

ENERGY MARKET UPDATE – JULY 2021

We have some important updates regarding the current energy markets. Most of the news is not positive for consumers, so let's start out with the good news – electricity capacity rates beginning in June 2022 will be significantly lower than current rates.

PJM 2022/2023 CAPACITY RATES ARE SET (June 2022 through May-2023)

Capacity rates for the PJM regional transmission grid (PJM) have been finalized for the 2022/23 delivery year. After a two-year delay due to ongoing negotiations between PJM, FERC, and other interested parties on the methodology used to set capacity prices, the 2022/2023 capacity auction was finally held in May 2021. The auction ensures power generation resources for each delivery year (June through May) are available to meet the electricity supply needs in the PJM service area.

The new capacity rate for the ComEd zone for the 2022/2023 PJM planning year (June through May) came in significantly lower than expected – at \$69.13/Mw-day. This compares to the average capacity rate over the past 5 years of \$189/Mw-day – a 63% decrease in future capacity rates. Capacity is the 2nd largest cost component in your retail electricity price (energy being the largest component). The cost decrease for various customer load factors [1] is estimated in the chart below and ranges from \$0.007/kW up to over \$0.015/kWh. Please contact us for a custom calculated estimate of the cost decrease for your specific account(s).

Capacity Rates - ComEd Zone - \$\$'s per Mw/Day		ESTIMATE FOR CAPACITY ONLY - Does not include Transmission		
Cost Application Year	Total Capacity: \$\$'s Per Mw/Day <small>[updated 06/04/2021]</small>	Est. Cost per Kwhr for 40% Load Factor (low) Customer [1]	Est. Cost per Kwhr for 60% Load Factor (avg.) Customer [1]	Est. Cost per Kwhr for 80% Load Factor (high) Customer [1]
5-Year Average	\$189.16	\$0.02392	\$0.01594	\$0.01196
Jun-22 to May-23	\$69.13	\$0.00874	\$0.00583	\$0.00437

[1] Load factor is a measure of capacity utilization – the ratio of total energy (KWh's) actually consumed in a billing period divided by the potential total energy consumed if the facility operated at peak demand for EVERY HOUR of the billing period.

Higher reserve margins (generation in excess of expected peak demand for power) across the PJM region – 19.9% compared to a target reserve margin of 14.5% – were the main reason for lower capacity rates during this most recent auction. The higher reserve margins were due to both a lower load forecast and new generation assets.

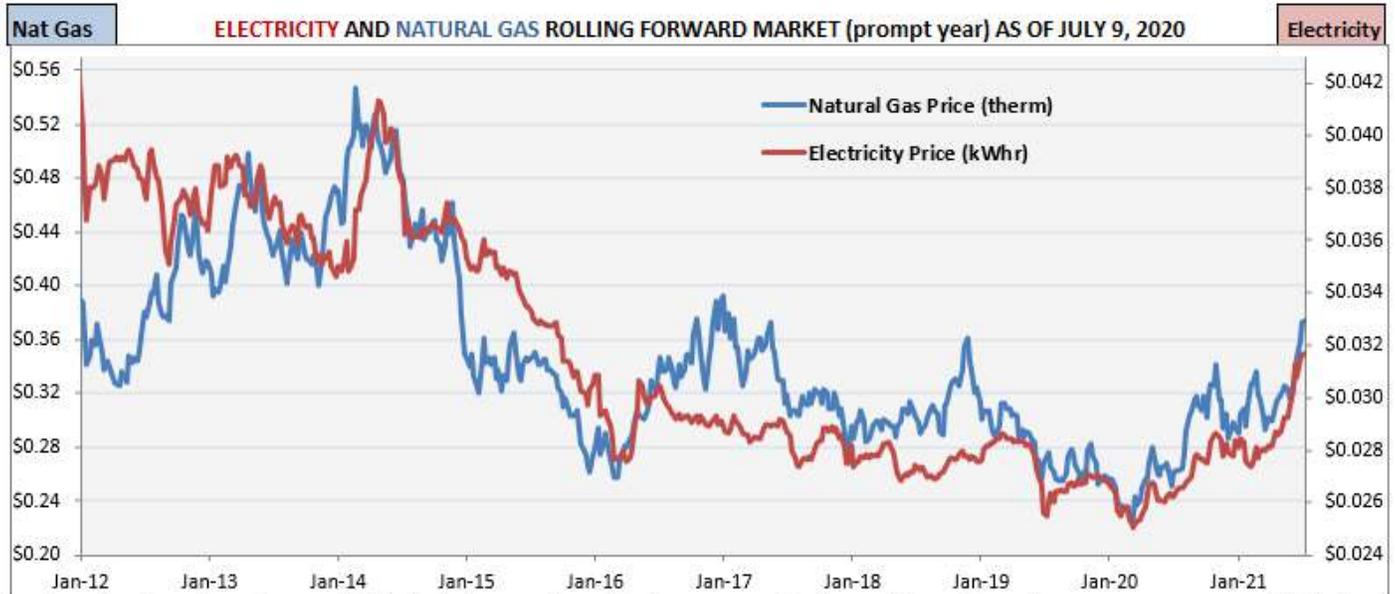
Moving forward, PJM will hold capacity rate auctions approximately every 6-7 months until it is caught up to the normal four-year-out schedule in May 2024 when it conducts the auction for the 2027/28 planning year. The next capacity rate auction for 2023/2024 will be held in December 2021.

ENERGY MARKET UPDATE

Back in January of this year we offered the following advice. *“For natural gas in 2021, decreased production, dwindling storage inventories, and higher LNG exports in 2021 portend to higher prices. Our recommendation for 2021 is the same as it was this past winter – consider a price hedge for your energy needs as the upside risk with energy prices in 2021 will be much higher than normal.”*

Fast forward 6 months and natural gas forward market prices are now at their highest levels in 4 years. Forward market electricity prices, directly impacted by higher natural gas prices, are at 5-year highs. There are several factors pushing energy prices higher. Natural gas production has still not fully recovered to pre-pandemic levels. Increased demand for natural gas from the power generation sector, record LNG exports, and economic demand recovery from

the pandemic are all adding upward pricing pressure. Our view is that the following factors will have the most impact on energy prices for the remainder of 2021.



The price chart above shows an 'indicative' price per therm/kWhr. Your actual price would vary dependent on your account specific load profile and the specific term you are pricing (start date and length of term).

NATURAL GAS PRODUCTION

While we had all been enjoying historically low energy prices the past few years, energy producers were struggling financially and this caused a decline in capital invested into finding and developing new production for oil and gas reserves. The coronavirus pandemic and a wave of natural gas producer bankruptcies in 2020 accelerated an already expected drop in natural gas production. So far in 2021, U.S. natural gas production is struggling to rebound to pre-pandemic levels. Current production levels are hovering around 93/Bcf-day, in comparison s to the 95-96/Bcf-day in late 2019.

Natural gas production is projected to remain around 93/Bcf-day through 2021 and not expected to climb back to 2019 levels until late 2022. Lower natural gas production is the #1 reason for the current price rally in the natural gas and electricity markets (see chart above).

Potential Impact on Energy Prices: Strong Bullish Factor through at least the upcoming winter 2021/22. If we have a colder than normal winter, we could see our highest energy prices since 2014.

SUMMER COOLING DEMAND (FOR ELECTRICITY AND GAS)

Demand for electricity is at its peak during the peak summer cooling months of July and August. June came in as the 5th hottest June on record in the U.S. In July so far, the record heat out West has been somewhat offset by cooler temperatures in the Midwest and out East. Current forecasts project overall temperatures across the U.S. to track below normal through this week and then turn hotter-than-normal through mid-August.

So far this summer, cooling demand load has been above average. The prospect of above average temperatures later this month and into August – increasing demand for natural gas for power generation – should continue to provide support for higher energy prices.

Potential Impact on Energy Prices: *Bullish, higher prices and increased price volatility.*

LIQUEFIED NATURAL GAS (LNG) EXPORTS

U.S. LNG exports had reached a record 8/Bcf-day by the end of 2019. After a brief drop during the early stages of the covid-19 pandemic, LNG exports have resumed their upward trajectory and are now at a record 10/Bcf-day. LNG exports now make up close to 12% of demand for U.S. production – up from just 1% five years ago.

Our main concern in 2020 was that natural gas demand (including LNG exports) would recover sooner than natural gas production and that is what has happened so far in 2021. Although LNG exports are projected to remain steady at between 9-10/Bcf-day for the remainder of 2021, the current level of LNG exports coupled with lower production will continue to exert upward pressure on prices in 2021.

Potential Impact on Energy Prices: *Bullish Impact on energy prices through 2021*

NATURAL GAS STORAGE RESERVES

Natural gas storage injections continue to lag historical averages due to significant heat in the West, record LNG exports, and gas production still working to recover from 2020 declines. Four of the past five weekly storage reports have shown below average injections. Natural gas storage reserves currently sit at 2,629/Bcf (July 9th) which is 7% behind the 5-year average and 17% lower last year at this time.

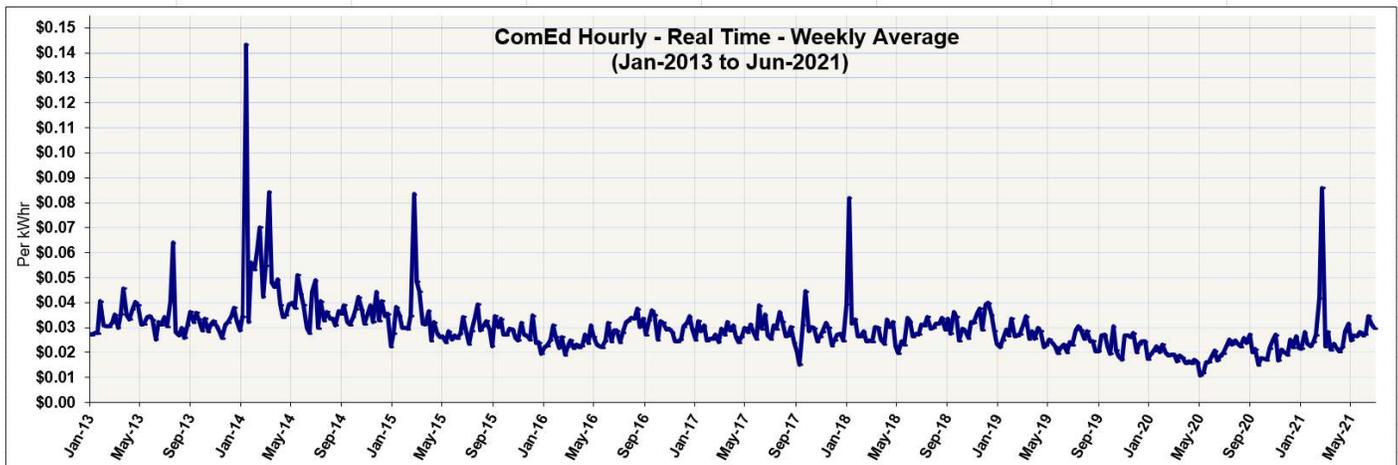
Current EIA projections peg storage at around 3,600/Bcf by the first week of November, about 10% lower than last year's 3927 storage level. In general, the 'market' would like to see storage reserves at around 3,900/Bcf entering the start (generally the 1st week of November) of winter heating season.

Potential Impact on Energy Prices: *The current pace of injections and projected storage levels heading into the winter are a bullish factor impacting current natural gas and electricity prices.*

PRICE OF ELECTRICITY IMPACTED BY HIGHER NATURAL GAS PRICES

Over the past 20+ years, natural gas has typically been the highest incremental cost fuel on the cost stack for electric generation. Since the market price of all electricity is set at the cost of the highest-cost generation source, it follows that natural gas is the #1 fundamental factor impacting forward market electricity prices. So, all of the factors we just covered that impact the price of natural gas (natural gas production levels, storage reserves, LNG exports, summer cooling demand, etc.) will have a similar impact on the price of electricity.

With natural gas prices at 4 years highs, it is no surprise that electricity forward market price curves are also at 4+ year highs. We would also expect to see higher price volatility in the hourly price market for electricity this summer. Looking forward, due to a projected tight supply situation with natural gas this winter, there will be a greater risk for extreme upward price volatility with electricity during the winter months. Over the past 10 years it has been the winter months (see chart) that have produced the most extreme real-time hourly electricity prices (2014, 2015, 2018, and 2021).



We know most customers are on a fixed price product for their commodity supply needs. However, if your organization is currently on an hourly index priced product, this is a winter you may want to be fully hedged. If you would like to discuss potential hedging strategies, please give us a call.

Potential Impact on Energy Prices: Bullish for the price of electricity, since natural gas prices are at 4-year highs and natural gas supply is expected to remain tight through the upcoming winter.

FINAL THOUGHTS

Overall, current market fundamentals point to 2021 being the strongest bull market for energy prices since 2014. Natural gas production has yet to fully recover from 2020 declines, exports of natural gas to Mexico and LNG exports are at record levels, summer cooling demand is higher than normal, storage levels lag both the one year and five year averages, which add up to uncertainty prevailing through the energy markets.

While we are not predicting a reoccurrence of the extreme supply situation of this past February 2021 which produced record electricity and natural gas prices on the spot market, there is certainly higher price risk this winter. If you haven't already, you should review and confirm you are aware of and comfortable with your organizations current supply procurement plan for through this next year.

If you have any questions or would like to review any of the topics we covered in greater detail, please give me a call.

Thank you,

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The partners at Century Energy Solutions collectively have more than 100 years of experience in the energy markets. We leverage that experience and knowledge on our client's behalf to create a credible competitive environment between multiple suppliers, resulting in lower energy costs and better product options that fit our client's specific needs. We welcome the opportunity to demonstrate the value we add to your energy procurement process.