

Newstracker:

-Natural gas spot prices rose at most locations in the US from Wednesday, December 13, to Wednesday, December 20 (the Report Week), during which the Henry Hub spot rose 16 cents to \$2.49/MMBtu.

-For the Report Week, the January 2024 NYMEX contract price increased 11.2 cents to \$2.447/MMBtu. The price of the 12-month strip averaging January 2024 through December 2024 futures rose 0.1 cents to \$2.564/MMBtu. International natural gas futures prices decreased this Report Week, with LNG cargoes in East Asia falling \$2.47 cents to a weekly average of \$13.30/MMBtu, and prices at TTF in the Netherlands decreasing 84 cents to a weekly average of \$10.89/MMBtu. In the same week last year, prices were \$34.42/MMBtu in East Asia and \$34.99/MMBtu at TTF.

-Total US consumption of natural gas rose by 0.3% (0.3 Bcf/d) compared with the previous Report Week. Natural gas consumed for power generation rose by 0.1% (less than 0.1 Bcf/d) week over week. Industrial sector consumption decreased by 0.5% (0.1 Bcf/d), and residential and commercial sector consumption increased by 1.1% (0.4 Bcf/d). Natural gas exports to Mexico decreased 2.1% (0.1 Bcf/d). Natural gas deliveries to US LNG export facilities averaged 14.6 Bcf/d, unchanged from last week.

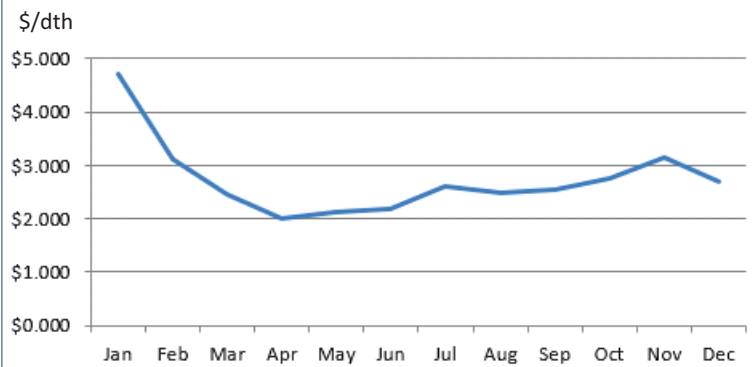
-The natural gas plant liquids composite price at Mont Belvieu, Texas, rose by 9 cents, averaging \$6.76/MMBtu for the week ending December 20. The average weekly propane price fell 1%, while the Brent crude oil price rose 6%. The propane discount relative to crude oil increased 15% week over week.

-For the week ending Tuesday, December 5, the natural gas rig remained flat at 119 rigs. The number of oil-directed rigs fell by 2 to 501 rigs. The total rig count, which includes 3 miscellaneous rigs, decreased by 3, and it now stands at 623 rigs.

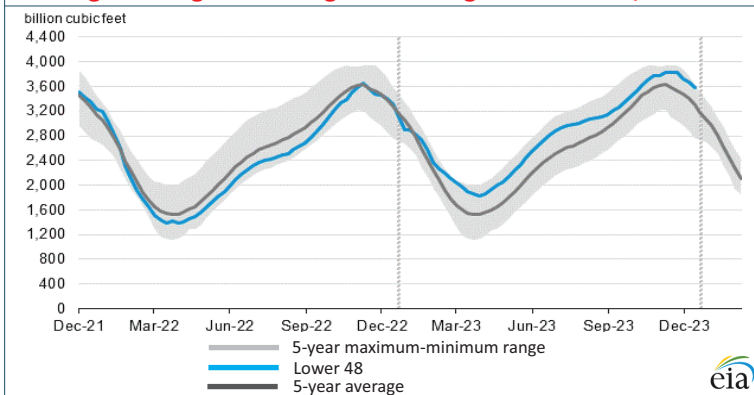
-Net natural gas withdrawals from storage totaled 87 Bcf for the week ending December 15, compared with the five-year average net withdrawals of 107 Bcf and last year's net withdrawals of 82 Bcf during the same week. Working natural gas stocks totaled 3,577 Bcf, which is 280 Bcf (8%) more than the five-year average and 240 Bcf (7%) more than last year at this time.

Excerpted from 

Monthly NYMEX Natural Gas Settle Price: Jan 2023 - Dec 2023:



Working natural gas in underground storage as of Dec. 15, 2023

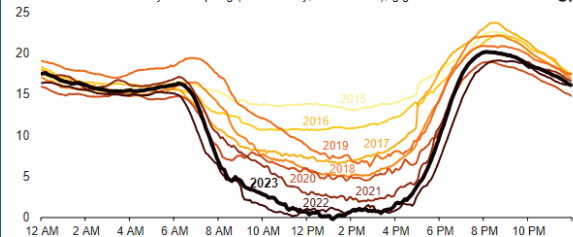


Forward 12-month NYMEX natural gas strip price - Jan24-Dec24:

Process Load-weighted \$2.564/dth - w/o/w = ▲\$0.001
 Typical Heat Load-weighted \$2.591/dth - w/o/w = ▲\$0.020


As solar capacity grows, duck curves are getting deeper in California:

California's duck curve is getting deeper
 CAISO lowest net load day each spring (March–May, 2015–2023), gigawatts



As more solar capacity has come online in California, grid operators at the California Independent System Operator (CAISO) have observed a drop in net load (or the demand remaining after subtracting variable renewable generation) in the middle of the day when solar generation tends to be highest. When graphed for a typical day, the pattern created by the midday dip in the net load curve, followed by a steep rise in the evenings when solar generation drops off, looks like the outline of a duck, so this pattern is often called a duck curve. As solar capacity in California continues to grow, the midday dip in net load is getting lower, presenting challenges for grid operators. Grid operators constantly balance electricity generation with electricity demand in a region. Demand is lowest overnight when most consumers are sleeping and when many businesses are closed. Demand begins to ramp up in the morning as people wake up and businesses start opening. Demand stays elevated throughout the day, rises slightly in the evening as people come home from work and residential electricity consumption increases, and then drops off again in the late evening. Unlike conventional power plants, solar and wind resources can't be fully dispatched at will to help meet demand, and utilities may have to curtail them to protect grid operations.

Solar power is only generated during daylight hours, peaking at midday when the sun is strongest and dropping off at sunset. As more solar capacity comes online, conventional power plants are used less often during the middle of the day, and the duck curve deepens. The duck curve presents two challenges related to increasing solar energy adoption. The first challenge is grid stress. The extreme swing in demand for electricity from conventional power plants from midday to late evenings, when energy demand is still high but solar generation has dropped off, means that conventional power plants must quickly ramp up electricity production to meet consumer demand. That rapid ramp up makes it more difficult for grid operators to match grid supply with grid demand in real time. In addition, if more solar power is produced than the grid can use, operators might have to curtail solar power to prevent overgeneration. The other challenge is economic. The dynamics of the duck curve can challenge the traditional economics of dispatchable power plants because the factors contributing to the curve reduce the amount of time a conventional power plant operates, which results in reduced energy revenues. If the reduced revenues make the plants uneconomical to maintain, the plants may retire without a dispatchable replacement. Less dispatchable electricity makes it harder for grid managers to balance electricity supply and demand.

Excerpted from 

"I learned to judge myself by Stanley Cups and scoring titles because nobody votes on those." - Mario Lemieux¹

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