January 6, 2023



Overall Energy & Fuels Markets Summary

- Crude oil, propane, and natural gas (Henry Hub) average spot prices compared to last week (see page 1):
 - WTI and Brent (crude oil) and propane slightly increased.
 - Natural gas at Henry Hub decreased.
- Regional fuels inventories (see pages 2 and 3) varied compared to the prior week:
 - Natural gas, ultra low sulfur diesel (ULSD), and propane decreased, while total gasoline remained comparable.
 - Propane inventories remain above the 5-year average
- Market influencers include:
 - Global demand and supply chain influences from ongoing Russian invasion of Ukraine and increases in COVID-19 in China.
 - Warm weather outlook for much of the U.S. as well as Europe (see page 6).
- NY retail prices (see pages 4 and 5):
 - NY retail prices for heating oil and propane slightly increased while kerosene slightly decreased compared to last week.
 Heating fuel retail prices remain elevated compared to last year.
 - NY transportation fuels retail prices slightly decreased over the past week. Gasoline prices are slightly less than last year while diesel prices remain elevated compared to last year.

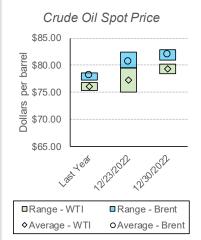
Issue Contents:

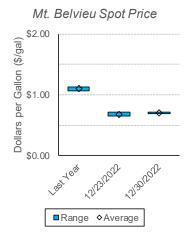
National crude and East Region natural gas inventories	Page 2
Regional Inventories: Select Liquid Fuels	Page 3
Transportation Fuels Prices Summary.	Page 4
Heating Fuel Prices Summary	Page 5
Weather Outlook	Page 6
Degree Days Outlook and Summary	Page 7
<u>References</u>	Page 8

Note:

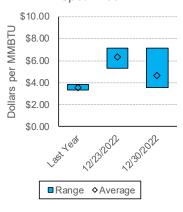
- Data from USEIA, see references section for detailed citations. Visualizations by NYSERDA.
- 2. Graphics summarize available USEIA data from the most recent week ending on Fridays, noted by the date.

Fundamental Fuels Market Weekly Price Summaries





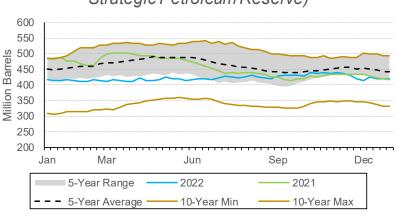
Natural Gas Henry Hub Spot Price





National Crude and East Region Natural Gas Inventories

U.S. Crude Weekly Stocks (Excluding Strategic Petroleum Reserve)



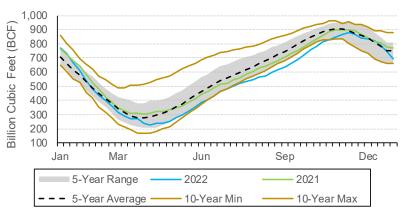
Historical Comparison 600 550 500 Million Barrels -5% 0% 1% 450 400 350 421 300 250 200 U.S. Crude Stocks (Excluding SPR)

■5-Year Average ■ Prior Year

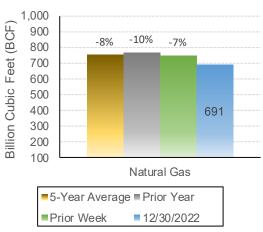
■Prior Week

12/30/2022

East Region: Natural Gas Working Underground Storage



Historical Comparison



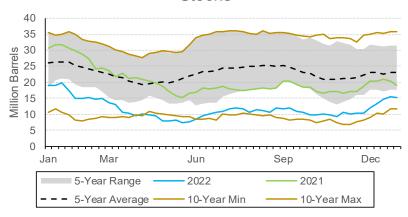
Note

- 1. Data from USEIA, see references section for detailed citations. Visualizations by NYSERDA.
- 2. Graphics summarize available USEIA data from the most recent week ending on Fridays.
- 3. Historical comparison bar chart percentages reflect current week. Positive values indicate current week is greater, negative values indicate current week is less than the historical value.

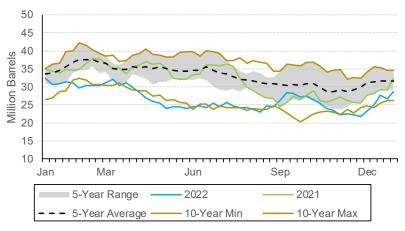


Regional Inventories: Select Liquid Fuels

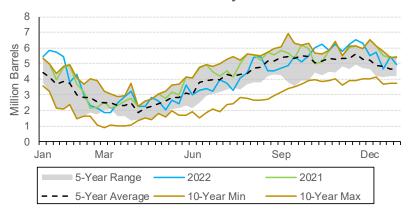
PADD 1B: Distillate (0 - 15 ppm S) Weekly Stocks



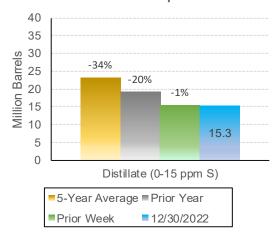
PADD 1B: Total Gasoline Weekly Stocks



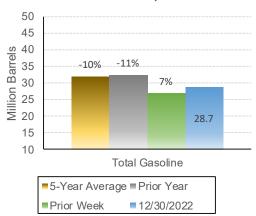
PADD 1B: Propane and Propylene Weekly Inventory



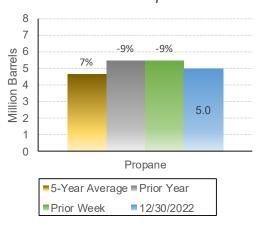
Historical Comparison



Historical Comparison



Historical Comparison



- 1. Data from USEIA, see references section for detailed citations. Visualizations by NYSERDA.
- Historical comparison bar chart percentages reflect current week. Positive values indicate current week is greater, negative values indicate current week is less than the historical value.



Transportation Fuel Prices Summary

Ultra-low Sulfur Diesel New York Harbor Average Weekly Spot Prices



Conventional Gasoline Average Weekly Spot Prices New York Harbor



For regional NYS
retail price summaries for
transportation fuels,
visit the following
NYSERDA resources:

Transportation Fuel Dashboard

Transportation fuels retail price summaries presented in this report and on the NYSERDA dashboards are collected by the Energy Markets team from AAA and USEIA as part of our ongoing fuels markets analyses and monitoring.

Fuel Type	NYS Average Retail Prices				
ruer Type	12/30/2022	12/23/2022	% Difference	Prior Year	% Difference
Regular Gasoline (dollars per gallon) ²	\$3.41	\$3.47	-2%	\$3.50	-2%
On-road Diesel (dollars per gallon) ²	\$5.36	\$5.44	-1%	\$3.73	44%

^{1.} Wholesale price data from USEIA, see references section for detailed citations. Visualizations by NYSERDA.

^{2.} Retail price data from AAA, see references section for detailed citations. Visualizations by NYSERDA.



Heating Fuel Prices Summary

No. 2 Heating Oil Average Weekly Spot Prices New York Harbor



Propane Mt. Belvieu Average Weekly Spot Prices



For regional NYS retail price summaries for heating fuels, visit the following NYSERDA resources:

Home Heating Oil Prices

Dashboard

Kerosene Prices
Dashboard

<u>Propane Prices</u> Dashboard

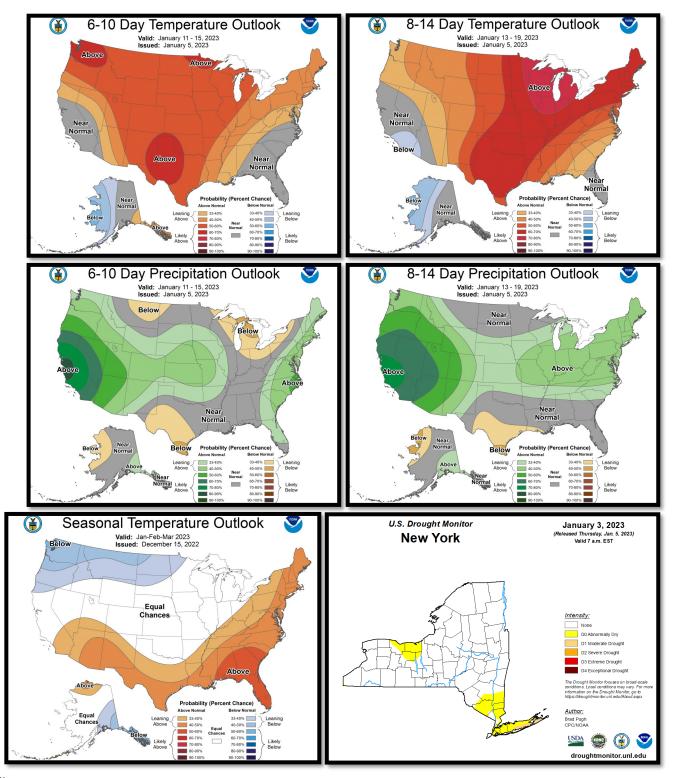
Heating fuels retail price summaries presented in this report and on the NYSERDA dashboards are part of the USEIA State Heating Oil and Propane Program/NYSERDA Heating Fuel Prices surveys.

Weekly Survey Results by Fuel Type	NYS Average Retail Prices				
Weekly Survey Results by Fuel Type	12/27/2022	12/19/2022	% Difference	Prior Year	% Difference
Ultra-low #2 Heating Oil Posted Credit Prices (dollars per gallon) ²	\$4.873	\$4.845	0.6%	\$3.569	36.5%
Propane Posted Credit Prices - 1,100 gallon usage (dollars per gallon) ²	\$3.551	\$3.523	0.8%	\$3.300	7.6%
Kerosene Posted Credit Prices (dollars per gallon) ²	\$6.780	\$6.888	-1.6%	\$4.003	69.4%
Monthly USEIA Reporting	October 2022	September 2022	% Difference	October 2021	% Difference
Monthly Average Residential Natural Gas Prices (dollars per Therm) ³	\$2.123	\$2.732	-22.3%	\$2.227	-4.7%

- 1. Wholesale price data from USEIA, see references section for detailed citations. Visualizations by NYSERDA.
- 2. Retail price data from USEIA & NYSERDA, see references section for detailed citations. Visualizations by NYSERDA.
- 3. Residential natural gas price data from USEIA, see references section for detailed citations. Visualization by NYSERDA.



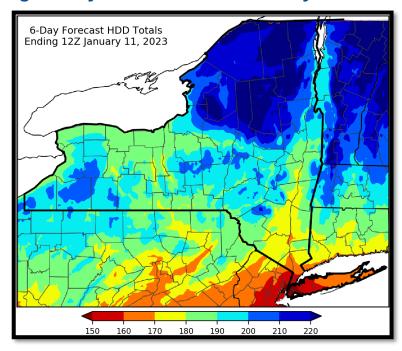
Weather Outlook and Seasonal Threat Monitoring



- 1. Temperature and precipitation outlook graphics from NOAA. See references section for detailed citations.
- 2. Seasonal threat monitoring for winter season. Graphics from NOAA. See reference section for detailed citation.
- Seasonal threat monitoring for drought conditions during the spring/summer. Graphic from National Drought Mitigation Center. See references section for detailed citation.



Degree Days Outlook and Summary



City	6-Day HDD Forecast
Albany	176
Binghamton	185
Buffalo	187
Glans Falls	187
Massena	221
NYC	145
Rochester	183
Syracuse	181
Watertown	196

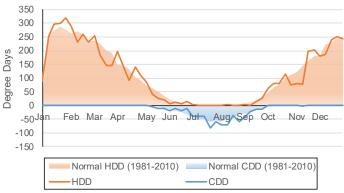
Forecast Dates:

01/05/2023 - 01/10/2023

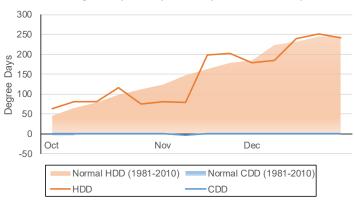
Notes:

1. M = Missing data





NYS Degree Day Weekly Summary: 2-Month History



For regional NYS
Heating and Cooling
Degree Data along with
additional information,
visit the following
NYSERDA resources:

Heating Degree Data

Monthly Degree Day Data (Heating & Cooling)

- Heating degree day (HDD) forecast from NOAA & Northeast Regional Climate Center at Cornell University (NRCC). See references section for detailed citations.
- 2. HDD and Cooling Degree Day (CDD) data from NOAA. Positive values represent HDD and negative values represent CDD. See reference section for detailed citation. Visualization by NYSERDA.



References

National and Regional Fuel Inventories

USEIA. 2022. U.S. Stocks of Crude Oil and Petroleum Products. Available online:

https://www.eia.gov/dnav/pet/xls/PET_STOC_WSTK_DCU_NUS_W.xls.

USEIA. 2022. Weekly Central Atlantic (PADD 1B) Ending Stocks of Distillate Fuel Oil, 0 to 15 ppm Sulfur (Thousand Barrels. Available online: https://www.eia.gov/dnav/pet/hist_xls/WD0ST_R1Y_1w.xls.

USEIA. 2022. Weekly Central Atlantic (PADD 1B) Ending Stocks of Total Gasoline (Thousand Barrels).

Available online: https://www.eia.gov/dnav/pet/hist_xls/WGTST1B1w.xls.

USEIA. 2022. Weekly Central Atlantic (PADD 1B) Propane and Propylene Ending Stocks Excluding Propylene at Terminal (Thousand Barrels). Available online: https://www.eia.gov/dnav/pet/hist_xls/WPRST1B1w.xls.

National and Regional Price Summaries

AAA. 2022. National and State Gas Prices. *New York Average Gas Prices*. Available online: https://gasprices.aaa.com/?state=NY.

USEIA. 2022. Spot Prices for Crude Oil and Petroleum Products. Available online:

https://www.eia.gov/dnav/pet/xls/PET_PRI_SPT_S1_D.xls.

USEIA. 2022. Natural Gas. Natural Gas Spot and Future Prices (NYMEX). Available online:

https://www.eia.gov/dnav/ng/xls/NG PRI FUT S1 D.xls.

USEIA. 2022. Natural Gas. Natural Gas Residential Prices (Monthly). Available online:

https://www.eia.gov/dnav/ng/xls/NG PRI SUM A EPG0 PRS DMCF M.xls.

USEIA & NYSERDA. 2022. State Heating Oil and Propane Program/NYSERDA Heating Fuel Prices Survey.

Available online: https://www.eia.gov/petroleum/heatingoilpropane/.

Weather Outlook and Data

National Oceanic and Atmospheric Administration (NOAA). 2022. National Weather Service Climate Prediction Center. Temperature and Precipitation Outlooks. Available online: https://www.cpc.ncep.noaa.gov/.

NOAA and Northeast Regional Climate Center (NRCC) at Cornell University. 2022. Weekly HDD Summary for New York. Available online: http://www.nrcc.cornell.edu/industry/hdd/.

NOAA. National Weather Service Climate Prediction Center. Degree Days Statistics. Available online:

https://www.cpc.ncep.noaa.gov/products/analysis monitoring/cdus/degree days/.

National Drought Mitigation Center. U.S. Drought Monitor. New York. Available online at: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NY.

Note that there may be slight differences between USEIA reported values and this NYSERDA summary due to methodology differences.

Developed weekly by the NYSERDA Energy Markets team, part of the Energy & Environmental Analysis Group. For any questions, please reach out to:

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