election.

For supply contracts that expire in the off-peak months (Nov-Mar), should I look at pricing now for a forward lock, or should I wait until closer to contract expiration?

There is no harm and only good that can come from looking at pricing now for future start dates. Currently, prices are overall relatively low. And, while waiting has mostly worked over the past six months, there is no guarantee that prices will remain weak during the risky winter period. For smaller businesses that may not have the financial wherewithal to survive the type of price volatility that has occurred during recent market spikes, there is no harm in reviewing pricing and terms now for contracts starting in the shoulder months.

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Is it better to fix or pass through energy supply cost components?

Passing through energy supply costs can be beneficial in two scenarios:

- when you want to avoid risk premiums
- when you can proactively manage your load

In the first case, New England is a good example where some customers paid very hefty premiums with certain suppliers for a rate component that actualized much lower. The second scenario applies to capacity and transmission tag management. If your business is able to strategically reduce usage to manage its cap/trans tag, then it would make sense to be on a pass-through product so that you can realize savings from this reduction.

Some things to consider:

- longer-term transactions have higher premiums on cost components as suppliers manage risk
- the best fit if you're looking to fix all costs into one rate would likely be a shorter-term transaction where rates are more certain and risks are smaller, which can amount to smaller premiums to lock in all components
- pass-through products have yielded superior results historically

What are your overall buying strategy recommendations going into winter?

For more information and analysis beyond the webinar, please be sure to check our blog for upcoming winter market outlook and buying strategies articles.