

May 2021 Market Update

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Including market research provided by NRG's analyst team

Publish Date: 6/3/2021

NYMEX Natural Gas Pricing

The June 2021 contract settled at \$2.984/MMBtu.

The July 2021 contract is trading around \$3.041/MMBtu (as of 6/3/2021).

Natural Gas Storage Report

Current BCF in Storage (2021 vs 2020):

Week Ending	Total BCF	Week Ending	Total BCF
07-May-21	2,029	08-May-20	2,422
14-May-21	2,100	15-May-20	2,503
21-May-21	2,215	22-May-20	2,612
28-May-21	2,313	29-May-20	2,714

There is about 15% less in underground storage now than there was at this time last year.

Weather (as of 6/3/2021)

6-10 Day: Much above average conditions are expected across the Northeast, Midwest, Plains, and the interior West. Period anomalies are expected to be near to slightly cooler than average across Texas and the southern tier, as well as the immediate West Coast.

11-15 Day: Above average temperatures are now expected across the interior West into the north-central US. Near to slightly cooler than average period anomalies are possible across the south-central and eastern US.

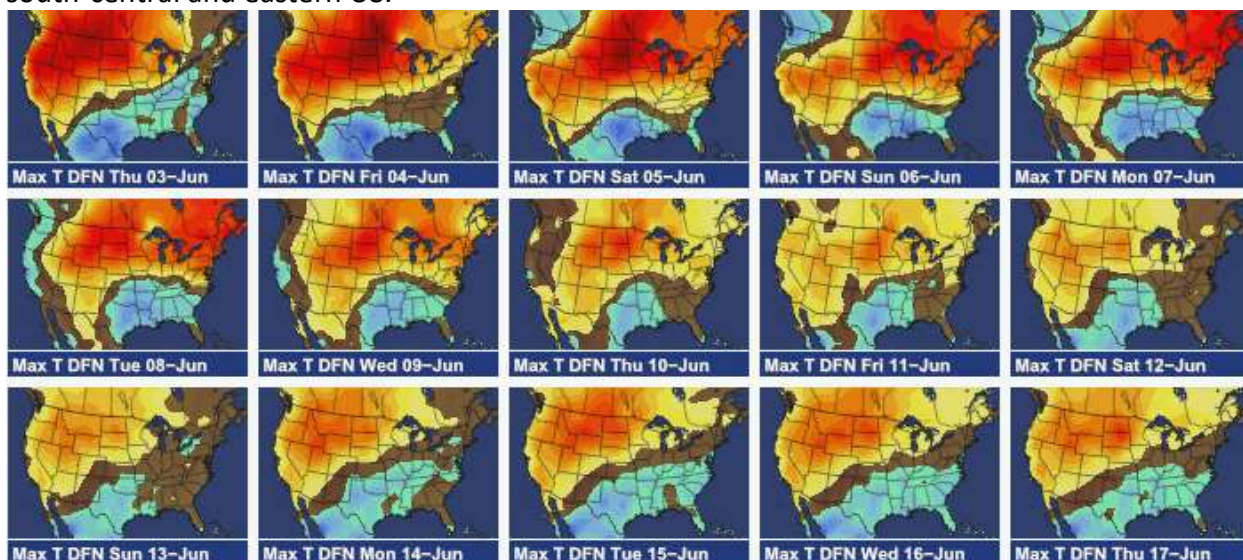


Photo and forecast courtesy of WSI Trader

MARKET UPDATES

EIA expects more electricity consumption this summer as economy recovers from pandemic

<https://www.eia.gov/todayinenergy/detail.php?id=48096>

The EIA's Summer 2021 Electricity Industry Outlook, projects 1.5% more U.S. retail sales of electricity this summer than last summer, with most of the growth coming from the commercial and industrial sectors. Between June and August 2020, retail electricity sales across all sectors totaled 1,055 billion kWh. That's the lowest total amount consumed since summer 2015!

Residential Consumers

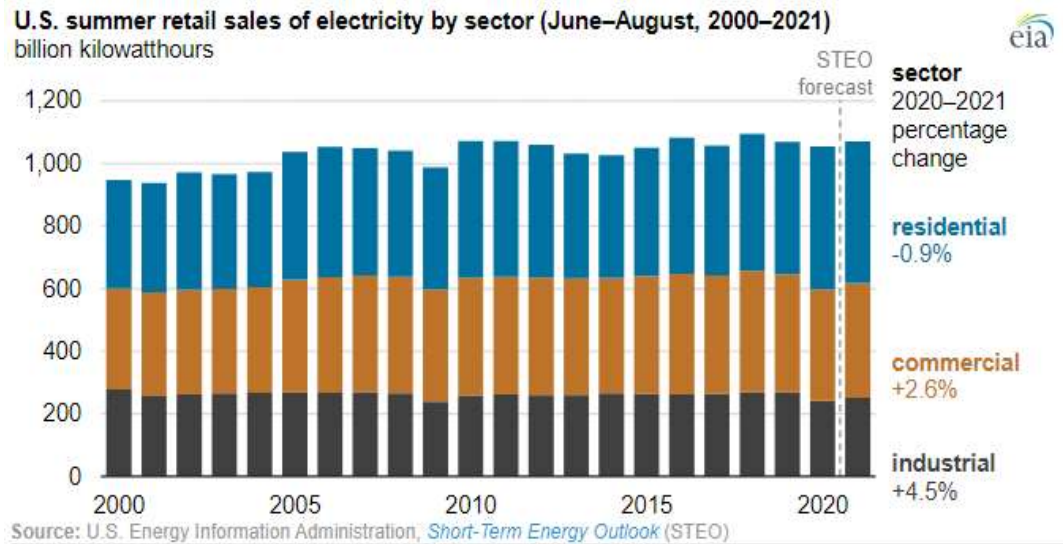
Roughly 457 billion kWh (43% of the total)

Commercial Consumers

Roughly 359 billion kWh (34%)

Industrial Consumers

Roughly 239 billion kWh (23%).

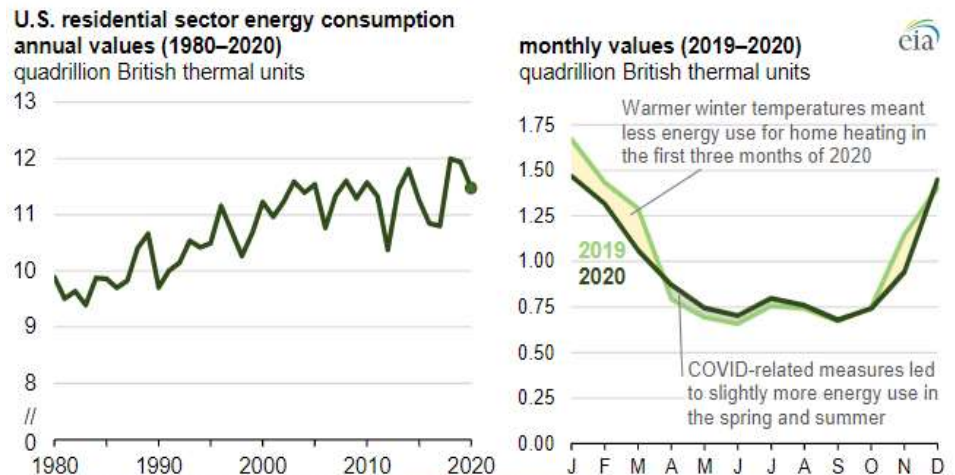


Despite more people staying at home, U.S. residential energy use fell 4% in 2020

<https://www.eia.gov/todayinenergy/detail.php?id=47976&src=email>

Despite many people spending more time in their homes last year in response to the COVID-19 pandemic, U.S. energy consumption in the residential sector fell 4% between 2019 and 2020.

Relatively warmer weather during the winter months in 2020 significantly reduced home energy consumption for space heating compared with 2019, which was enough to offset a 2% increase in residential electricity retail sales.



Source: U.S. Energy Information Administration, *Monthly Energy Review*

Note: Consumption in this chart includes primary energy consumption plus electricity retail sales consumed by the residential sector. Consumption excludes the associated electrical system energy losses from the electric power sector.

Biden cybersecurity order tackles software risks in energy, other sectors following Colonial hack

https://www.utilitydive.com/news/biden-cybersecurity-executive-order-tackles-colonial-hack-energy-sector-risks/600107/?utm_source=Sailthru&utm_medium=email&utm_campaign=Issue:%202021-05-13%20Utility%20Dive%20Newsletter%20%5Bissue:34223%5D&utm_term=Utility%20Dive

Following a series of cyberattacks to the United States' critical infrastructure, President Joe Biden signed an executive order aimed at strengthening defenses and transparency. The recent Colonial Pipeline attack and SolarWinds supply chain hack show that software procurement and distribution is a major vulnerability, according to senior White House officials.

To address this, the executive order requires the use of a Software Bill of Materials (SBOM) in government procurements, to allow for more efficient tracking of known vulnerabilities.

NYISO head eyes new technologies to reach zero emissions, saying renewables and storage not enough

https://www.utilitydive.com/news/nyiso-dewey-eyes-new-tech-to-reach-zero-emissions-renewables-storage-not-enough/599661/?utm_source=Sailthru&utm_medium=email&utm_campaign=Issue:%202021-05-06%20Utility%20Dive%20Newsletter%20%5Bissue:34073%5D&utm_term=Utility%20Dive

Upcoming transmission projects and the possibility of offshore wind development will help to even out the availability of carbon-free electricity in New York state, but without an alternative to natural gas there is uncertainty on how the ISO could achieve zero emission by 2040. Also, it is imperative that there are new technologies that will help to move the wind and solar energy from the northwest of the state to higher population centers in the southeast. NYISO continues to make progress toward reducing emissions and has already cut carbon emissions by 52% since 1999 by adding 12,739 MW of new generation and retiring 10,535 MW of less efficient generation.

ERCOT Reports Record Electric Demand Expected This Summer; Low Risk Of Emergency Conditions Based On Expected Generation Availability & Weather Conditions

<http://www.energychoicematters.com/stories/20210506d.html>

ERCOT states that it is anticipating record-breaking electric demand this summer due to expected hot and dry conditions and continued economic and population growth throughout the region. It is identifying low-probability, high-impact situations like the February winter event in its seasonal assessments, to ensure all market participants and government officials have a comprehensive view into market conditions. This will allow the market to plan and prepare for even the most remote possibility. ERCOT anticipates there will be enough generation to meet the summer 2021 peak demand of 77,144 MW. Based on this forecast, the reserve margin will be 15.7% this summer season. The current system-wide peak demand record for ERCOT is 74,820 MW set on Aug. 12, 2019.

Proposed Calif. PUC Decision Would Reject Expansion Of Direct Access, Citing "Unacceptable Risk" To Reliability Goals

<http://www.energychoicematters.com/stories/20210517a.html>

In September 2020, it was recommended that the PUC expand the Direct Access program to more participants. However, a recent oppositional order cites two recent grid reliability events that could overturn the decision.

In August 2020, CAISO was forced to institute unplanned rotating electricity outages during an extreme heat wave. These rotating outages confirmed that the state's reliability issues are acute and immediate; however, these challenges are also long-term and structural.

The February 2021 outages in Texas, where direct access providers serve all retail customers, further underscore the dangers of insufficient available generation resources. Texas and other states experienced a weather-related power crisis that led to extended power outages and skyrocketing energy prices. It is especially concerning because advocates of direct access in California have cited Texas as an example of a successful, fully competitive retail market.