

Weekly Headlines

- Winter Blast
- FERC
- AI = Load

POWER PRICING (\$/MWh)

| Day-Ahead LMPs | | Mon 1/15 | Tue 1/16 | Wed 1/17 | Thu 1/18 | Fri 1/19 |
|----------------|-------------------------|----------|----------|----------|----------|----------|
| PJM | On-Peak WESTERN HUB | \$145.54 | \$145.51 | \$132.19 | \$67.60 | \$60.22 |
| | Off-Peak WESTERN HUB | \$132.03 | \$99.77 | \$157.63 | \$74.11 | \$45.36 |
| | On-Peak N ILLINOIS HUB | \$135.58 | \$147.93 | \$112.03 | \$54.68 | \$50.29 |
| | Off-Peak N ILLINOIS HUB | \$118.08 | \$96.11 | \$139.45 | \$54.13 | \$35.96 |
| | On-Peak PPL | \$126.86 | \$125.59 | \$123.75 | \$59.73 | \$59.12 |
| | Off-Peak PPL | \$108.01 | \$76.03 | \$121.77 | \$64.98 | \$39.86 |
| | On-Peak PENELEC | \$145.21 | \$148.25 | \$133.70 | \$68.25 | \$67.35 |
| | Off-Peak PENELEC | \$127.38 | \$100.03 | \$153.21 | \$67.12 | \$45.49 |
| | On-Peak COMED | \$135.99 | \$148.48 | \$112.50 | \$54.91 | \$50.50 |
| | Off-Peak COMED | \$118.36 | \$96.39 | \$139.92 | \$54.31 | \$36.08 |
| MISO | On-Peak INDIANA HUB | \$190.65 | \$232.71 | \$126.75 | \$60.46 | \$43.57 |
| | Off-Peak INDIANA HUB | \$130.39 | \$177.94 | \$98.19 | \$64.61 | \$32.05 |
| | On-Peak MICHIGAN HUB | \$166.48 | \$190.97 | \$111.88 | \$60.16 | \$42.36 |
| | Off-Peak MICHIGAN HUB | \$121.91 | \$148.76 | \$89.13 | \$65.32 | \$32.21 |
| | On-Peak MINN HUB | \$154.69 | \$168.04 | \$164.50 | \$61.91 | \$42.23 |
| | Off-Peak MINN HUB | \$116.61 | \$129.14 | \$84.56 | \$60.66 | \$30.35 |
| ERCOT | On-Peak NORTH | \$318.48 | \$461.76 | \$22.16 | \$16.24 | \$28.73 |
| | Off-Peak NORTH | \$181.37 | \$274.44 | \$68.22 | \$6.76 | \$0.14 |
| | On-Peak SOUTH | \$265.96 | \$436.61 | \$48.42 | \$23.87 | \$27.25 |
| | Off-Peak SOUTH | \$141.67 | \$254.61 | \$88.52 | \$18.04 | \$17.09 |

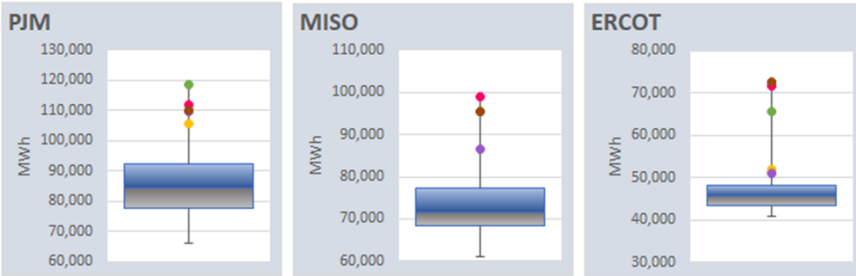
* Red signifies week over week price change down / Green signifies week over week price change up

| Futures | Western Hub | | Indiana Hub | | North Hub | |
|---------|-------------|----------|-------------|----------|-----------|----------|
| | On-Peak | Off-Peak | On-Peak | Off-Peak | On-Peak | Off-Peak |
| | \$53.83 | \$41.68 | \$53.68 | \$41.76 | \$56.46 | \$34.70 |

* Forward 12 month strip

DAILY RTO LOAD PROFILE (MWh)

● -1/15 ● -1/16 ● -1/17 ● -1/18 ● -1/19



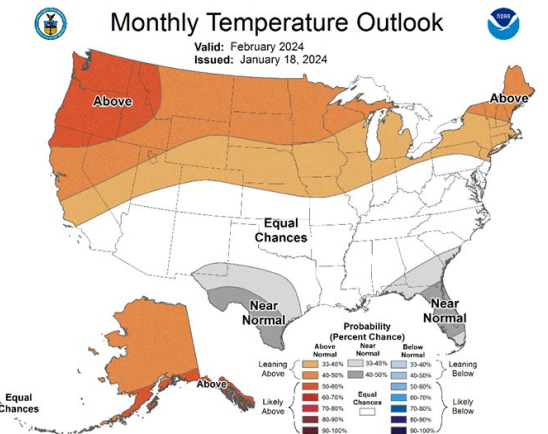
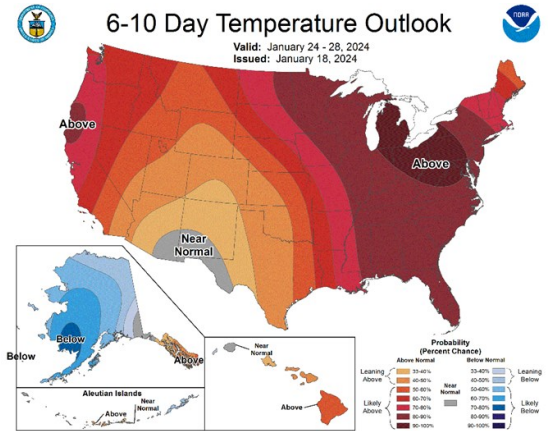
* Current week daily load plotted with past 3 months daily load

COMMENTARY

The February contract of natural gas the last week, looks like the inverse of the thermometer. As impressive as these moves were, they imitate a small fraction of the moves some of the gas citygate and pipeline zones saw. Interestingly enough, unlike electricity, natural gas isn't scheduled daily. The weekends are scheduled on Friday and local spot prices were through the roof heading into the unknown of cold weather. For example, at the Chicago City gate, natural gas for Thursday Jan 11 was priced at \$3.00/MMBtu and \$3.76 on Tuesday. In between, the price for the full weekend and holiday cleared at \$25.82/MMBtu. These moves aren't unusual, but can be exaggerated over long weekends as the fear of well freeze ups and pipeline constraints has buyers scrambling.

As timing would have it, FERC held its [January meeting](#) yesterday. As expected, there was plenty of discussion about the cold and storms of last week. Commissioners came out firing talking about the need for transmission and dispatchable generation. In his opening remarks, Chair Phillips pointed out that SPP imported more electricity this week compared to Winter Storm Uri. Commissioner Christie commented that PJM had their peak covered by 90% dispatchable generation while MISO was 75% with wind covering another 20%. The commissioner commended the RTO/ISOs on a job well done, with Chairman Phillips reminding all in attendance winter is only half over.

This week, The Verge ran an article interviewing Meta CEO Mark Zuckerberg. In the article, there was plenty of mention about AI and Meta's goals. After talent, the hardest thing to get for running AI models is computing power. Enter Nvidia who's H100 GPUs are coveted as the industry choice for building AI models. According to an article in Tom's Hardware, a PC centric website, Paul Churnock, Principle Electric Engineer of Datacenter Technical Governance and Strategy at Microsoft, states that, 'one Nvidia H100 has the peak power consumption of 700W. At 61% annual utilization, it's equivalent to the power consumption of a household with 2.5 people.' These chips will be replacing some legacy, but it's fair to say, AI is an electricity mega consumer by whatever metric you use.



COMMODITIES PRICING (\$/MMBtu)

| | | |
|-------------------|-----------|---------|
| Henry HUB Nat Gas | 1/19/2024 | \$2.56 |
| WTI Crude Oil | 1/19/2024 | \$74.52 |

