U.S. SUMMER 2024 MARKET UPDATE WEBINAR
After the call summary

Compiled: April 22, 2024

Important highlights at a glance

The following is an overview of some important elements of the U.S. Summer 2024 Market Update presentation.

Weather outlook

The El Niño Southern Oscillation (ENSO) region is currently experiencing lingering warm anomalies across the equator, but cooler-than-normal sea surface temperatures (SSTs) across the eastern Pacific. Positive ENSO anomalies are associated with El Niño and negative anomalies are associated with La Niña.

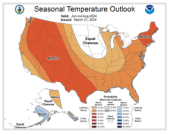
El Niño peaked back in December and has been slowly weakening through early this year. **Current forecasts show a more rapid descent toward neutral through spring, then to La Niña by summer**. The NOAA ENSO Probabilities indicates a medium chance (50-60%) of having La Niña conditions for early summer and higher chances later in the summer and into the fall.

> ***What does a summer La Niña imply?***
>
> La Niña conditions typically indicate dryer/warmer summer weather.

Summer weather tidbits

- Since the year 2000, summers on average have increased by 6.7 population-weighted cooling degree days (PWCDDs)/year. *Degree days are the difference between the daily temperature mean and 65°.*
- While last summer ran hot across Texas, nationally it was under the 2000s trend.
- The top 10 warmest summers (from 1950 to present) have occurred since 2010, with last summer sliding in as the 10th hottest on record and 2022 as the hottest.

See how recent La Niña summers have actualized and check out the NOAA summer seasonal temperature outlook.



Atlantic 2024 tropical forecast

Source	Named Tropical Systems	Hurricanes	Major Hurricanes (Cat 3+)
Colorado State	23	11	5
MAXAR	20	10	4
CWG	23	12	5
2023	**14**	**8**	**2**
10-yr. avg.	**17**	**8**	**4**
30-yr. avg.	**14**	**7**	**3**

Winter power and gas in review

With another above-normal winter, the warmest on record for Dec.-Jan.-Feb. dating back to 1950, the natural gas market is over-supplied.

- Except for the short-lived January freezing temps, which prompted some volatility, index prices remained stable/low.
- We exited winter with gas storage at a significant surplus to the 5-year average, finishing withdrawal season (March) at 2,275 Bcf.
- Natural gas exports hit a new record of 15.1 Bcf/day (in December) but then dipped in January following the cold weather and maintenance issues at Freeport.
- NYMEX remained low during December and February and only showed short-lived volatility in January in response to Winter Storm Heather.
- Power burn demand set a new record in January and flirted with record 2023 levels for Feb/March. This may continue as we head into nuclear maintenance season if low index pricing continues.

Market fundamentals: natural gas

Two warm winters ending in storage surpluses have resulted in sustained low prices, including sub-$2/MMBtu this spring. However, the supply/demand balance may be changing.

- Producers are starting to respond to low prices, with a forecasted 1.5 Bcf/day drop in production this summer over last, recently pushing below 100 Bcf/day which could continue for most of the summer.
- Decreased production with increasing power burn demand (coal-to-gas switching) and LNG exports are bullish factors for prices. A hot summer would further increase demand for power burn.
- Pipeline infrastructure updates will help deliver supplies from key production sites to regions like the East Coast/Mid-Atlantic and Southeast, while regions like the Midwest may see a bullish impact to basis with gas now flowing to other regions.
- Near-term pricing remains low compared to historicals, with upside risk outweighing downside opportunity, according to EIA confidence levels.

The NYMEX moved from backwardation in 2022 to contango in 2023 and has remained there for 2024.

NRG Energy, Inc. (along with our affiliates, "NRG" or "we") makes no representation or warranty, express or implied, as to the accuracy or completeness of the information set forth in this document, and we shall not have any liability to any person or entity resulting from use of this information in any way. This information is provided for informational purposes only, and it is not (and it may not be construed as) an offer to enter into any transaction. In addition, this information is not (and it should not be viewed as) recommending or advising on a particular result, strategy, or trading decision in any market.

NRG and the plus signs are registered servicemarks of NRG Energy, Inc. NRG is a registered trademark of NRG Energy, Inc. © 2024 NRG Energy, Inc. All rights reserved.

U.S. SUMMER 2024 MARKET UPDATE WEBINAR
After the call summary

Compiled: April 22, 2024

Buying strategies & regional considerations

Buying in the shoulder months: Buying in the spring or fall might sound like the right thing to do—shoulder months don't typically have the high demand or extreme weather that can cause price volatility. However, data indicates that:

- There's no trend of consistent buying opportunities in Q2, as prompt month natural gas futures have risen in 4 of last 7 seasons.
- In 5 of last 7 seasons, the low price point has come between Christmas and end of March, with zero low points during Q2.

Buying in a contango natural gas market: Near-term prices have declined—consistently—but long-term prices are higher than near-term and have had modest movement.

- **Near-term:** "Waiting" has worked for the near-term, as buyers have reaped the benefits of the near-term price decline.
- **Long-term:** While long-term prices are higher than near-term, based on bullish fundamentals, those longer-term prices could rise and therefore today's prices may be a value. Bullish fundamentals, like increased LNG exports and producer cuts, also make it less likely that longer-term prices will fall.
- **Regional basis considerations:** basis is weak in the east, so a potential strategy in a contango market could include the NYMEX Plus product. You could lock in a longer-term basis then immediately trigger higher percentages for the lower-priced near-term, with a more gradual triggering strategy for the longer-term portion of your contract. See what terms have shown value and when from April 2022 to present.

Regional power considerations

ERCOT

Demand in Texas is growing much faster than elsewhere in the country and supply from dispatchable resources isn't keeping up. As a result, net load has become more expensive to serve.

- Forward prices for this summer are at or near all-time highs and are disconnected from NYMEX with modest backwardation.
- Summer prices beyond this year have recently strengthened significantly given the potential future load growth from residential, AI, crypto, LNG projects, and hydrogen facilities.

Key takeaways: When compared to forward prices ($50-60/MWh), the index for most hours of the day has shown value ($20-30/MWh), making forward purchases seem unattractive. But, certain hours on certain days can be in the thousands—which can blow up your index strategy and forward prices—so there may be value in some level of hedging (portions of your load) to protect yourself from extreme volatility and increases in longer-term prices.

Northeast

NYISO Zone J (and PJM as well to some extent) was seeing a downward trend in prices between last summer and this summer, until March-April 2024, when there's been a sudden jump in long-term prices ('27-'28). This is due to the market being concerned about AI-driven data center load that is increasing across the east. The market is now in a steeper contango so:

- **Near-term:** is showing the best value.
- **Long-term:** With 2026-2028 moving up, there is time to wait or consider a partial commitment with a lower percent forward hedge.

Non-energy cost components

PJM cap and trans costs: Transmission costs are significantly higher than capacity behind most PJM utilities and, when combined with transmission, the two components can comprise 15-40% of your supply price. The next base residual capacity auction scheduled for July will be for the 2025-26 delivery year. Long-term, cap and trans fundamentals are bullish due to the increased reliance in this region on non-dispatchable generation assets and ongoing retirements of dispatchable resources.

NYISO capacity costs: Capacity prices are very strong, with in-city capacity up 3.6x in the last 12 months. Capacity costs now comprise 20-35% of supply costs in NYC and 10-15% for rest of state. These increases can be attributed to power exports to Canada and peaker plant retirements.

Strategies to manage demand components: consider cap and trans pass-through products with a peak load management program or demand response. Curtailing your load even for a few key hours during the peak load periods could result in savings.

Overall considerations

Price trends have been favorable overall to start 2024, but procurement decisions remain difficult due to market inconsistencies and bullish longer-term pressures—including the impact of renewable generation comprising a larger chunk of the regional generation stack. A flexible strategy during times of uncertainty could help you better weather the storm through layered purchases for portions of your load requirements for various timeframes. And, if you're located in PJM, NYISO or ERCOT, you may want to give serious consideration to load management services.

NRG Energy, Inc. (along with our affiliates, "NRG" or "we") makes no representation or warranty, express or implied, as to the accuracy or completeness of the information set forth in this document, and we shall not have any liability to any person or entity resulting from use of this information in any way. This information is provided for informational purposes only, and it is not (and it may not be construed as) an offer to enter into any transaction. In addition, this information is not (and it should not be viewed as) recommending or advising on a particular result, strategy, or trading decision in any market.