PJM MARKET UPDATE WEBINAR
After the call summary

Compiled: Feb. 5, 2024

Important highlights at a glance

The NYMEX and power markets are in contango, while gas basis pricing is backwardated. Learn more about what's going on in PJM and what buying strategies to consider amidst current market conditions.

Regulatory update

Interconnection queue: there are more than 3,000 current active generation interconnection projects (equaling 260,000 MW) at various stages of study:

- The energy value of these projects is **nearly 100 GW greater** than PJM's peak load.
- The majority of the projects include **solar**, **wind** (on-shore and off-shore), and **storage**.

In 2022, FERC approved a series of changes to improve PJM's queue process. PJM is now expected to complete studies for:

- 2024: about 300 new generation projects totaling 26,000 MW
- 2025: 46,000 MW in projects that should be ready for construction by mid-2025
- 2026: an additional 100,000 MW expected to clear by the end of 2026

Demand: there's been a sizable increase in the rate of growth, after several years of tepid growth. This is due to more data centers being built in the PJM footprint and accelerated electrification of transportation and industry.

- 1.7%↑ per year for summer peaks
- 2.0%↑ per year for winter peaks
- 2.4%↑ for net energy demand 2024-2034

Supply: the resource mix is rapidly changing in PJM. Historically it's been dominated by gas, nuclear and coal but more recently there's been a switch from coal to gas and the emergence demand response. The future is focused on solar, wind and storage. There is some uncertainty however: the interconnection queue is playing catchup with existing projects, retirements could outpace new entry or be asked to remain in place through reliability must run agreements, and the amount of iron in the ground is unknown.

Capacity market update: PJM undertook a significant effort to overhaul some aspects of the capacity market in 2023, to further support reliability targets and price signals. FERC approved PJM's two filings in this matter, which will result in changes to the base residual auction in June. All told, PJM is changing how demand is measured and how supply participates in the market.

Pricing & market fundamentals

Natural gas historical and current pricing trends:

- In 2023, the market became very much over-supplied thanks to the mild temperatures in both winter and summer. Pricing reacted and 2023 and 2024 NYMEX returned to the $3-$3.50 level.
- Cold weather like we saw in January caused the prompt 12 months to jump over $0.50/Dth.
- Although the 12-month Strip dropped over $5.50/Dth from the highs we saw in Spring 2022, the outer years are only down $1-1.50/Dth from their highs. The strength in the outer years is driven mostly by the expectation of more liquefied natural gas (LNG) facilities coming online and more power burn demand.

Natural gas supply & demand:

2022: the deficit condition was driven by increases in LNG exports, strong summer demand, and slow production growth

2023: a surplus condition following mild weather and production increases resulted in softer pricing

2024+: the recent winter conditions temporarily rebalanced the gas market however the surplus condition should remain through the balance of 2024, with the expectation of strong production and a delay in the next wave of LNG feedgas demand to 2025

Jan. 15, 2024: new **all-time high demand of 174.4/Bcf**. Demand in Jan/Feb 2023 was right around the 5-year average, and well below Winter 2022.

Key market drivers:

Weather: December 2023 was one of the warmest on record, which caused the sizable price drop we are seeing for the balance of 2024. Outside of the cold week in the middle of January, February forecasts are indicating above-normal temps in the PJM region through the middle of the month.

Storage: is forecasted to remain at a very good level through the rest of the year; 2025 is expected to be less than this year, but still higher than the 5-year average

Exports: are expected to increase due to the new LNG facilities expected to come online next year.

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Production: was hovering around the 105 Bcf/day range until the Q4 2024. The recent cold weather caused a reduction in production, but the expectation is that production will remain strong throughout 2024.

Regional gas basis: as a reminder, gas supply is comprised of both the commodity price, which is tied to national fundamentals (mentioned above), and the basis price, which is separately traded, not as transparent as the NYMEX. Basis is tied to both national and regional factors—including local weather, power generation, and pipeline infrastructure.

Example: the pricing trends of three pipelines that run through PJM's territory and have a big impact on power pricing—Tetco M3, Transco Zone 5 and Chicago Citygate:

- Currently Transco is about $1/DTh more expensive than Chicago Citygate.
- There is a downward trend in basis pricing and backwardation, resulting in lower basis pricing over longer-term contracts. However NYMEX pricing is elevated in 2025 and beyond, which pushes up fixed pricing across a longer term.
- The bearish fundamentals impacting the NYMEX market are also impacting the basis market.
- The main bullish fundamental pushing the NYMEX up in the future is LNG exports.

Power historical and current pricing trends:
Natural gas continues to be the #1 driver of power pricing however buyers shouldn't rely on NYMEX pricing alone to make electricity buying decisions.

- A one-month contract starting in Feb. 2024 has dropped from $73/MWh in January 2023 to $42 January 2024.
- Winter contracts overall (2024/2025/2026) have dropped drastically since last year as a result of mild winter temps last year and this year.
- Winter weather is a primary driver, so an above-normal winter will have an impact on pricing for subsequent winters.
- Non-winter months have increased slightly from last year to this year, even though NYMEX pricing has dropped.
- Shrinking generation reserves in PJM through the rest of this decade could result in very volatile index pricing. That possibility is likely one of the factors putting upward pressure on forward prices.

Power historical and current pricing trends (con't):
When considering the West Hub historical ATC forward pricing for calendar strips 2023-2027 plotted against the average Day-Ahead LMP for 2023:

- Day-Ahead pricing settled at $72.91, and 2023 forwards nearly hit $90/MWH in the spring and again in September 2022.
- The 2023 weighted average DA index price settled well below forward pricing at $33.05/MWh. The last time DA pricing was this low, forwards were around $30/MWh—now they're about $50.
- The $50s in the forward market could jump to the levels we saw in 2022 if unforeseen circumstances arise. If current fundamentals remain and index pricing continues to settle at low levels, forward pricing could continue to trend down into the $30s.

Buying strategies

Natural gas purchasing:
Gas basis pricing is backwardated, with lower pricing in the outer years, so longer-term contracts will result in lower basis pricing across the term. NYMEX pricing however is in contango, with 2025 and beyond currently being higher than 2024. As a result of this, instead of a multi-year fixed contract, you may consider a **NYMEX+ strategy**. With the NYMEX+ product, only the basis component is fixed up front, with the flexibility to purchase NYMEX in layers—giving buyers a shot at identifying more opportune times for purchases. A NYMEX+ strategy will allow you to lock in the basis for a longer term now, and layer in your NYMEX purchases at various points in time. With this approach, locking in NYMEX for the first 12 months (corresponding to the lower-priced terms), while waiting to lock in future NYMEX terms, could be an approach.

Power purchasing:
To help reduce future price upside risk, but not lock yourself into what could be a high-priced fixed contract (due to prices in the outer years), you could consider a **layered purchasing strategy**. This would allow you to make several purchases and get a weighted average cost for energy, as opposed to fix everything at once. A buyer looking for a near-term start could fix 75% to 100% of their load for the first 12 months to take advantage of the attractive 2024 pricing, then lock 50% of the second 12 months, then maybe only 25% of the third 12 months. There is still plenty of time to catch a market dip in the outer years and fulfill the remaining 50-75% of the unhedged requirements. In both scenarios, we can assist by monitoring your open positions and help you identify opportune times to make subsequent purchases.

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