December 29, 2023



Overall Energy & Fuels Markets Summary

- Summary of average spot prices for the following fuels (see page 1).
 - Propane (Mt. Belvieu), crude oil (WTI and Brent), and natural gas (Henry Hub) average prices all slightly increased compared to the prior week.
- Regional fuels inventories (see pages 2 and 3) compared to the previous week:
 - Total gasoline, propane and natural gas inventories all decreased compared to the prior week.
 - Ultra-low sulfur diesel (ULSD) inventories increased 13% compared to the prior week.
 - ULSD remains at a seasonally low inventory level for the PADD 1B region.
- Market influencers include:
 - Global factors include the Russian-Ukraine war, the Hamas-Israel war, the recent attacks on oil shipments in the Red Sea, and the associated geopolitical uncertainties.
 - Economic concerns related to higher interest rates and global petroleum products demand dynamics as winter heating demand increases.
- In New York/Northeast, National Oceanic and Atmospheric Administration (NOAA) forecasts indicates leaning above to near normal temperatures over the next 6-14 days. The forecast for precipitation is leaning below to near normal for the 6-10 day outlook and leaning above for the 8-14 day. (Page 6)
- NY retail prices (see pages 4 and 5) for heating and transportation fuels:
 - NY transportation regular gasoline and diesel both slightly decreased compared to the prior week.
 - Heating oil and propane slightly increased while kerosene increased 4.2% compared to the prior week.

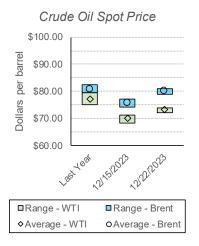
Issue Contents:

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

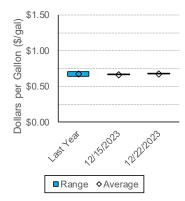
Note

- 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, noted by the date.

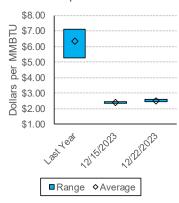
Fundamental Fuels Market Weekly Price Summaries



Propane Mt. Belvieu Spot Price



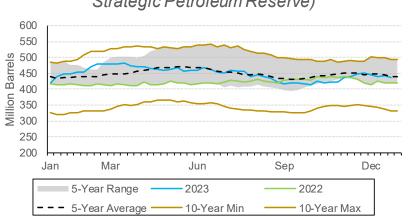
Natural Gas Henry Hub Spot Price

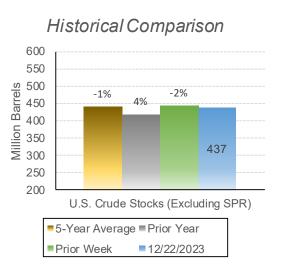




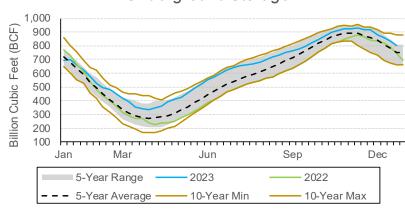
National Crude and East Region Natural Gas Inventories

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

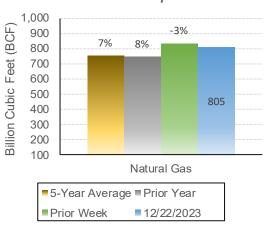




East Region: Natural Gas Working Underground Storage



Historical Comparison



Note:

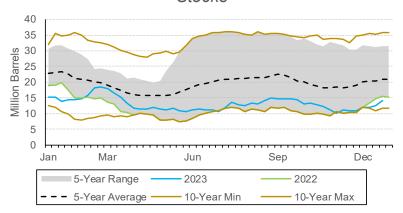
- Data from USEIA, see references section for detailed citations. Visualizations by NYSERDA.
- 2. Graphics summarize available USEIA data from the most recent week ending on Fridays.

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.

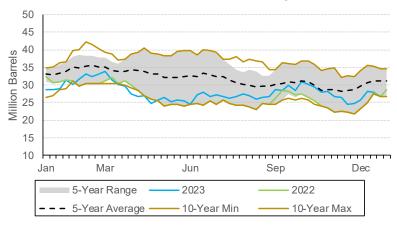


Regional Inventories: Select Liquid Fuels

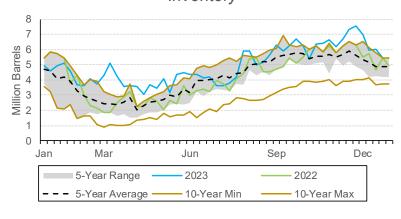
PADD 1B: Distillate (0 - 15 ppm S) Weekly Stocks



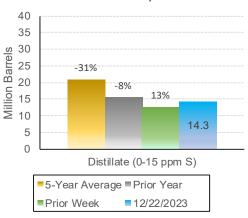
PADD 1B: Total Gasoline Weekly Stocks



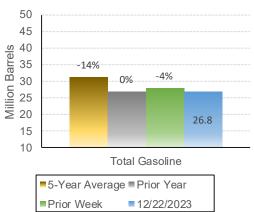
PADD 1B: Propane and Propylene Weekly Inventory



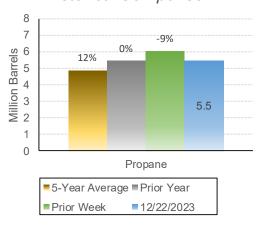
Historical Comparison



Historical Comparison



Historical Comparison



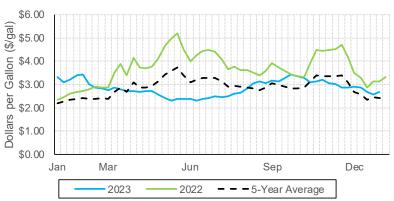
Notes:

- 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				NYS Average Retail Prices		
ruer Type	12/22/2023	12/15/2023	% Difference	Prior Year	% Difference		
Regular Gasoline (dollars per gallon) ²	\$3.40	\$3.46	-1.5%	\$3.46	-1.7%		
On-road Diesel (dollars per gallon) ²	\$4.51	\$4.54	-0.8%	\$5.43	-17.0%		

Notes:

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

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



Heating Fuel Prices Summary

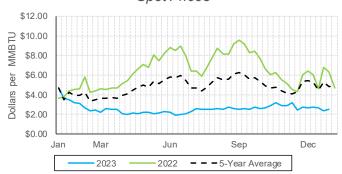
No. 2 Heating Oil Average Weekly Spot Prices New York Harbor



Propane Mt. Belvieu Average Weekly Spot Prices



Natural Gas Henry Hub Average Weekly Spot Prices



NYS Average Retail Prices				
12/26/2023	12/18/2023	% Difference	Prior Year	% Difference
¢4 140	¢4 144	0.10/	¢4.050	-14.5%
Ф4. 140	ф4. 144	0.1%	\$4.00Z	-14.5%
¢2 245	¢2 220	0.20/	¢2 460	-3.6%
φ3.3 4 3	φ3.339	0.270	Ф 3.400	-3.0%
ΦE 252	¢5 041	4.20/	ምድ ዐ ርርር	-23.9%
φ5.255	φ5.04 I	4.270	φ0.902	-23.970
September 2023	August 2023	% Difference	September 2022	% Difference
\$2.030	\$2.197	-7.6%	\$2.729	-25.6%
	\$4.148 \$3.345 \$5.253 September 2023	12/26/2023 12/18/2023 \$4.148 \$4.144 \$3.345 \$3.339 \$5.253 \$5.041 September 2023 August 2023	12/26/2023 12/18/2023 % Difference \$4.148 \$4.144 0.1% \$3.345 \$3.339 0.2% \$5.253 \$5.041 4.2% September 2023 August 2023 % Difference	12/26/2023 12/18/2023 % Difference Prior Year \$4.148 \$4.144 0.1% \$4.852 \$3.345 \$3.339 0.2% \$3.468 \$5.253 \$5.041 4.2% \$6.902 September 2023 August 2023 % Difference 2022 September 2022

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

<u>Home Heating Oil Prices Dashboard</u> <u>Kerosene Prices Dashboard</u>

Propane Prices Dashboard

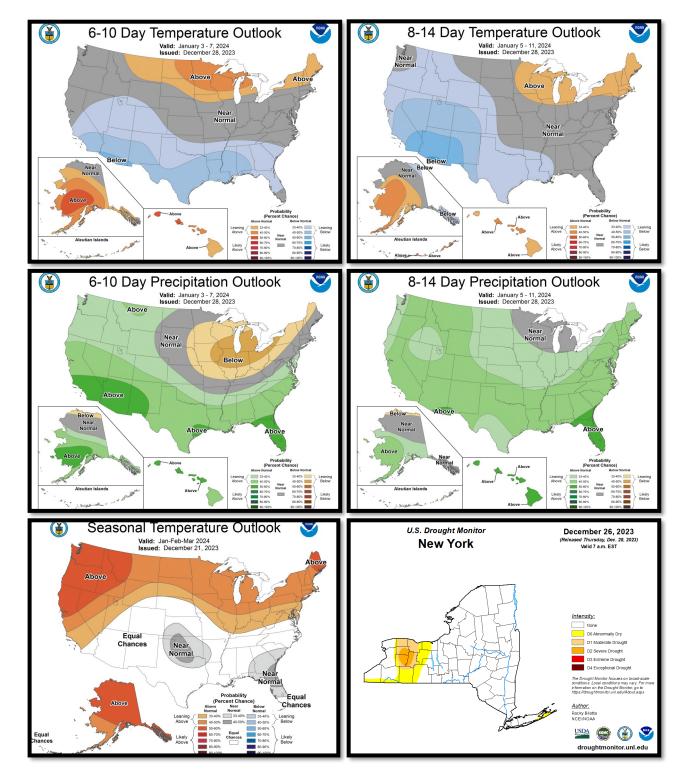
Heating fuels retail price summaries presented in this report and on the NYSERDA dashboards are part of the USEIA State Heating Oil and Propane Program/ NYSERDA Heating Fuel Prices surveys.

Notes:

- Wholesale price data from USEIA, see references section for detailed citations. Visualizations by NYSERDA.
- Retail price data from USEIA & NYSERDA, see references section for detailed citations. Visualizations by NYSERDA. Highlighted cells indicate price correction from prior week.
- Residential natural gas price data from USEIA, see references section for detailed citations. Visualization by NYSERDA.



Weather Outlook and Seasonal Threat Monitoring

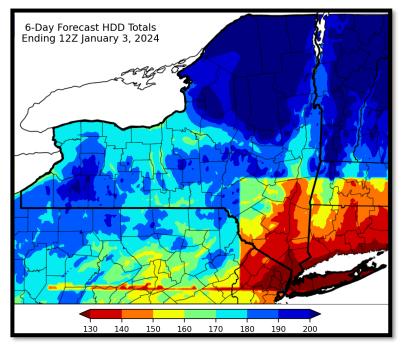


Notes:

- 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.
- 3. 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	Normal	% Difference
Albany	165	230	-28%
Binghamton	172	243	-29%
Buffalo	169	223	-24%
Glens Falls	175	255	-31%
Massena	204	277	-26%
NYC	133	172	-23%
Rochester	168	219	-23%
Syracuse	169	231	-27%
Watertown	182	253	-28%

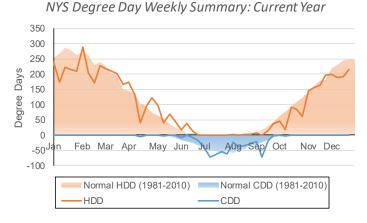
Forecast Dates:

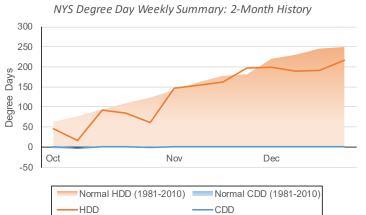
12/28/2023 - 01/02/2024

Notes:

1. M = Missing data

We have transitioned to solely reporting heating degree days.





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)

Notes:

- 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 & 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.

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