



Lake County Illinois – Regional Market Outlook & Electricity Bid Results



Executive Summary

Current Market: Although natural gas storage levels recovered from their deficit at the end of 2021, cold weather to start 2022 brought record levels of market volatility and has supported energy prices. Natural gas storage levels, which were already well below normal, faced further setbacks when EIA reported a late season withdrawals and lower than forecasted injections. Storage levels are now 22% below last year driving stronger than normal refill demand outlooks. The stronger refill demands will increase summer gas costs for generators needed to meet summer air conditioning demand leading to elevated power prices in virtually all US markets. The next two weeks are expected to increase the deficit further as we typically make triple digit injections and we are expecting an injection well under 80 Bcf this week. With small injections having already led to increases in natural gas prices for this winter, the next two could exacerbate the elevated prices even further. Should those prove smaller than anticipated both gas and power prices for the next 18-24 months will certainly move higher with further impacts on the outer years.

Electricity prices have followed natural gas prices higher as natural gas fired power plants set the marginal cost for wholesale electricity rates in ComEd and other markets.

Longer term outlooks show strong support for natural gas and electricity markets with the potential rebalancing in 2026-2027 on hopes of natural gas supply production increasing marginally and a return to more normal storage levels. However, with more volatility and uncertainty due to geo-political events this expectation could quickly shift and lead to a longer recovery to prices.

Key Points:

1. Despite a warmer than average start to the 2021/2022 winter, the return of seasonably cold weather combined with strong gas demand has left storage inventory levels ~22% below last year and ~20% below the prior 5-year average, hovering near the lowest levels in 5 years, which is increasing market uncertainty and supporting a higher natural gas price environment through the remainder of 2022 and well into 2023.
2. Some forecasts are calling for a warmer than normal summer across virtually the entire US which would add to electricity demands and increase natural gas consumption to generate it. Forecasts are also calling for a drier summer across the Pacific Northwest, exacerbating their drought conditions and increasing gas demands further.
3. Record level LNG exports and gas pipeline exports to Mexico now account for ~20% of the overall demand for natural gas and are supporting of longer term prices and added price volatility across the US.
4. With many solar components imported and often subject to tariffs, supply chain issues pose a risk for renewables buildout and production growth projections, placing more demand on gas fired power plants.
5. Exelon is planning to retire the Braidwood and LaSalle generating stations, accounting for another ~4,700 MW have also been identified to be at high risk of early retirement.
6. Vistra has committed to retiring its entire fleet of coal plants in Illinois and Ohio within the next six years, initially losing another ~2,800 MW of capacity with the Edwards power plant slated to close by 2023, and the Baldwin closure to follow by end of 2025 or sooner. Vistra also recently announced they will close their Joppa Coal plant on Sept. 1, 2022, three years earlier than previously disclosed.
7. As the electricity generation mix changes to incorporate more solar, wind and natural gas fired generation, this will also raise regional natural gas prices which in-turn also puts pressure on electricity prices.

Recommendation:

Tradition Energy recommends securing a fully fixed price agreement for the next 36-48 months so as to insulate from further volatility and hedge against the material risk of prices moving higher. Our expectation is that in late 2027 we will begin to see additional infrastructure improvements being able to integrate more renewables in the power grid along with a rebalancing in the domestic natural gas market.

Customer Information			
Customer Name:	Lake County	Phone:	847-377-2180
Contact:	RuthAnne Hall	Email:	rhall@lakecountyil.gov
Address:	18 N County Street Waukegan, IL 60085		
Account Information			
Utility:	COMED	Estimated Volume:	38,177,408
Pricing Zone:	PJM	Current Supply Rate:	0.05486
Acct #'s/ESI #'s	131	Current Est Budget:	\$ 2,094,412.60
Pricing Type:	New Request - Fixed Price		
Current Provider:	Direct Energy	Creation Date:	June 2, 2022



Energy Advisor: Michael English
Direct Line: 312-281-7483
Email: Michael.English@TraditionEnergy.com

Standard Power Bids - Supplier Fixed Price Comparison / Savings and Budget Analysis

Terms	12 months	24 months	36 months	48 months	60 months	
Start Date	Jul-22	Jul-22	Jul-22	Jul-22	Jul-22	
End Date	Jul-23	Jul-24	Jul-25	Jul-26	Jul-27	
KWH Usage	38,177,408	76,354,816	114,532,224	152,709,632		

Freepoint	0.10478	0.08576	0.07720	0.07266		
Proj. Annual Budget	\$ 4,000,228.81	\$ 3,274,094.51	\$ 2,947,295.90	\$ 2,773,970.47		
Est. Annual Savings	\$ (1,905,816.21)	\$ (1,179,681.91)	\$ (852,883.29)	\$ (679,557.86)		
Est. Term Savings	\$ (1,905,816.21)	\$ (2,359,363.81)	\$ (2,558,649.88)	\$ (2,718,231.45)		
Est. % Savings	-91.0%	-56.3%	-40.7%	-32.4%		

CREDIT: Pending

SWING %: 100%

PAY TERM: Supplier Consolidated

Engie Resources	0.10821	0.08896	0.07996	0.07484	0.07210	
Proj. Annual Budget	\$ 4,131,177.32	\$ 3,396,262.22	\$ 3,052,665.54	\$ 2,857,197.21	\$ 2,752,591.12	
Est. Annual Savings	\$ (2,036,764.72)	\$ (1,301,849.61)	\$ (958,252.94)	\$ (762,784.61)	\$ (658,178.51)	
Est. Term Savings	\$ (2,036,764.72)	\$ (2,603,699.23)	\$ (2,874,758.82)	\$ (3,051,138.45)	\$ (3,290,892.57)	
Est. % Savings	-97.2%	-62.2%	-45.8%	-36.4%	-31.4%	

CREDIT: Approved

SWING %: 100%

PAY TERM: Supplier Consolidated

Direct Energy	0.11289	0.09098	0.08156	0.07645	0.07367	
Proj. Annual Budget	\$ 4,309,847.59	\$ 3,473,380.58	\$ 3,113,749.40	\$ 2,918,662.84	\$ 2,812,529.65	
Est. Annual Savings	\$ (2,215,434.99)	\$ (1,378,967.98)	\$ (1,019,336.79)	\$ (824,250.24)	\$ (718,117.04)	
Est. Term Savings	\$ (2,215,434.99)	\$ (2,757,935.95)	\$ (3,058,010.38)	\$ (3,297,000.95)	\$ (3,590,585.22)	
Est. % Savings	-105.8%	-65.8%	-48.7%	-39.4%	-34.3%	

CREDIT: Approved

SWING %: 100%

PAY TERM: Supplier Consolidated

Constellation	0.10718	0.08724	0.07793	0.07314	0.07061	
Proj. Annual Budget	\$ 4,091,854.59	\$ 3,330,597.07	\$ 2,975,165.41	\$ 2,792,295.62	\$ 2,695,706.78	
Est. Annual Savings	\$ (1,997,441.99)	\$ (1,236,184.47)	\$ (880,752.80)	\$ (697,883.02)	\$ (601,294.18)	
Est. Term Savings	\$ (1,997,441.99)	\$ (2,472,368.94)	\$ (2,642,258.41)	\$ (2,791,532.07)	\$ (3,006,470.88)	
Est. % Savings	-95.4%	-59.0%	-42.1%	-33.3%	-28.7%	

CREDIT: Approved

SWING %: Unlimited Swing

PAY TERM: Supplier Consolidated

*Does Not Include Taxes

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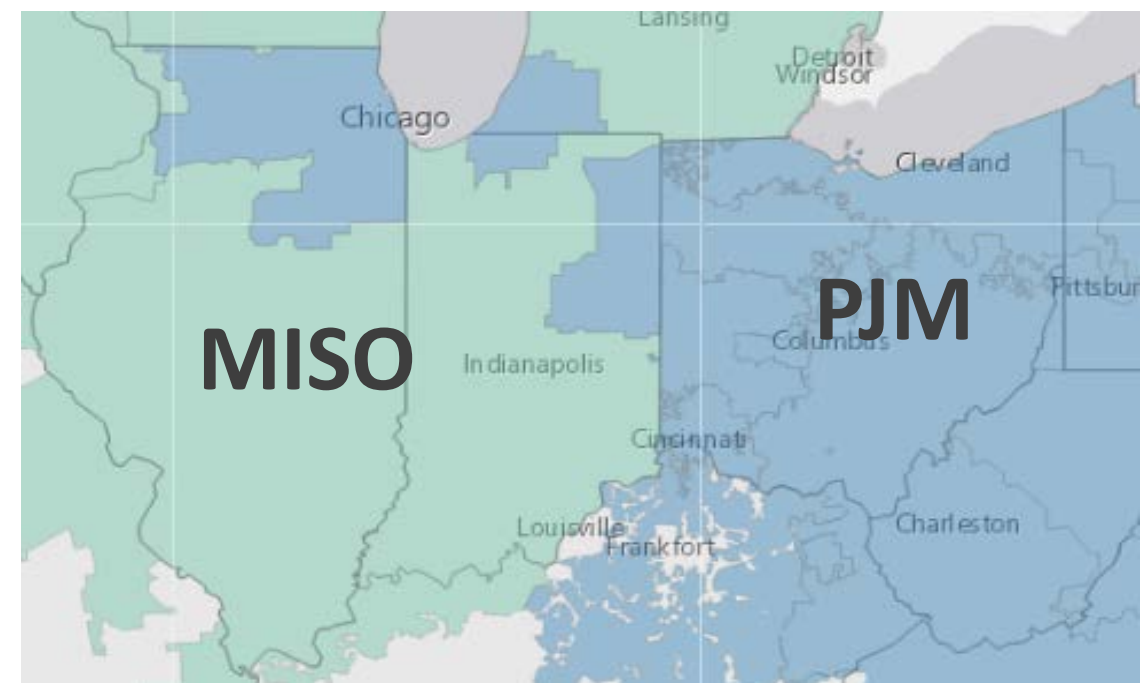
<i>Annual Usage (kWh)</i>	48 Month Brown Power Offer (\$/kWh)	25% GREEN Premium (\$/kWh)	50% GREEN Premium (\$/kWh)	75% GREEN Premium (\$/kWh)	100% GREEN Premium (\$/kWh)
38,177,408	\$0.07266	\$0.00130	\$0.00260	\$0.00390	\$0.00520
Total Annual Cost	\$2,773,970.47	\$49,631	\$99,261	\$148,892	\$198,523
Combined Annual Cost Inclusive of REC's		\$2,823,601	\$2,873,232	\$2,922,862	\$2,972,493

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The County can elect to layer REC purchases on top of the existing electricity agreement. The above table outlines the incremental cost associated with increasing the renewable percentage of the agreement.

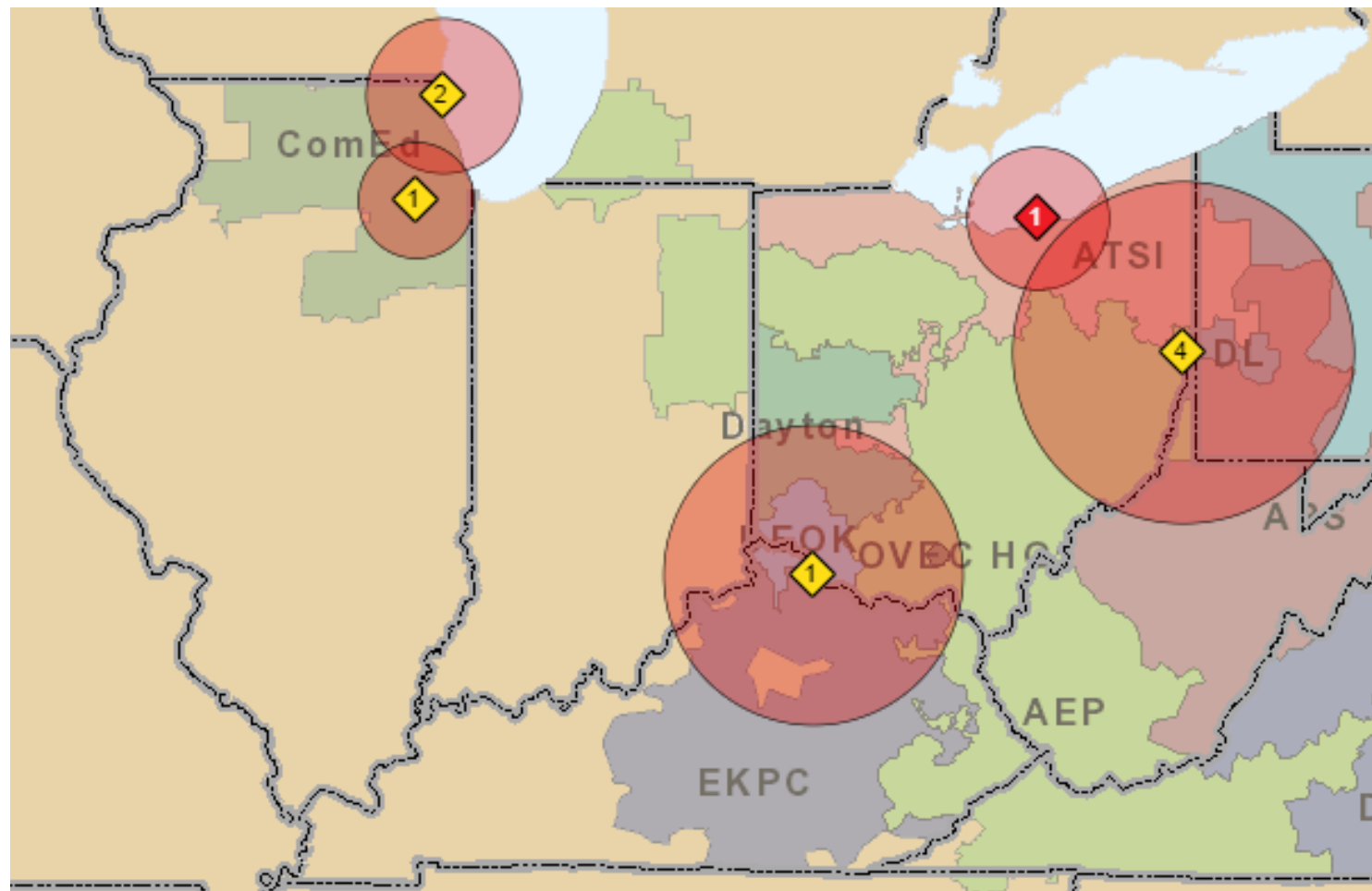
PJM IL Energy Market Overview

- The ComEd Zone of Illinois are within PJM territory, with the remainder of Illinois governed by MISO, and each region facing unique market dynamics and risks that influence prices today and in the future.
- The Future Energy Jobs Bill (Illinois Public Act 099-0906) ordered the Utility Delivery Company (COMED), effective June 1, 2017 to begin collecting remaining portions of Renewable Portfolio Standards Costs. Therefore transferring responsibility to comply with the state required 25% renewable energy component onto COMED and no longer necessary for the supplier to source.
- Any customer looking to procure additional renewable energy is doing this in addition to what COMED would be purchasing on their behalf.



PJM Generator Deactivations

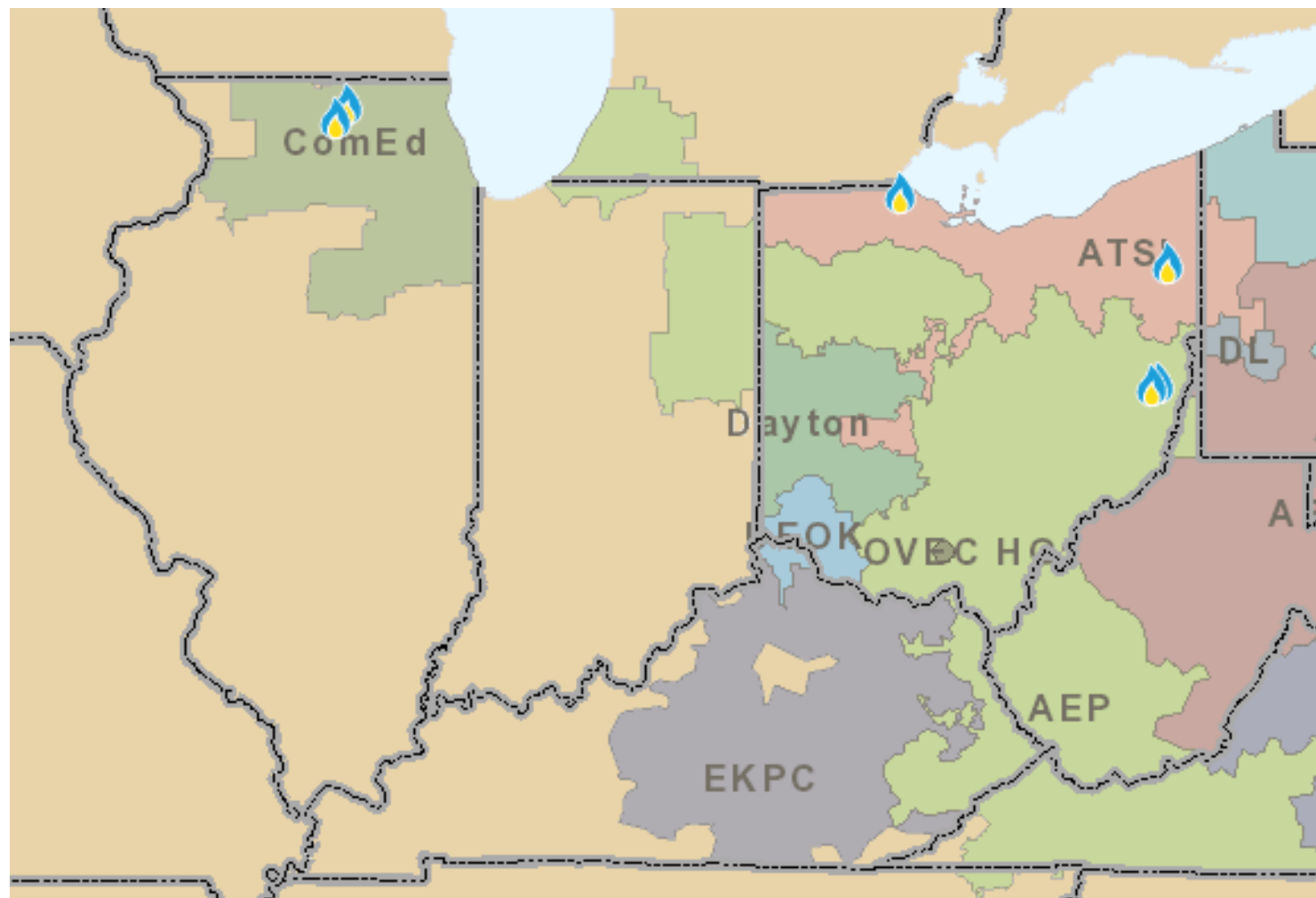
The low clearing prices in the most recent PJM Capacity Auction coupled with a push to move towards a greener generation mix have led to the planned closure of coal fired power plants across the region.



The generators shown above represent approximately 4,500 MW's of supply in Ohio and Illinois and all plan to retire before summer 2023. Their retirements will mean the region will rely even more heavily on natural gas as a fuel source to generate electricity.

PJM Gas Generator Cancellations

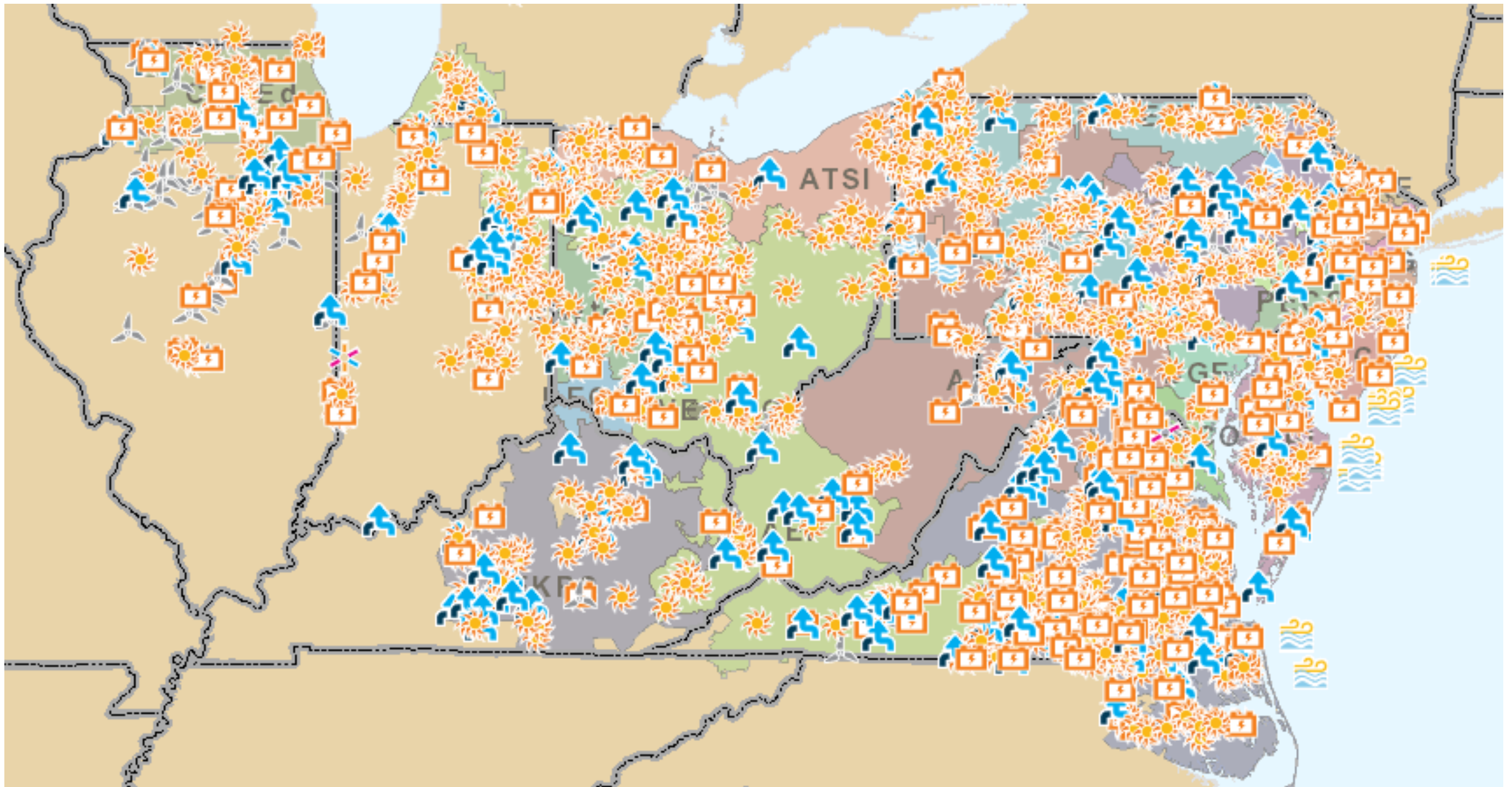
Permitting issues combined with uncertainty in the capacity market has led to the cancellation of many natural gas projects originally designed to replace the retiring coal plants.



The generators shown above represented more than 4,500 MW's of new dispatchable electricity supply in Ohio and Illinois and have been canceled.

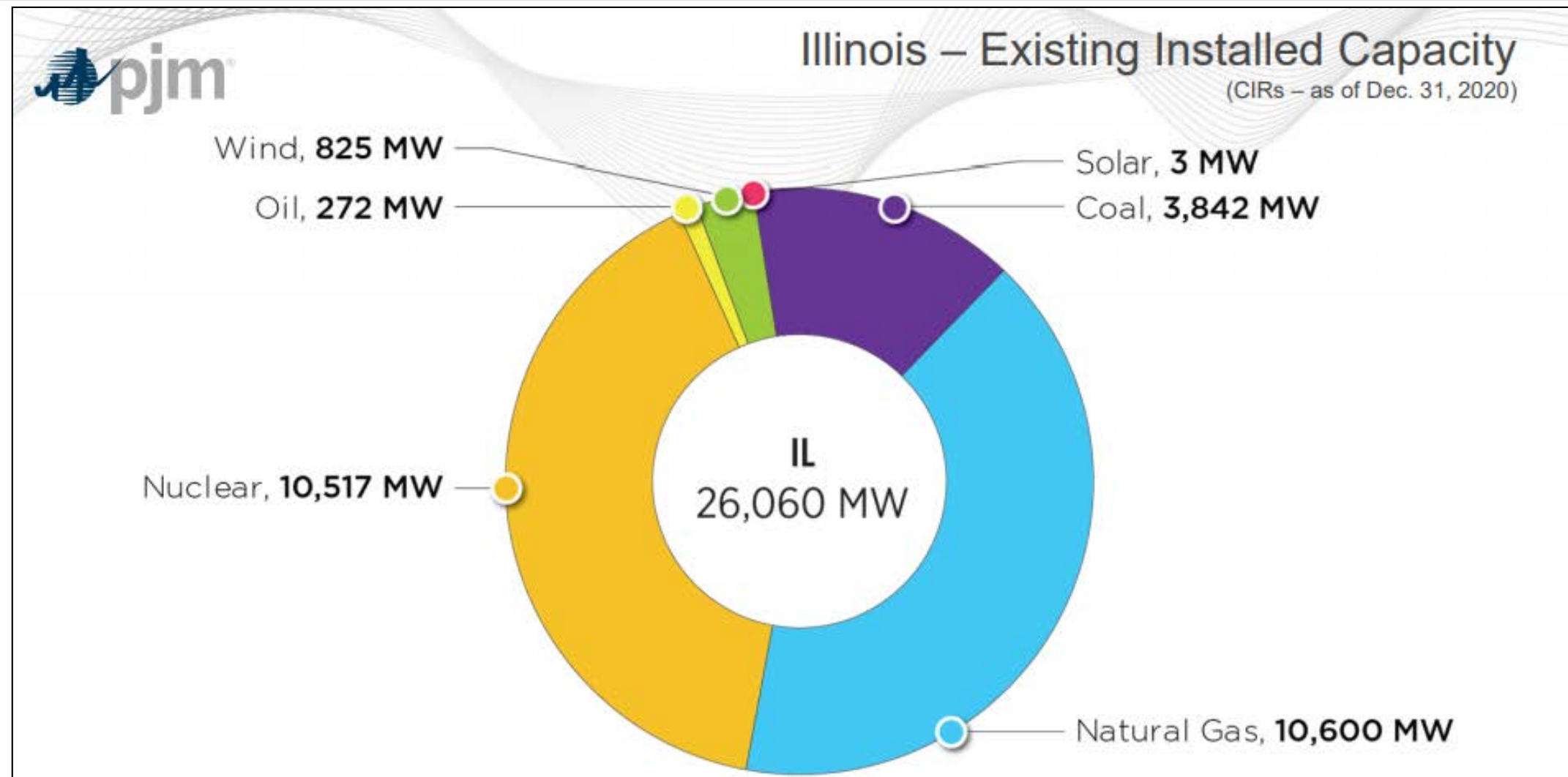
PJM Renewable Buildout

Renewable buildout is strongly influenced by subsidies and tax incentives.



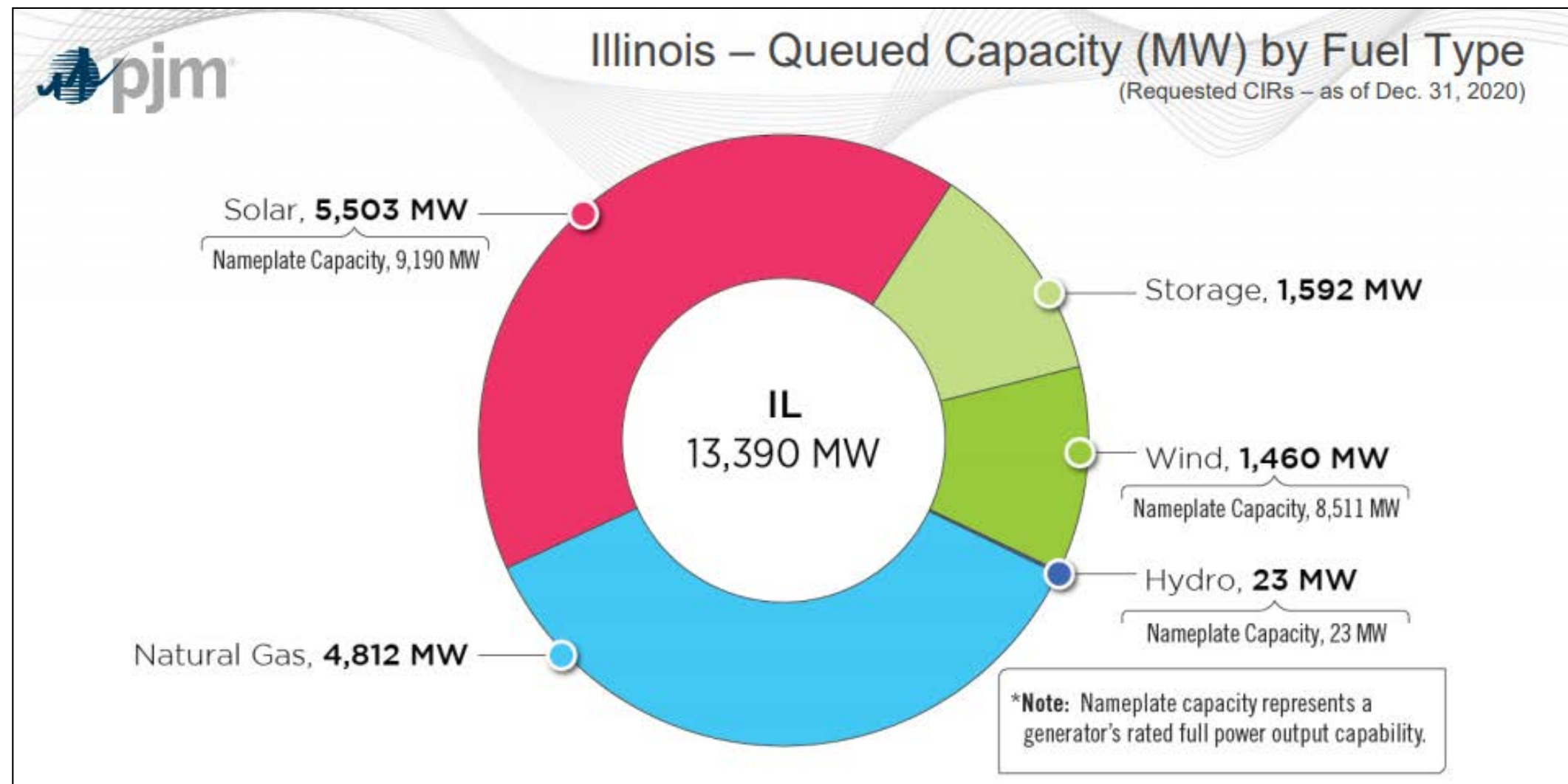
The recent push for renewables buildout has overwhelmed the PJM interconnection process and all applications are being put on hold.

PJM IL Energy Market Today



- Illinois' electricity market will be well supplied and relatively stable thanks to its strong nuclear baseload generation. However, natural gas sets the marginal price for power due to the generation stack.
- Unlike other regions of the country, wind and solar have not made measurable inroads in Illinois, and also mention that the purple section representing coal is expected to retire by the end of the decade.

PJM IL Energy Market Future

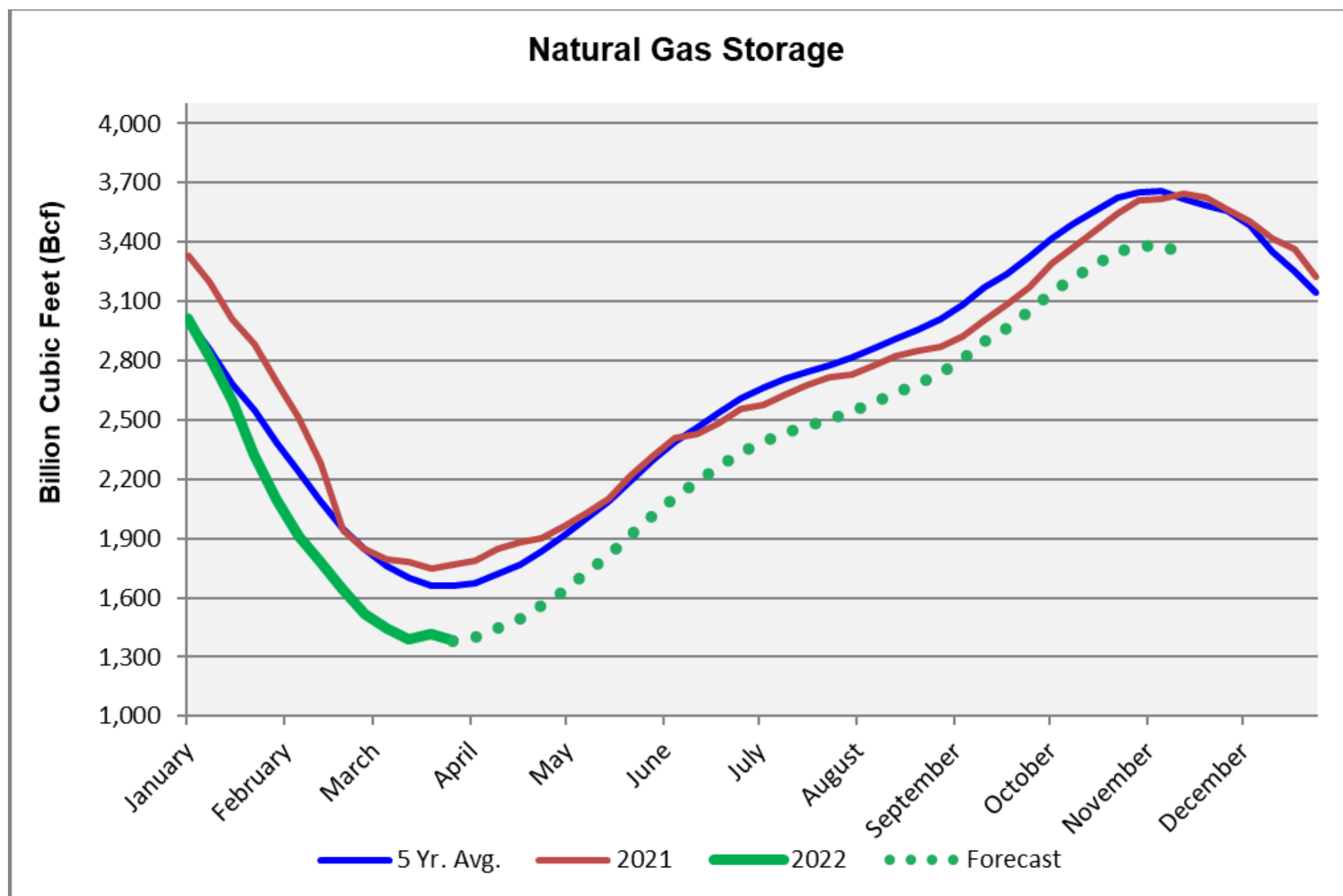


Replacing coal with renewables and natural gas will make electricity in Illinois more sensitive to weather and prices are likely to be more volatile.

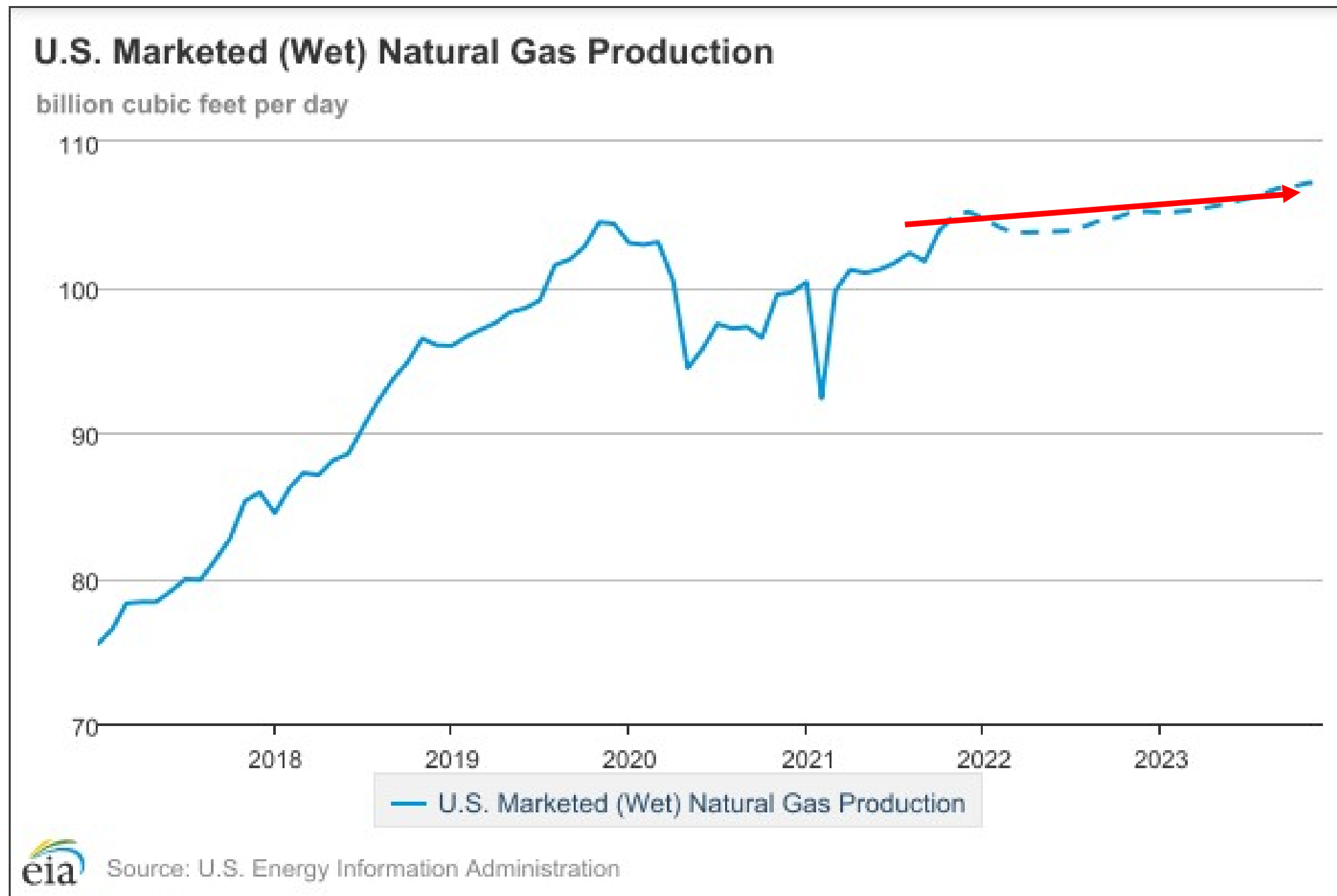
Natural Gas Storage

Natural gas storage volumes are a key driver of prices. After a colder than normal winter, and record high exports, we are well behind normal.

That deficit to normal is expected to persist throughout 2022 and will impact next winter.



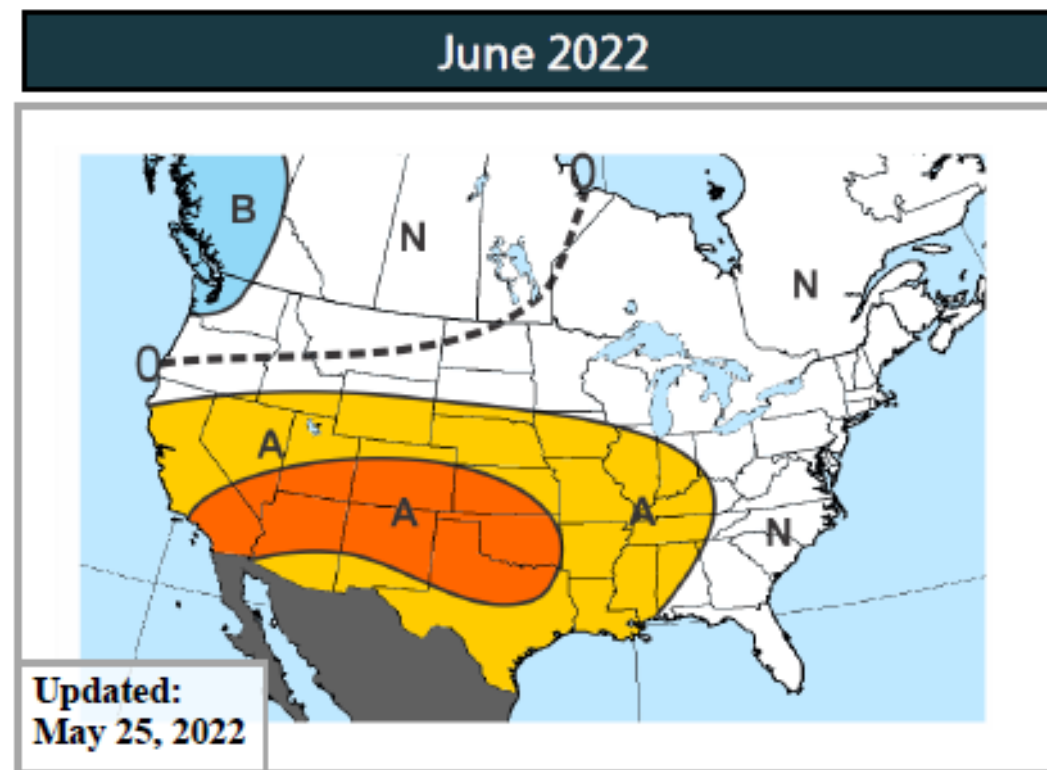
Natural Gas Production Stagnant



Although expected to rise slightly from 2021 levels, US natural gas production growth has slowed and could face additional headwinds.

U.S. Natural Gas Outlook

Above average temperatures across the country early on in the Summer season have led to higher than normal electricity demands for this time of year.

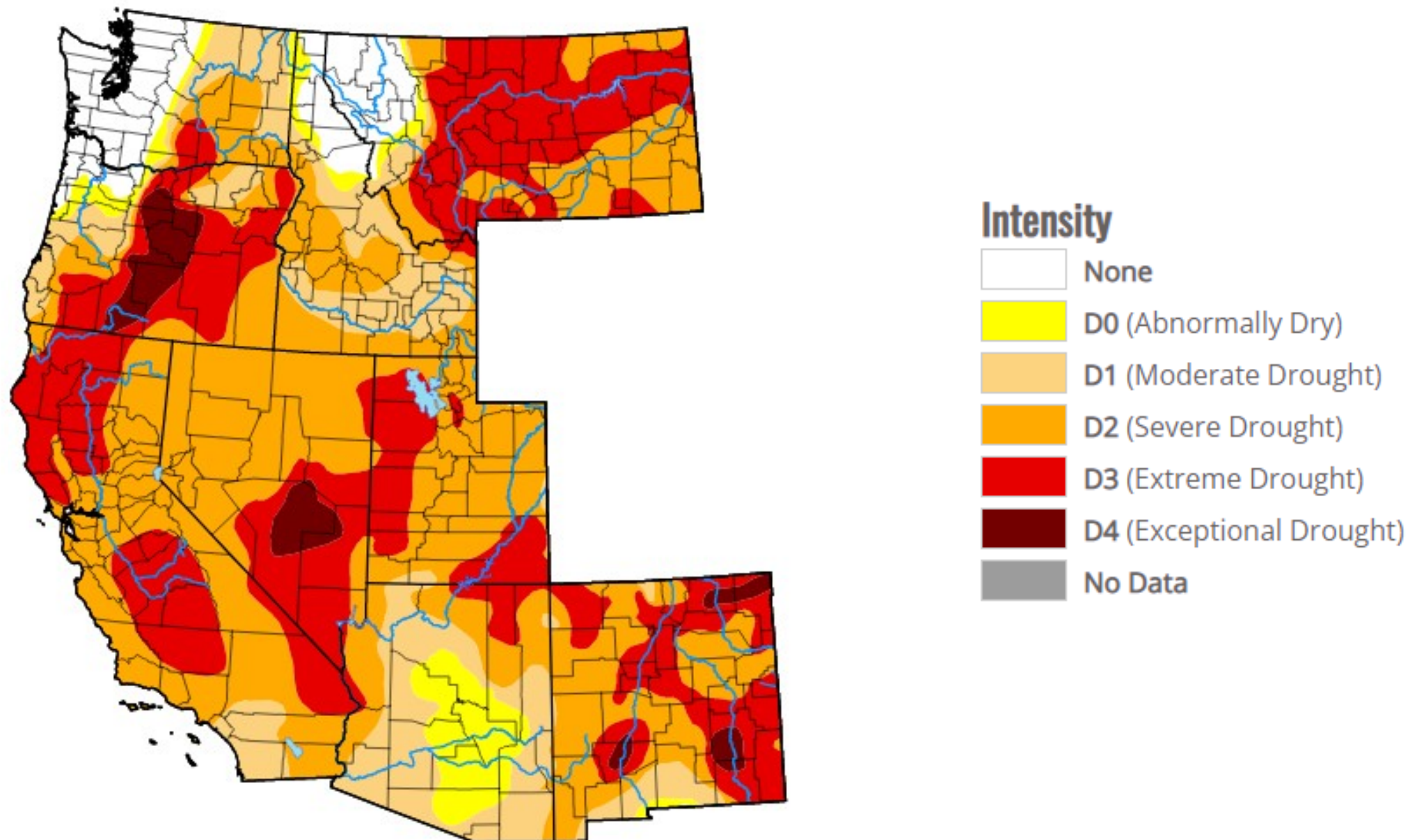


Heat in Texas in May led to record high demand levels and will now be followed by 90 degree temperatures in the Northeast this week. Adding to this is the most recent 30 day weather outlook, which is calling for above normal temperatures across the central and southern regions of the country in June.

The larger volumes of gas needed to generate the electricity to meet cooling demands are limiting how much can be injected into storage during this critical shoulder season.

Natural Gas Demand – Drought Impact

Much of the Pacific Northwest failed to recover from drought conditions during winter and remains under severe to extreme drought, while the drought in California and the Southwest has intensified.



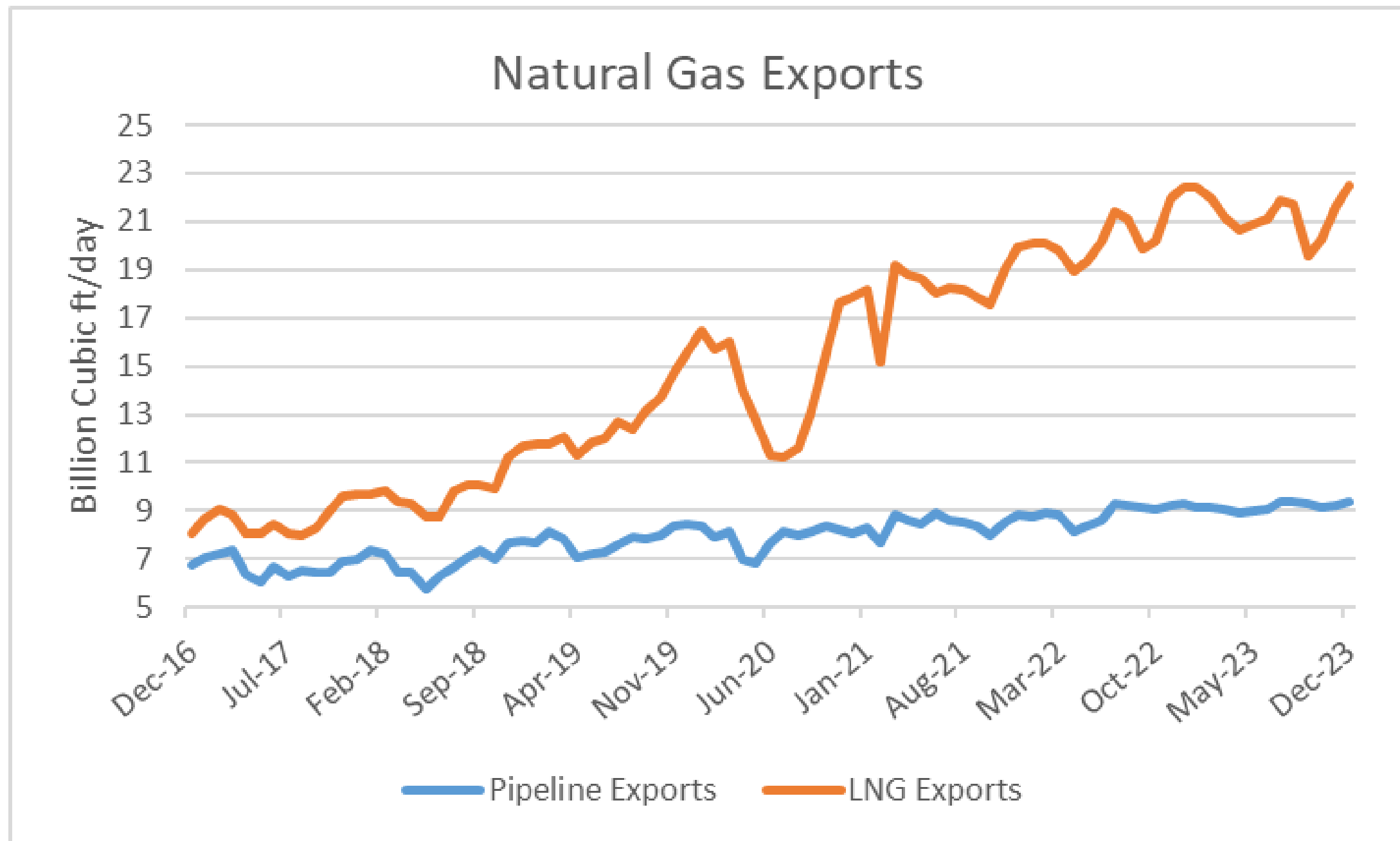
Natural Gas Global LNG Prices

High demands for LNG from buyers in Asia and Europe drove LNG prices to extreme levels, and those high price levels will continue throughout 2022.



The elevated values will have US LNG facilities running at full capacity all year long, limiting our ability to inject into storage for next winter and supporting prices.

Natural Gas Exports Continue to Grow



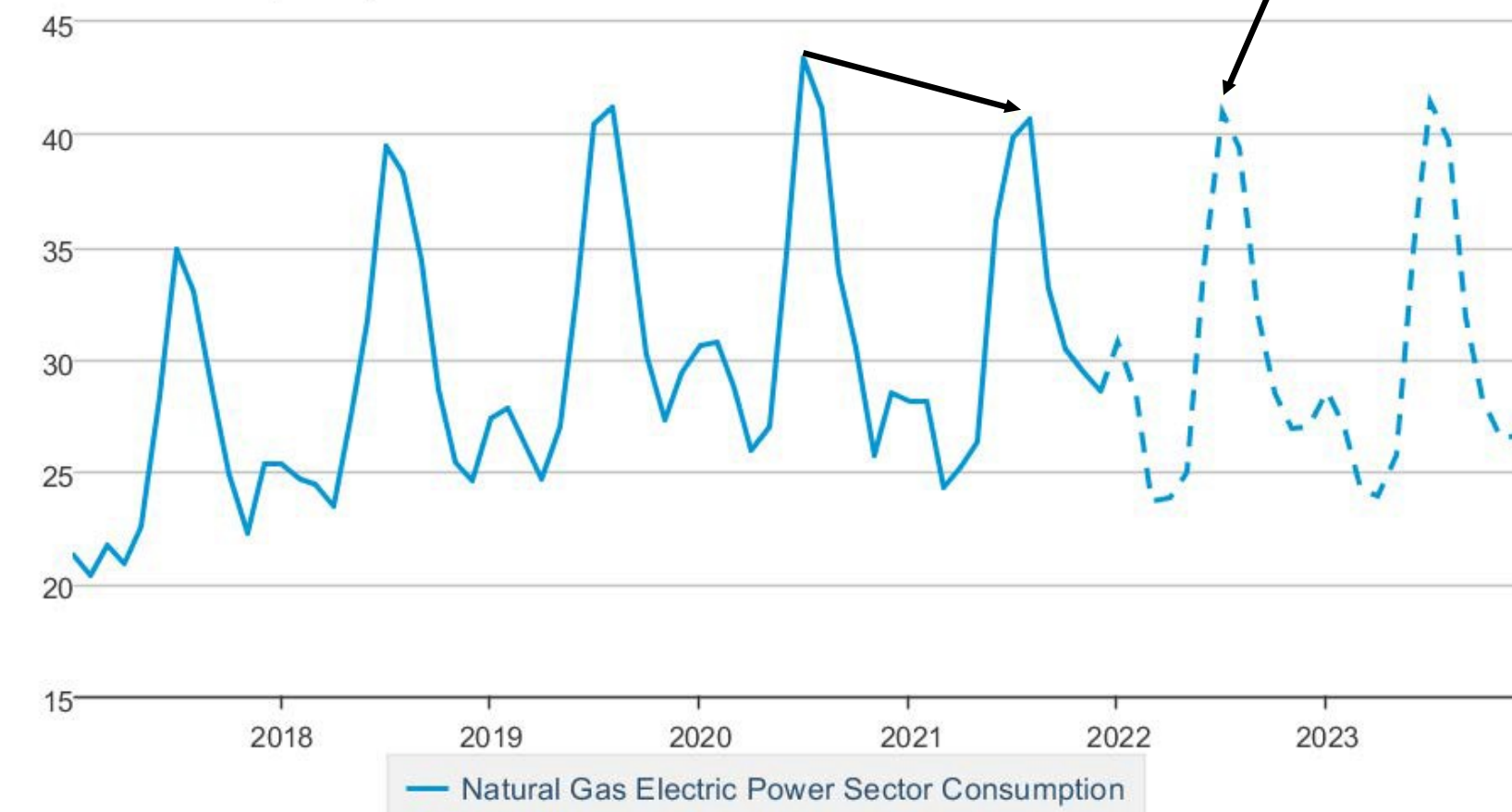
Exports to Mexico have stabilized but the amount of natural gas the US exports in the form of LNG continues to grow with facilities operating near full capacity.

Natural Gas Demand – Power Sector

Higher natural gas prices have made other fuels such as coal more economic causing a decrease in gas usage between 2020 and 2021.

Natural Gas Electric Power Sector Consumption

billion cubic feet per day

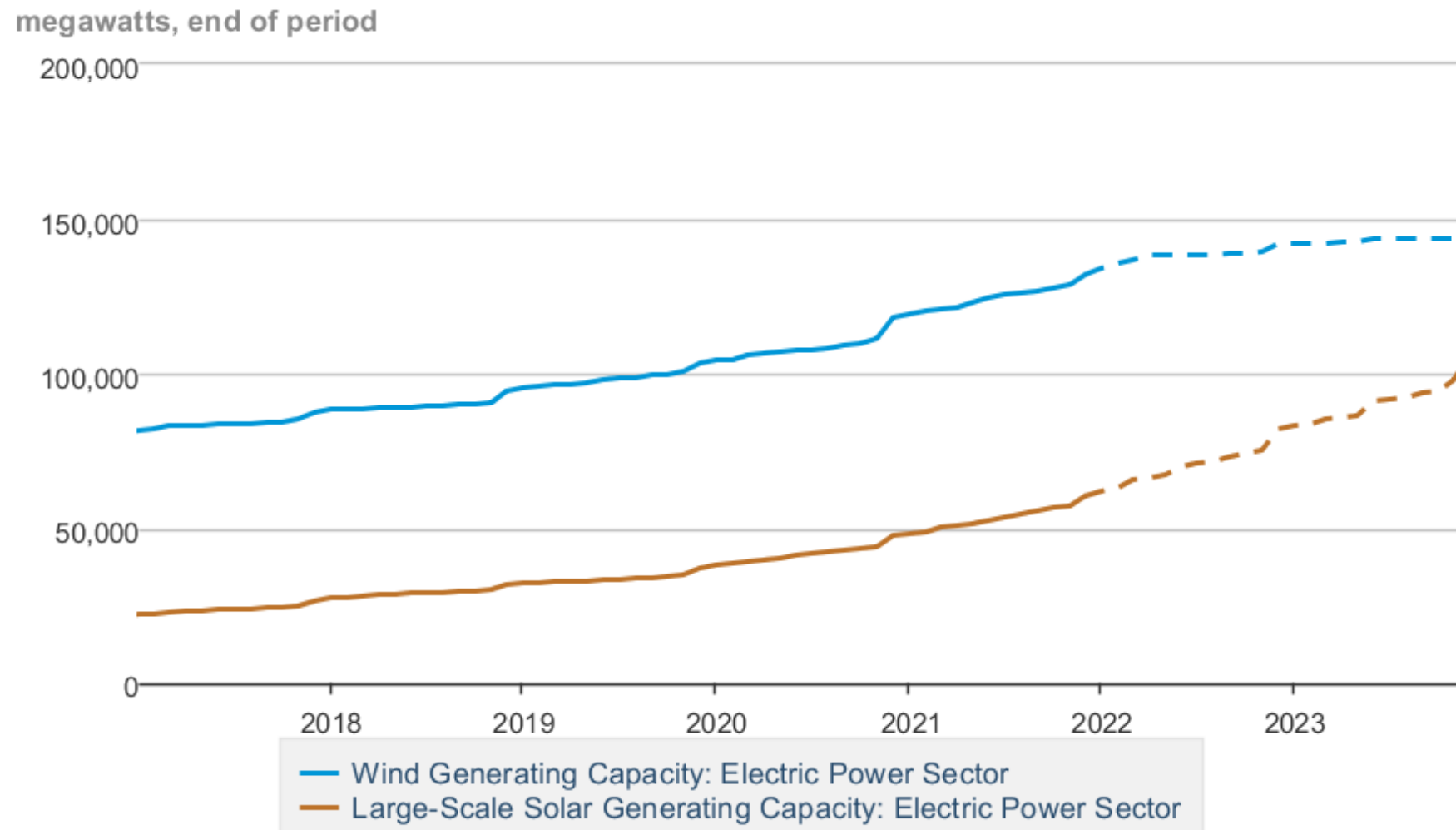


Source: U.S. Energy Information Administration

but with most available coal units already running, Tradition thinks this shift away from natural gas is maxed out and that power generation from natural gas will increase slightly in 2022.

Natural Gas Demand – Renewable Output

Solar production is expected to grow during 2022, but wind output should remain relatively flat over the next 6-8 months.



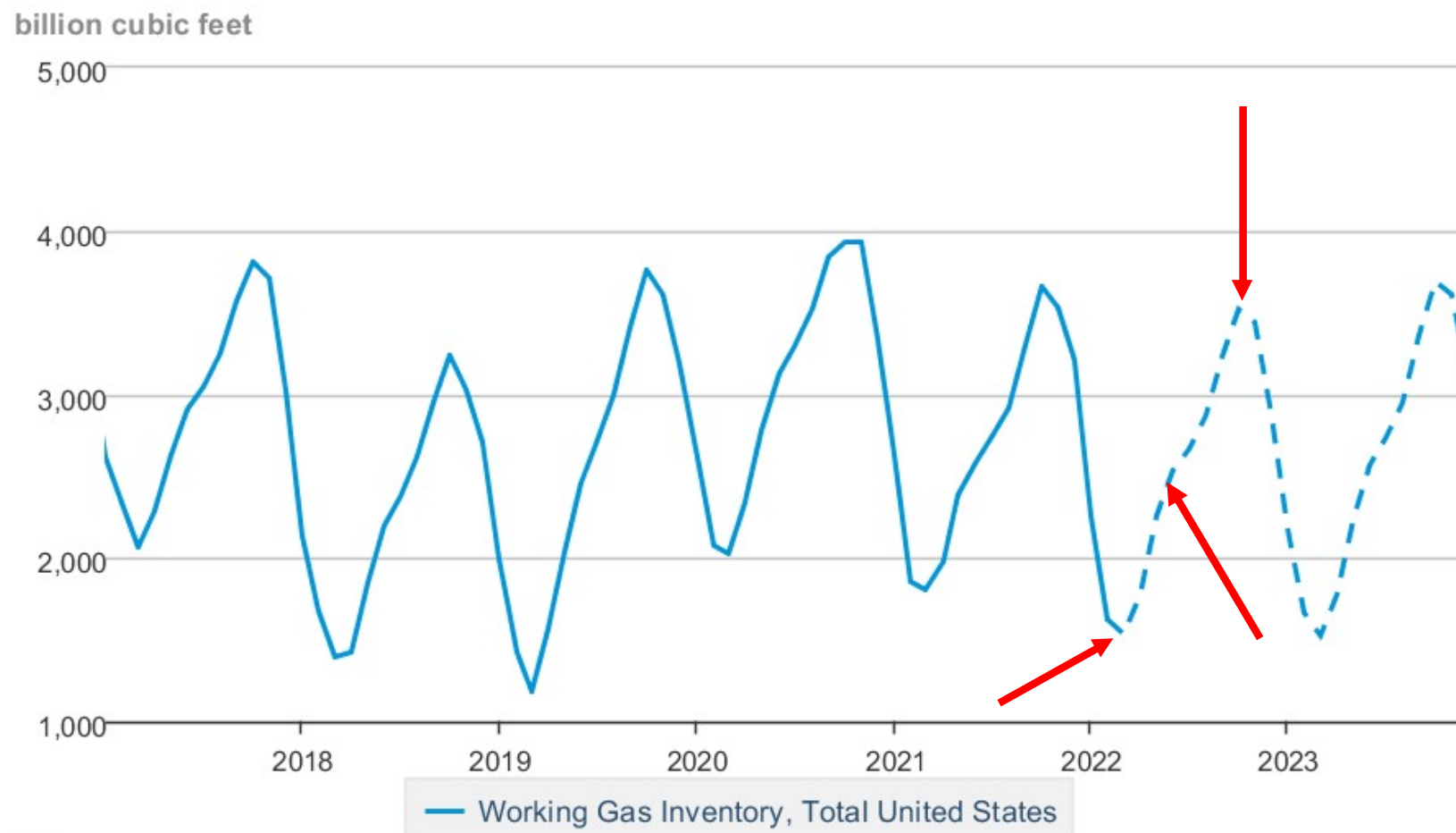
Source: U.S. Energy Information Administration

With many solar components imported and often subject to tariffs, supply chain issues pose a risk for renewables buildout and production growth projections.

Natural Gas Storage Outlook

Strong domestic and export demand have left us with a lot less gas in storage this spring than we had in April 2021.

Working Gas Inventory, Total United States



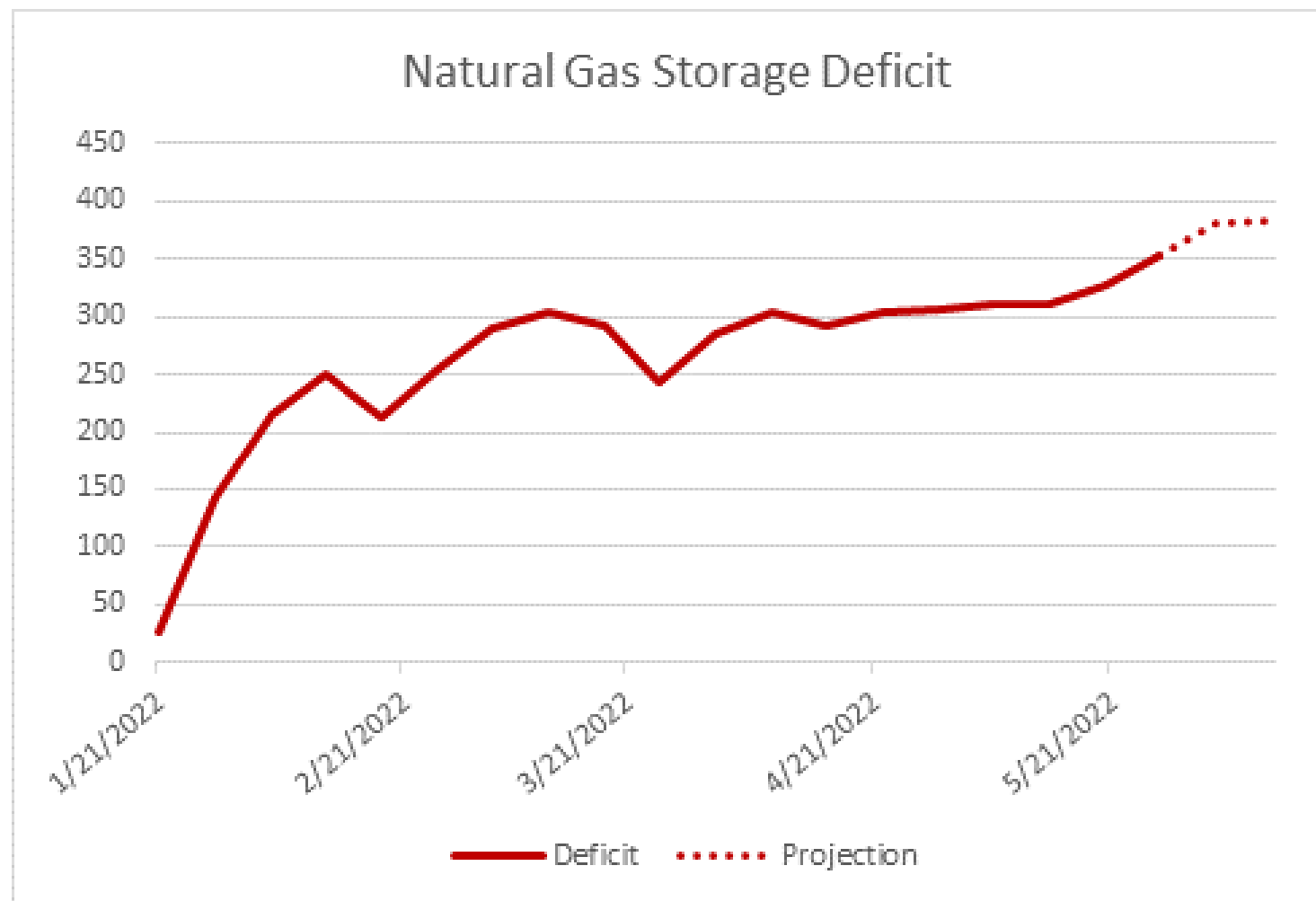
Source: U.S. Energy Information Administration

That will increase demand to refill and when combined with strong export demands support a higher price environment in 2022. **But we will still likely end out with less gas to start next winter, especially if we have a hot summer.**

U.S. Natural Gas Outlook

Natural Gas Storage Deficit Growing:

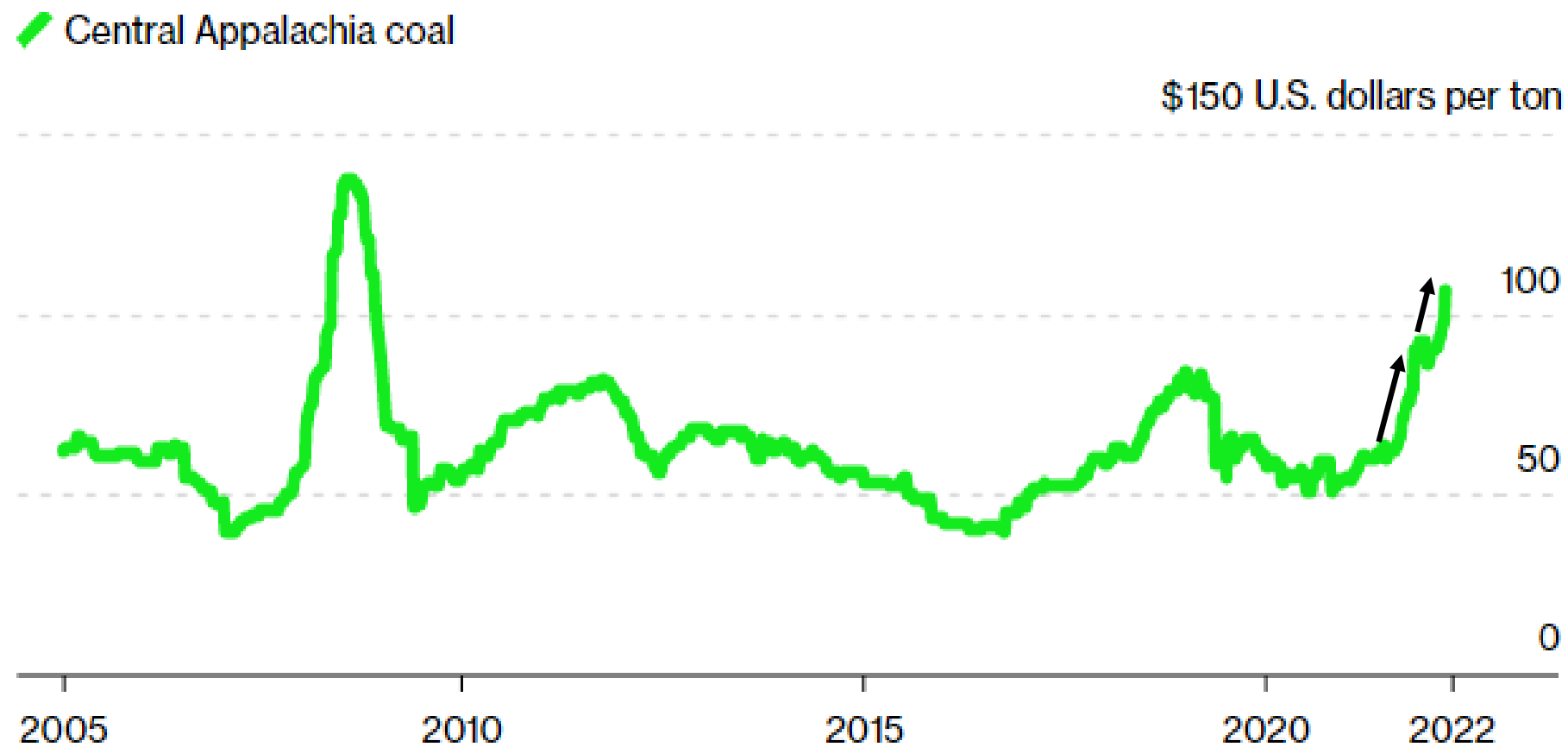
Below average storage injections for the month of May have increased the storage deficit and risk of creating a tight supply dynamic for Winter 2022/23.



If the storage deficit trend continues through the summer, we will likely see prices for Winter 2023/24 rise as well since refilling storages for that winter will become more difficult.

PJM Fuel Costs – Coal

As more coal was used for electricity generation last year, coal demand and therefore prices increased. Current events in Europe have changed global coal market dynamics causing a steep price increase again this year.



Source: S&P Global Market Intelligence

With both the cost of natural gas and coal significantly elevated, electricity is no longer insulated from increased fuel costs.

Thank you

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