

May 29

2024



MARKET INTELLIGENCE REPORT



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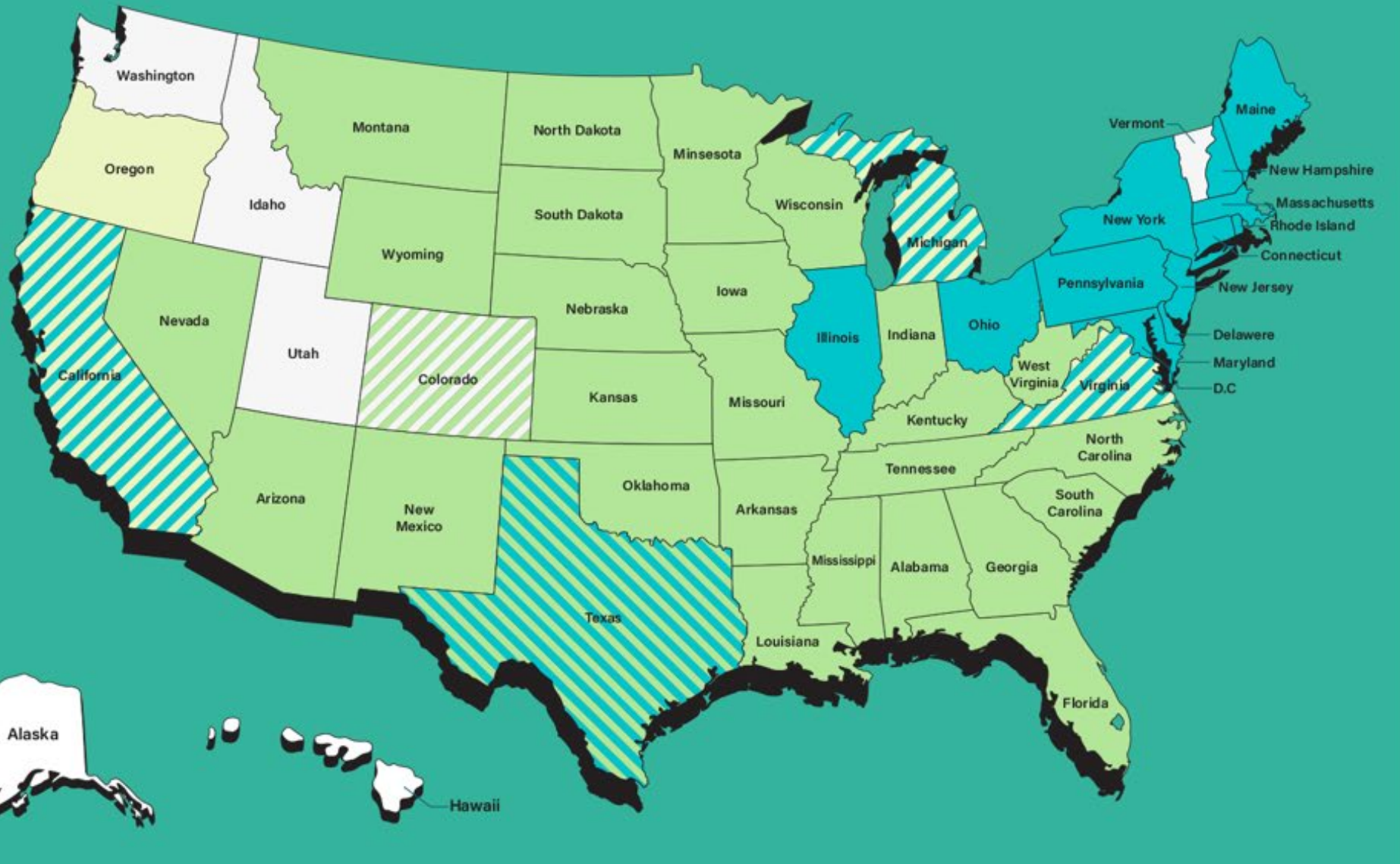
The Energy Markets are Changing

THIS WEEK IN THE NEWS

- [FERC releases 2024 summer energy market and electric reliability assessment.](#)
- [Treasury department issues voluntary carbon markets joint policy statement and principles.](#)
- [National Grid plans 5-year, \\$35 billion investment in NY, MA.](#)
- [U.S. biodiesel imports have doubled due to low prices in Europe.](#)
- [Europe's natural gas prices rally amid supply concerns.](#)
- [Alaskans sue to block proposed trans-Alaska natural gas pipeline.](#)
- [SUVs are setting new sales records – as are their emissions.](#)
- [New EU methane rules aim to curb emissions from energy sector.](#)
- [Coal's decline accelerates as natural gas and renewables boom.](#)
- [Natural gas rally likely will be short-lived after this month's surge, Citi says.](#)



MAP OF DEREGULATED ENERGY MARKETS



- Deregulated Electricity Only
- Deregulated Electricity & Natural Gas with Gas Restrictions
- Deregulated Electricity & Natural Gas with Electricity Restrictions
- Deregulated Natural Gas Only
- Deregulated Electricity & Natural Gas
- Deregulated Natural Gas with Restrictions
- No Deregulation

FUNDAMENTAL MARKET DRIVERS

Bull Drivers (Dynamics Driving Prices Higher)

- ❖ Summer forecasts calling for **above-normal temperatures** across majority of U.S. and Europe.
- ❖ **LNG exports are increasing** along with pipeline exports to Mexico.
- ❖ Gas-directed rig counts at the **lowest level since the summer of 2021**.

Bear Drivers (Dynamics Driving Prices Lower)

- ❖ Domestic natural gas production is showing **signs of improving**, with near-term projections at more than 100 Bcf per day.
- ❖ Natural gas inventories stand at **17.4% ahead of last year** and **28.8% above the 5-year average** for this time of year.





ENERGY PROCUREMENT CONSIDERATIONS

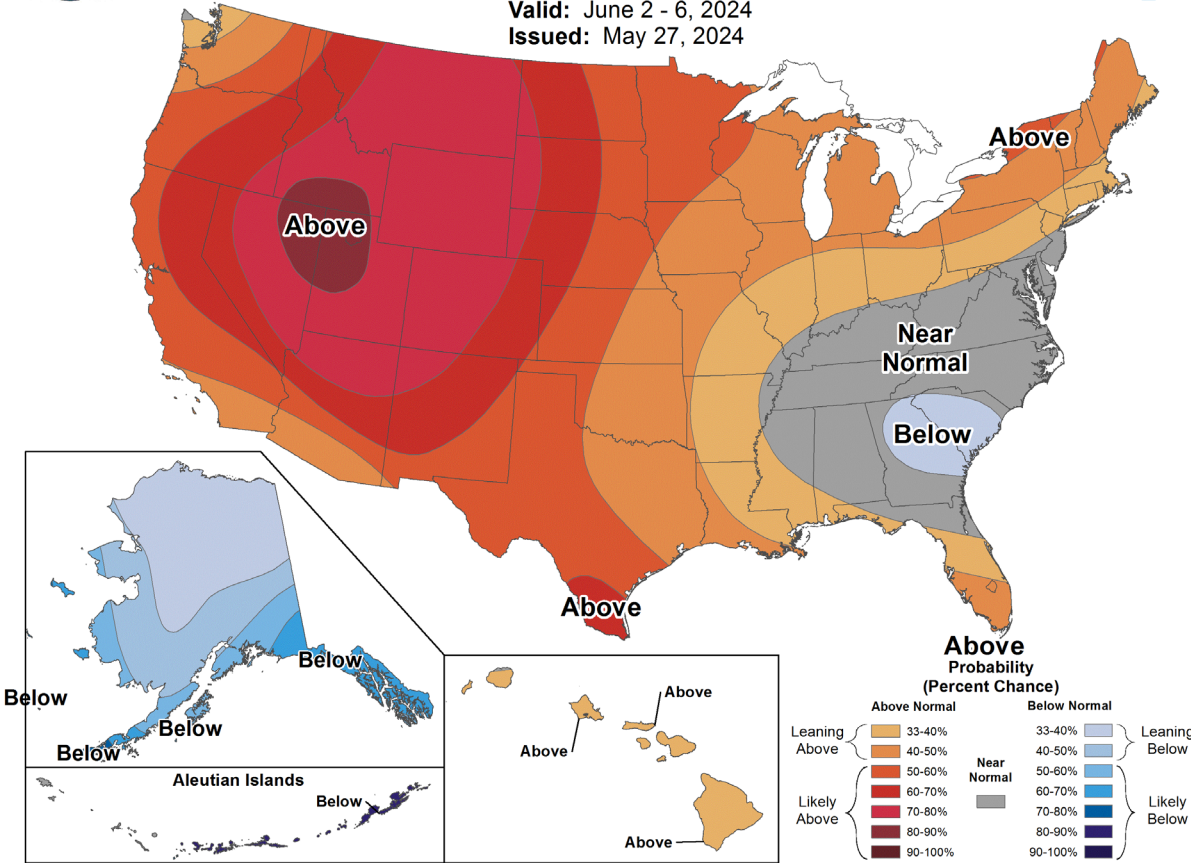
- *May 2024 saw near-term natural gas prices move higher* in response to production cuts and a shrinking inventory surplus. The 12-month natural gas strip gained \$0.25 per MMBtu, however, forward calendar strips from 2025 to 2030 remained mostly unchanged.
- *Forward energy markets remain in a state of contango, with further out pricing being more expensive in anticipation of increased LNG exports and growth in the power demand sector* related to data centers and AI.
- *Natural gas contracts for March thru May 2024 all settled below \$1.62 per MMBtu. A recent bull run in the near term has sent all forward contracts above \$2.50 per MMBtu.* Calendar year 2025 is trading around \$3.50 per MMBtu while the strips for 2026-2030 are all flirting with \$4 per MMBtu.
- *Ample natural gas storage, and relatively mild weather* to start the year have helped keep energy prices in check.
- *Summer climate forecasts are calling for above-normal temperatures in the June to September period, and a chance of nation-wide temperature averages joining the top ten hottest on record.*
- *Complacency in energy procurement during this relatively low-price environment is a high-risk strategy. Implementing a prudent risk management strategy is essential.*

MARKET FUNDAMENTALS OVERVIEW: WEATHER OUTLOOK



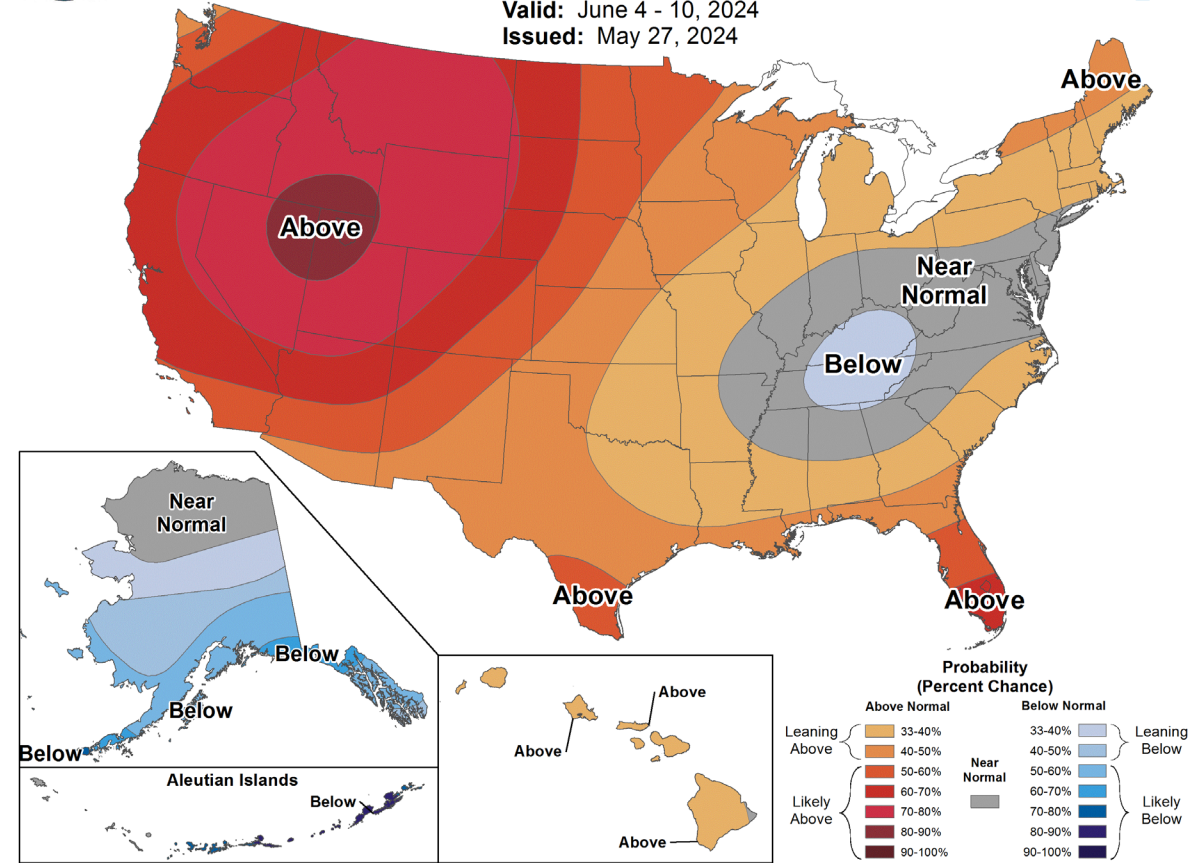
6-10 Day Temperature Outlook

Valid: June 2 - 6, 2024
Issued: May 27, 2024



8-14 Day Temperature Outlook

Valid: June 4 - 10, 2024
Issued: May 27, 2024



Key Takeaway: The southern third of the U.S. will be very warm, especially Texas which is undergoing record temperatures along with strong storms. Most of the northern U.S. is expected to be mild with highs in the 60s to 80s. **Pricing Impact: *Neutral-Bullish Summer***

WTI – CRUDE OIL – 12 MONTH STRIP



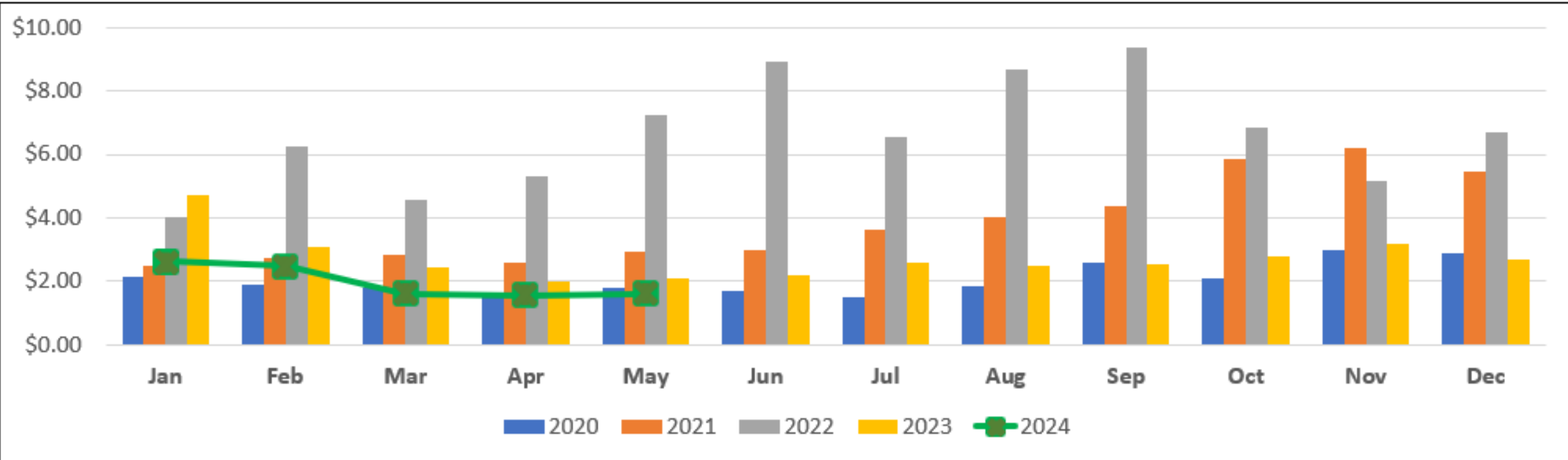
	Last Year	Last Month	Last Week	Today
Trade Date	5/25/2023	4/22/2024	5/17/2024	5/24/2024
12M Strip	\$71.15	\$78.78	\$76.04	\$75.01
% Δ	5.43%	4.79%	1.35%	-

HENRY HUB – NATURAL GAS – 12 MONTH STRIP



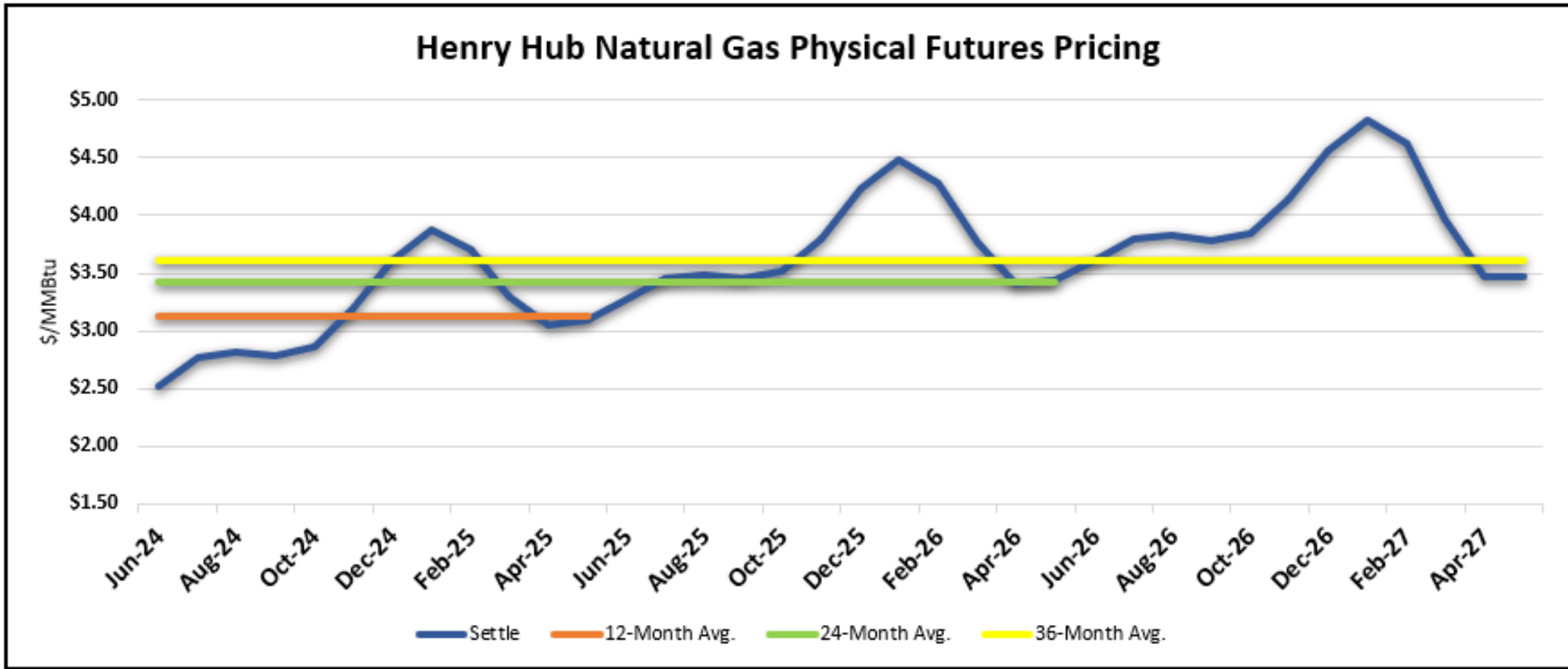
	Last Year	Last Month	Last Week	Today
Trade Date	5/26/2023	4/22/2024	5/17/2024	5/24/2024
12M Strip	\$3.001	\$2.833	\$3.130	\$3.130
% Δ	4.30%	10.48%	0.00%	-

NYMEX MONTHLY NATURAL GAS SETTLEMENTS



2020	\$ 2.158	\$ 1.877	\$ 1.821	\$ 1.634	\$ 1.794	\$ 1.722	\$ 1.495	\$ 1.854	\$ 2.579	\$ 2.101	\$ 2.996	\$ 2.896
2021	\$ 2.467	\$ 2.760	\$ 2.854	\$ 2.586	\$ 2.925	\$ 2.984	\$ 3.617	\$ 4.044	\$ 4.370	\$ 5.841	\$ 6.202	\$ 5.447
2022	\$ 4.024	\$ 6.265	\$ 4.568	\$ 5.336	\$ 7.267	\$ 8.908	\$ 6.551	\$ 8.687	\$ 9.353	\$ 6.868	\$ 5.186	\$ 6.712
2023	\$ 4.709	\$ 3.109	\$ 2.451	\$ 1.991	\$ 2.117	\$ 2.181	\$ 2.603	\$ 2.492	\$ 2.556	\$ 2.764	\$ 3.164	\$ 2.706
2024	\$ 2.619	\$ 2.490	\$ 1.615	\$ 1.575	\$ 1.614							

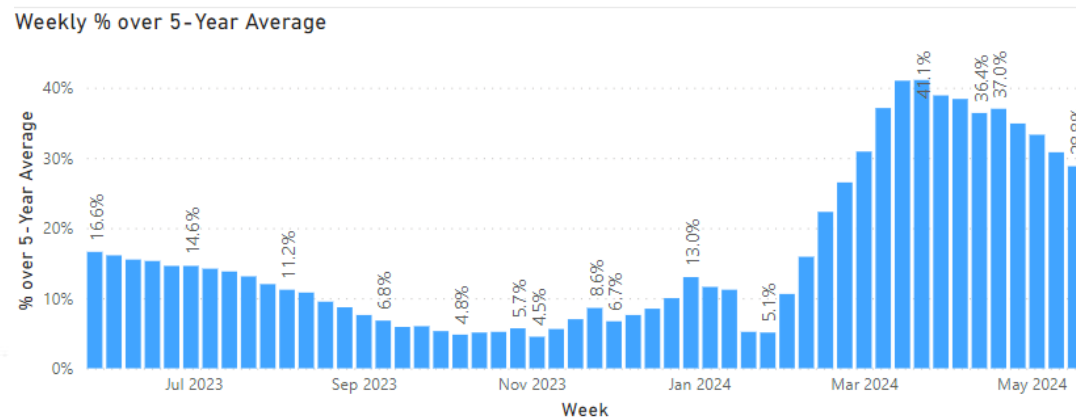
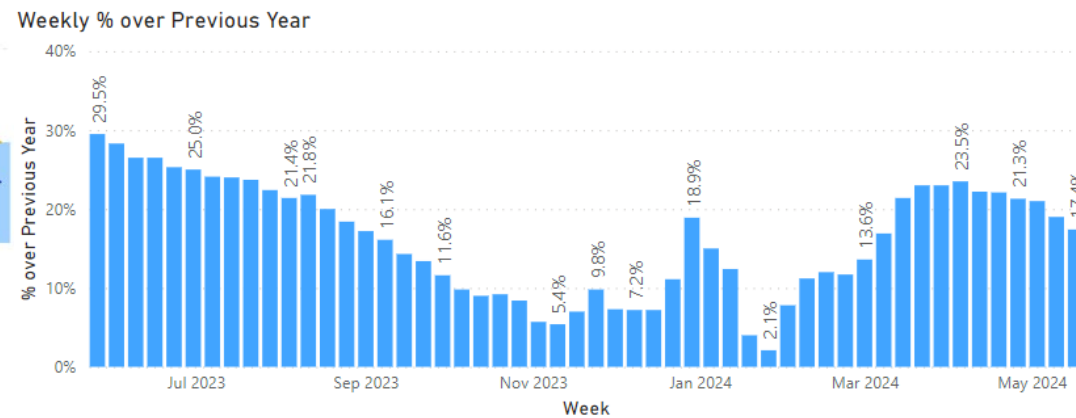
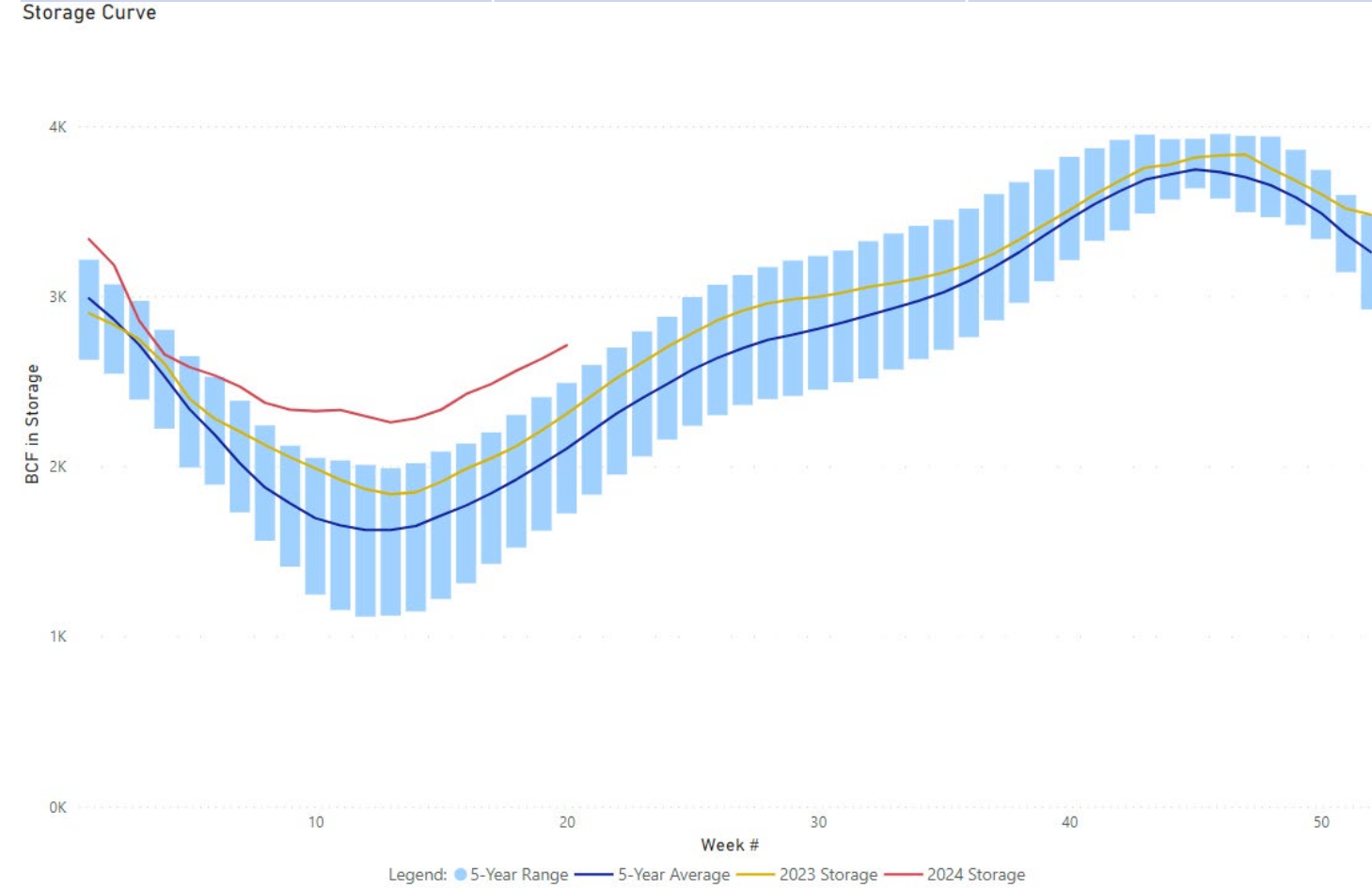
NATURAL GAS FUTURES PRICING



<i>Jun-24</i>	\$ 2.520	<i>Dec-24</i>	\$ 3.613	<i>Jun-25</i>	\$ 3.262	<i>Dec-25</i>	\$ 4.225	<i>Jun-26</i>	\$ 3.613	<i>Dec-26</i>	\$ 4.561
<i>Jul-24</i>	\$ 2.773	<i>Jan-25</i>	\$ 3.880	<i>Jul-25</i>	\$ 3.448	<i>Jan-26</i>	\$ 4.484	<i>Jul-26</i>	\$ 3.794	<i>Jan-27</i>	\$ 4.829
<i>Aug-24</i>	\$ 2.822	<i>Feb-25</i>	\$ 3.706	<i>Aug-25</i>	\$ 3.483	<i>Feb-26</i>	\$ 4.282	<i>Aug-26</i>	\$ 3.825	<i>Feb-27</i>	\$ 4.624
<i>Sep-24</i>	\$ 2.787	<i>Mar-25</i>	\$ 3.299	<i>Sep-25</i>	\$ 3.447	<i>Mar-26</i>	\$ 3.769	<i>Sep-26</i>	\$ 3.784	<i>Mar-27</i>	\$ 3.971
<i>Oct-24</i>	\$ 2.858	<i>Apr-25</i>	\$ 3.054	<i>Oct-25</i>	\$ 3.514	<i>Apr-26</i>	\$ 3.412	<i>Oct-26</i>	\$ 3.844	<i>Apr-27</i>	\$ 3.462
<i>Nov-24</i>	\$ 3.181	<i>May-25</i>	\$ 3.090	<i>Nov-25</i>	\$ 3.800	<i>May-26</i>	\$ 3.442	<i>Nov-26</i>	\$ 4.135	<i>May-27</i>	\$ 3.475

MARKET FUNDAMENTALS OVERVIEW: NATURAL GAS STORAGE

Weekly change	Current Storage	Total year ago	5-year average	Percent Full
+78	2,711	2,309	2,105	63.0%



Key Takeaway: The EIA reported that, for the week ending May 17th, U.S. inventories increased by +78 Bcf, which was within the range of expectations, but lower than many expectations. Total stockpiles now stand at 2,711 Bcf, up by 17.4% from a year ago and 28.8% above the five-year average for the same week. **Pricing Impact: Neutral**

NYISO ZJ (NYC) vs. HH – 12 MONTH FLAT FORWARDS



Key Takeaway: National Grid announced intentions to spend more than \$20 billion in capital improvements over the next five years to upgrade more than 1,000 miles of transmission lines in upstate New York and repair nearly 170 miles of gas pipelines in New York City and Long Island. *Pricing Impact: **Bullish.***

PJM WEST HUB vs. HH – 12 MONTH FLAT FORWARDS



Key Takeaway: PJM informed the developers for more than 300 proposed generation projects that applications have been approved for the next phase of the interconnection process. The projects have 30 days to announce plans to continue forward with the goal of being ready for construction by June 2025. *Pricing Impact: Neutral.*

PJM NI HUB vs. HH – 12 MONTH FLAT FORWARDS



Key Takeaway: Chicago's Bronzeville neighborhood is now home to a solar-powered microgrid that serves more than 1,000 customers. The system consists of 750 kW of PV along with a 500 kW energy storage system and 5 MW of dispatchable natural gas generation. *Pricing Impact: Neutral.*

MASS HUB vs. HH – 12 MONTH FLAT FORWARDS



Key Takeaway: NERC’s summer reliability assessment notes that ISO-NE is at an elevated risk for electric supply shortages and price spikes if temperatures come in much higher than average for an extended period. The ISO’s reserve margin of 15.9% is projected to fall to just 3.3% in an elevated outage scenario. *Pricing Impact: **Neutral-Bullish**.*

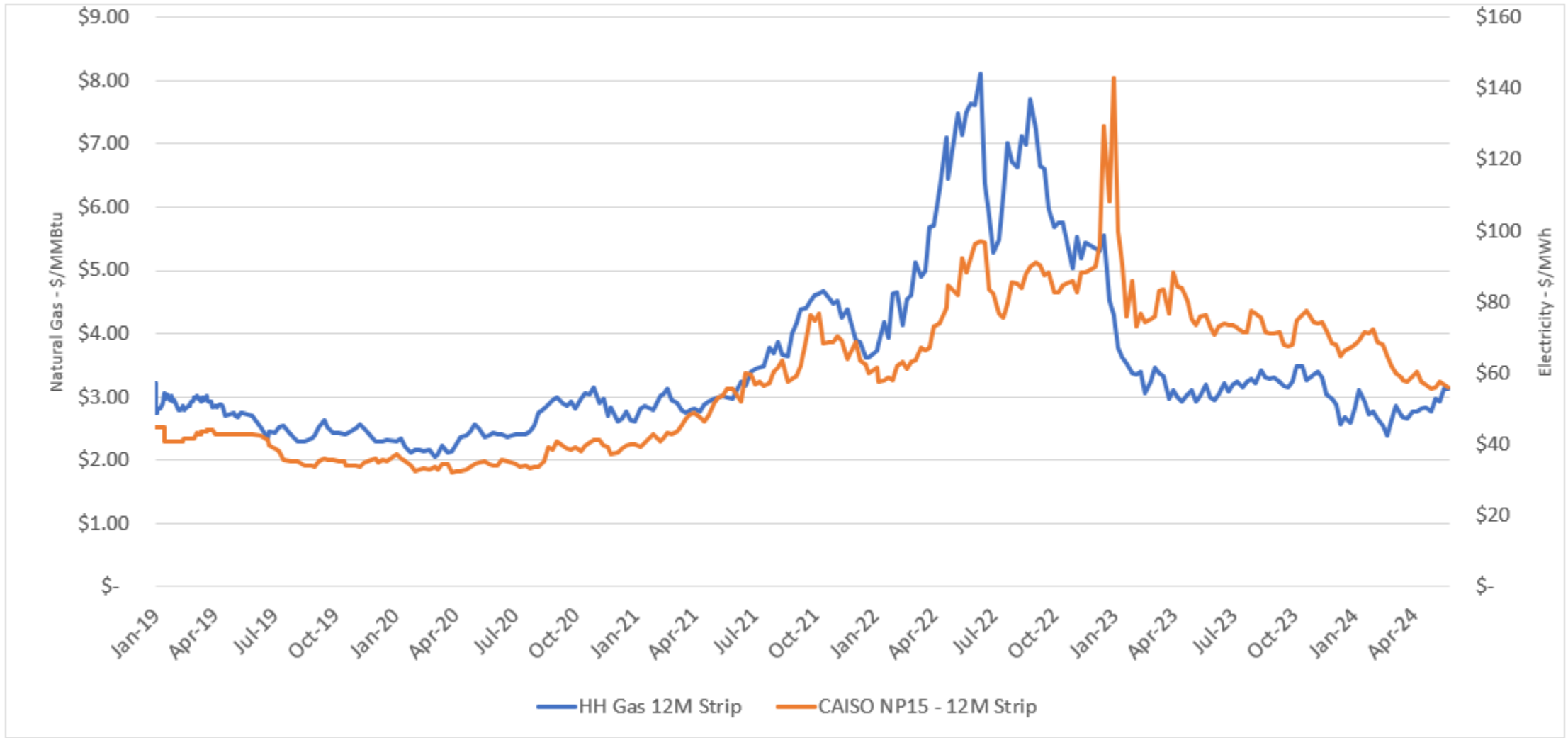


ERCOT (TX) vs. HH – 12 MONTH FLAT FORWARDS



Key Takeaway: ERCOT set a peak demand record for May, reaching 77,126 MW on May 27th. This marked the sixth time this month a new record was established. The ISO's all-time peak occurred last August at 85,508 MW, a record which is expected to be eclipsed this summer. *Pricing Impact: Neutral-Bullish.*

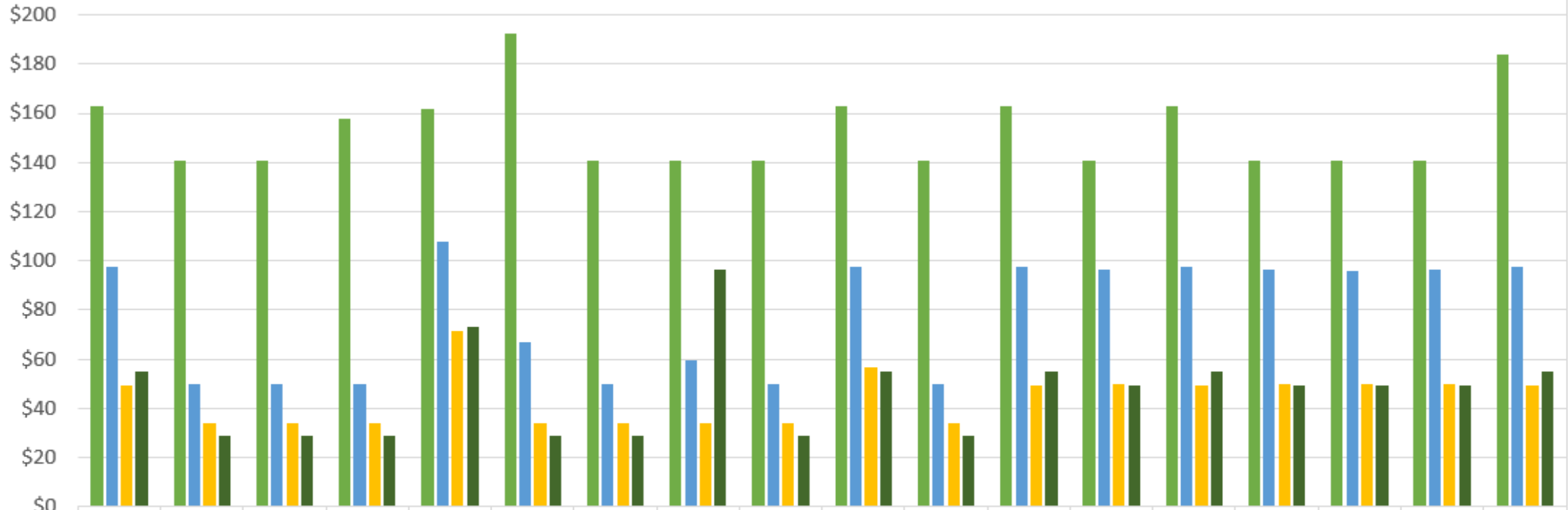
CAISO (CA) vs. HH – 12 MONTH FLAT FORWARDS



Key Takeaway: CAISO is pushing to increase its energy price cap offer from \$1,000 per MWh to \$2,000 per MWh. The main reason for this would be to incentivize battery storage. The state has ample renewable generation, however, the lack of battery infrastructure prevents the state from maximizing its solar, hydro, and wind generation. *Pricing Impact: Neutral.*

PJM FORWARD CAPACITY AUCTION PRICES (\$/MW-DAY)

PJM Base Residual Capacity Auction Results

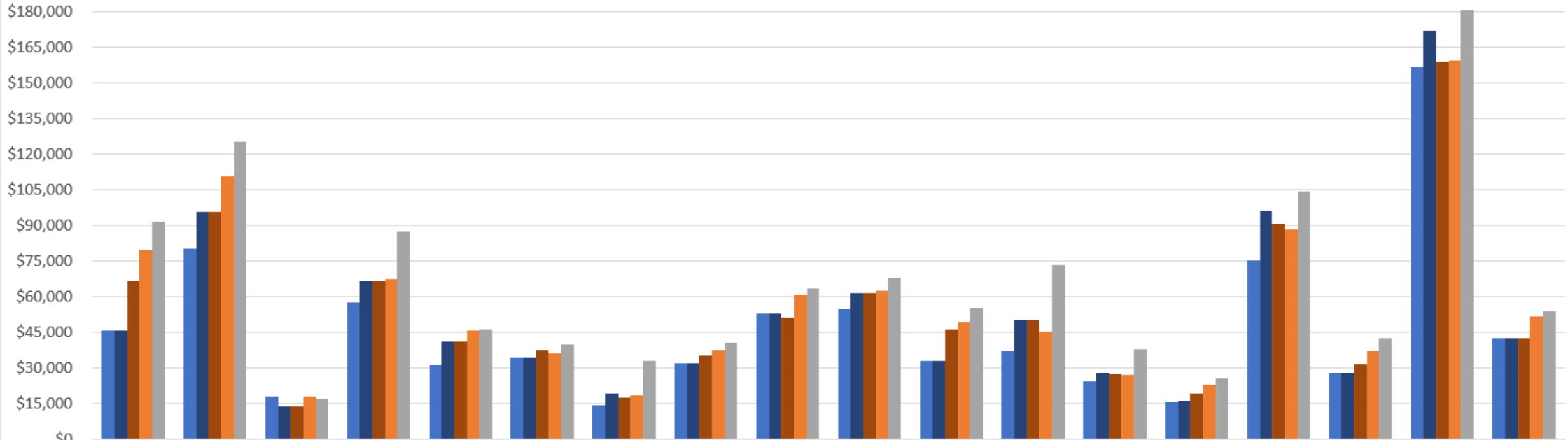


	AECO	AEP	APS	ATSI	BGE	COMED	DAYTON	DUKE	DOM	DPL	EKPC	JCPL	METED	PECO	PENELEC	PEPCO	PPL	PSEG
2021/2022	\$163.08	\$140.53	\$140.53	\$157.99	\$161.62	\$192.69	\$140.53	\$140.53	\$140.53	\$163.08	\$140.53	\$163.08	\$140.53	\$163.08	\$140.53	\$140.53	\$140.53	\$184.03
2022/2023	\$97.75	\$50.09	\$50.09	\$50.09	\$107.92	\$67.17	\$50.09	\$59.38	\$50.09	\$97.75	\$50.09	\$97.75	\$96.42	\$97.75	\$96.42	\$95.97	\$96.42	\$97.75
2023/2024	\$49.59	\$34.20	\$34.20	\$34.20	\$71.62	\$34.20	\$34.20	\$34.20	\$34.20	\$56.57	\$34.20	\$49.59	\$49.70	\$49.59	\$49.70	\$49.70	\$49.70	\$49.59
2024/2025	\$54.95	\$28.92	\$28.92	\$28.92	\$73.00	\$28.92	\$28.92	\$96.24	\$28.92	\$54.95	\$28.92	\$54.95	\$49.49	\$54.95	\$49.49	\$49.49	\$49.49	\$54.95

■ 2021/2022 ■ 2022/2023 ■ 2023/2024 ■ 2024/2025

PJM NETWORK INTEGRATED TRANSMISSION (NITS)

Network Integrated Transmission Service Rate (\$/MW-Year)



	AECO	AEP	APS	ATSI	BGE	ComEd	Dayton	Duke	Duquesne	Dominion	DPL	METED / PENELEC	JCPL	PECO	PPL/UGI	PEPCO	PSEG	Rockland
■ 2020	\$45,693.0	\$80,306.4	\$17,895.0	\$57,482.3	\$31,311.0	\$34,280.8	\$14,456.9	\$32,143.0	\$53,072.2	\$54,914.3	\$33,000.0	\$37,083.1	\$24,354.6	\$15,513.0	\$75,204.0	\$28,022.8	\$156,503.	\$42,548.0
■ 2021	\$45,693.0	\$95,597.5	\$13,930.0	\$66,744.1	\$40,962.0	\$34,280.8	\$19,175.0	\$32,143.0	\$53,072.2	\$61,729.4	\$33,000.0	\$50,128.4	\$28,012.0	\$16,022.0	\$95,997.0	\$28,165.5	\$172,189.	\$42,548.0
■ 2022	\$66,741.0	\$95,597.5	\$13,930.0	\$66,744.1	\$40,962.0	\$37,749.0	\$17,320.4	\$35,136.0	\$51,000.9	\$61,729.4	\$46,184.0	\$50,128.4	\$27,327.2	\$19,517.0	\$90,836.0	\$31,496.5	\$159,013.	\$42,548.0
■ 2023	\$79,876.0	\$110,857.	\$18,162.0	\$67,420.7	\$45,531.0	\$36,069.0	\$18,410.2	\$37,718.0	\$60,850.6	\$62,688.2	\$49,476.0	\$45,112.8	\$27,008.4	\$22,998.0	\$88,606.0	\$37,201.2	\$159,248.	\$51,530.0
■ 2024	\$91,559.0	\$125,466.	\$17,114.7	\$87,624.3	\$46,400.0	\$39,796.0	\$32,781.5	\$40,717.0	\$63,330.2	\$68,234.5	\$55,166.0	\$73,260.1	\$37,937.4	\$25,648.0	\$104,360.	\$42,655.8	\$180,897.	\$53,766.0

THE ENERGY MARKET DYNAMICS

- Natural gas producers are beginning to show signs of increasing output following months of slowdown.
- Demand for electricity in the U.S. continues to rise, particularly in the data center, automotive, and residential heading sectors.
- Forward natural gas prices (12 to 60-month strips) are trading below \$3.75 per MMBtu, which historically has been a **signal to hedge at least a portion of energy risk** exposure in the future.
- The retirement of fossil fuel generation and the intermittent nature of renewables will cause **natural gas demand to continue to accelerate** in the electric generation sector.
- The steady ascent of near-term NYMEX natural gas prices suggests that **the current inventory surplus will continue to deteriorate** over the next several weeks and months.

