NYSERDA Heating Fuels Report

December 6, 2021

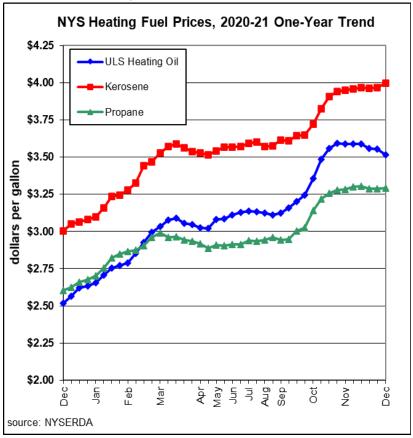
Highlights

- Mid-Atlantic ultra-low sulfur (ULS) distillate inventories increased 1.7 million barrels (8.7%) since last week to 20.5 million barrels. Inventories are 35.5% below the year-ago level and 21.2% below the 5-year average.
- The weekly average U.S. WTI crude oil spot price decreased \$10.90 per barrel (14.0%) since last week to \$66.89 per barrel. Current prices are \$21.52 per barrel (47.4%) above the year-ago weekly average of \$45.37 per barrel.
- The New York Statewide average retail price of ultra-low sulfur (ULS) heating oil decreased while the average retail prices of kerosene and propane increased since the last survey.

Retail Petroleum Prices—On a statewide basis since the last survey on November 29th, the price decreased \$0.038/gallon (1.1%) to \$3.516/gallon for ULS heating oil, prices increased \$0.030/gallon (0.8%) to \$3.998/gallon for kerosene, and \$0.003/gallon (0.1%) to \$3.291/gallon for propane. Compared to a year earlier, prices increased \$1.000/gallon (39.7%) for heating oil, \$0.993/gallon (33.0%) for kerosene, and \$0.687/gallon (26.4%) for propane.

Crude Oil Prices—For the week ending 12/3/2021, WTI crude oil spot prices averaged \$66.89/bbl, a decrease of \$10.90/bbl (14.0%) from the week-ago average of \$77.79/bbl. WTI prices are now \$21.52/bbl (47.4%) above the year-ago weekly average of \$45.37/bbl. The all-time weekly average high of \$142.52/bbl occurred on 7/04/08.

Spot Natural Gas Prices—For the week ending 12/3/2021, Henry Hub natural gas spot prices averaged \$4.296 per million Btu (MMBtu), a decrease of \$0.567/MMBtu (11.7%) from the prior week level of \$4.863/MMBtu. Prices are currently \$1.634/MMBtu (61.4%) above the year-earlier weekly average of \$2.662/MMBtu.



Residential Natural Gas Prices—The NYS average price in September 2021 was \$2.148/therm, a decrease of \$0.089/therm (4.0%) from the August 2021 price of \$2.237/therm, and was \$0.285/therm (15.3%) higher than the year earlier average of \$1.863/therm.

| Middle Atlantic Stocks- | -Current and historic h | neating fuel inventory | data is presented in the table below. |
|-------------------------|-------------------------|------------------------|---------------------------------------|
| | | | |

| | | | • | - | | | |
|--|-----------|------------|---------------------------|----------|---------------------------|-------------------|----------------------------|
| Middle Atlantic Region, Weekly Inventories (million barrels) | | | | | | | |
| Fuel Type | 12/3/2021 | 11/26/2021 | % Change vs. Last Week | Year Ago | % Change vs. Last Year | 5-Year Average | % Change vs. 5-Year Avg |
| ULS Distillate (0-15 ppm) | 20.5 | 18.8 | 8.7% | 31.7 | -35.5% | 26.0 | -21.2% |
| Non-road Diesel (15-500 ppm) | 0.4 | 0.4 | -10.3% | 0.7 | -44.0% | 1.0 | -61.8% |
| High Sulfur Distillate (>500 ppm) | 2.2 | 2.1 | 7.3% | 1.7 | 28.0% | 2.7 | -18.5% |
| Total Distillate Oil | 23.1 | 21.3 | 8.2% | 34.1 | -32.4% | 29.7 | -22.3% |
| Propane | 6.531 | 5.979 | 9.2% | 5.145 | 26.9% | 4.690 | 39.3% |
| #6 Residual Oil | 3.8 | 4.0 | -4.9% | 6.7 | -43.0% | 6.0 | -36.3% |
| US Natural Gas | 3,505 | 3,564 | -1.7% | 3,861 | -9.2% | 3,595 | -2.5% |
| US Crude Oil | 432.9 | 433.1 | -0.1% | 503.2 | -14.0% | 465.6 | -7.0% |

Notes: Natural Gas in billion cubic feet (Bcf); Middle Atlantic is DE, DC, MD, NJ, NY, and PA

ppm = parts per million sulfur content Source: US DOE/EIA



| REGIO N | 12/6/2021 | 11/29/2021 | % Change vs. Prior Survey | Year Ago | % Change vs. Last Year |
|------------------|--------------------------|----------------------|------------------------------|----------------------|---------------------------|
| Long Island | 3.624 | 3.705 | -2.2% | 2.702 | 34.1% |
| New York City* | 3.596 | 3.663 | -1.8% | 2.662 | 35.1% |
| Lower Hudson | 3.545 | 3.610 | -1.8% | 2.529 | 40.2% |
| Upper Hudson | 3.491 | 3.424 | 1.9% | 2.409 | 44.9% |
| Capital District | 3.292 | 3.356 | -1.9% | 2.232 | 47.5% |
| North Country | 3.453 | 3.464 | -0.3% | 2.425 | 42.4% |
| Central | 3.350 | 3.364 | -0.4% | 2.344 | 42.9% |
| Western | 3.711 | 3.729 | -0.5% | 2.681 | 38.4% |
| Statewide* | 3.516 | 3.554 | -1.1% | 2.516 | 39.7% |
| New York | State Retail Propane Pos | sted Credit Prices - | 1,100 gallon usage | category (dollars pe | r gallon) |
| Long Island | 3.988 | 3.997 | -0.2% | 3.050 | 30.8% |
| Mid-Hudson | 3.557 | 3.539 | 0.5% | 2.785 | 27.8% |
| Capital District | 3.046 | 3.062 | -0.5% | 2.461 | 23.8% |
| North Country | 3.356 | 3.344 | 0.4% | 2.745 | 22.3% |
| Central | 3.147 | 3.133 | 0.4% | 2.454 | 28.2% |
| Western | 3.023 | 3.043 | -0.6% | 2.402 | 25.8% |
| Statewide | 3.291 | 3.288 | 0.1% | 2.604 | 26.4% |
| | New York State Reta | il Kerosene Posted | Credit Prices (dolla | ars per gallon) | |
| Mid-Hudson | 4.089 | 3.990 | 2.5% | 3.089 | 32.4% |
| Capital District | 3.850 | 3.863 | -0.3% | 2.806 | 37.2% |
| North Country | 3.891 | 3.864 | 0.7% | 3.048 | 27.6% |
| Central | 3.918 | 3.935 | -0.4% | 2.906 | 34.8% |
| Western | 4.222 | 4.233 | -0.3% | 3.153 | 33.9% |
| Statewide | 3.998 | 3.968 | 0.8% | 3.005 | 33.1% |
| | New York State A | Average Residentia | Natural Gas Prices | s (\$/therm) | |
| REGIO N | September 2021 | August 2021 | % Change vs. Prior Month | September 2020 | % Change vs. Last Year |
| Statewide | 2.148 | 2.237 | -4.0% | 1.863 | 15.3% |

* Revision

Historic Retail Prices—Statewide average high and low prices since Sept. 1997 for heating oil & propane & Sept. 2000 for kerosene.

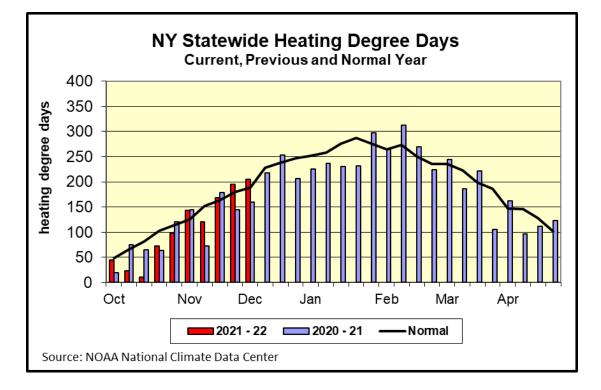
- Heating oil—highest price \$4.778/gallon on 7/14/08, lowest price \$0.876/gallon on 9/08/98.
- Propane—highest price \$3.811/gallon on 2/17/14, lowest price \$1.072/gallon on 9/20/99.
- Kerosene—highest price \$5.068/gallon on 7/14/08, lowest price \$1.309/gallon on 9/09/02.

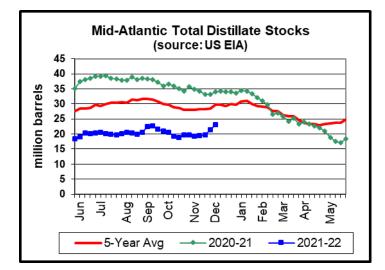
Residential Natural Gas Prices: Statewide average prices are derived from US EIA most currently available data. NYS gas utility specific prices can be found on the NYS DPS website at http://www.dps.ny.gov/TypicalBills.htm#GasRes.

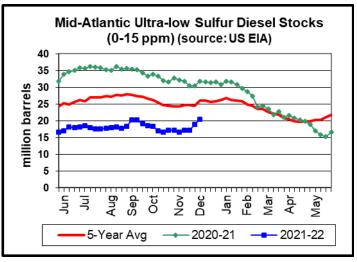
New York State Regions: Long Island: Nassau and Suffolk New York City: Bronx, Kings, New York, Queens, and Richmond Lower Hudson: Dutchess, Putnam, Rockland, and Westchester Upper Hudson: Columbia, Greene, Orange, Sullivan, and Ulster Capital District: Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, and Washington North Country: Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, St. Lawrence, and Warren Central: Broome, Cayuga, Chenango, Cortland, Delaware, Herkimer, Madison, Oneida, Onondaga, Oswego, Otsego, Tioga, and Tompkins Western: Allegany, Cattaraugus, Chautauqua, Chemung, Erie, Genesee, Livingston, Monroe, Niagara, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, Wyoming, and Yates counties. Propane & Kerosene: Mid-Hudson: Columbia, Dutchess, Greene, Orange, Putnam, Rockland, Sullivan, Ulster, and Westchester counties. B5 heating oil is required for Downstate New York including Nassau, Suffolk, NYC, and Westchester counties.

Heating Degree Days— On a statewide basis during the past week, the number of heating degree-days (205) was 28.1% above the year-ago level (160) and 8.5% above the normal trend (189). On a cumulative basis since October 1^{st} , current year heating degree-days (1,082) are ahead of the year-ago level (1,042) by 3.8% and behind the normal trend (1,222) by 11.5%.

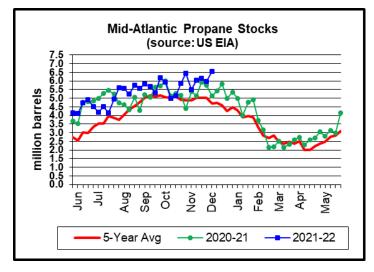
| New York State Heating Degree Day Information, Weekly & Cumulative | | | | | | | |
|--|------|------|--------|---------------------------|---------|--------|--|
| Week Ending December 04 | | | | Cumulative From October 1 | | | |
| Region | 2021 | 2020 | Normal | 2021-22 | 2020-21 | Normal | |
| Albany | 225 | 187 | 211 | 1,202 | 1,316 | 1,366 | |
| Binghamton | 231 | 186 | 229 | 1,331 | 1,250 | 1,511 | |
| Buffalo | 194 | 174 | 211 | 1,032 | 1,069 | 1,344 | |
| Glens Falls | 184 | 146 | 239 | 747 | 810 | 1,578 | |
| Massena | 272 | 194 | 257 | 1,475 | 1,422 | 1,654 | |
| NYC | 152 | 102 | 159 | 644 | 553 | 883 | |
| Rochester | 206 | 177 | 213 | 1,115 | 1,124 | 1,354 | |
| Syracuse | 201 | 174 | 216 | 1,045 | 1,085 | 1,377 | |
| Watertown | 226 | 169 | 239 | 1,239 | 1,264 | 1,559 | |
| Statewide | 205 | 160 | 189 | 1,082 | 1,042 | 1,222 | |



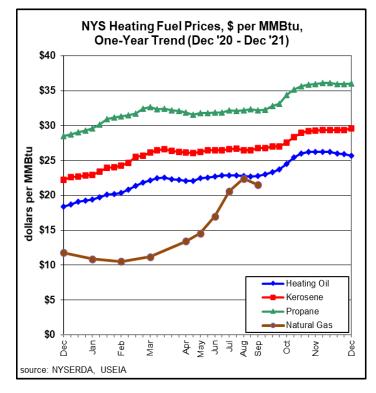




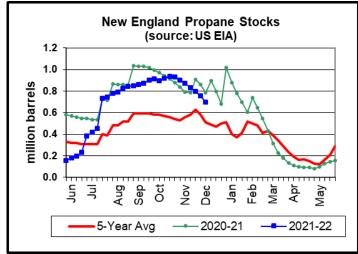
Propane Stocks—Current and historic heating fuel inventory data is presented in the graphs below.



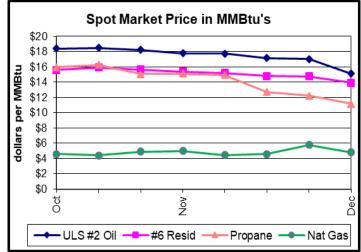
Retail Btu Price Equivalents—The New York State heating fuel prices Btu graph equates the retail price for New York Statewide average residential ultra-low sulfur heating oil, kerosene, propane, and natural gas on a dollar per million Btu (MMBtu) basis.



Note: Natural gas prices are from the U.S. EIA and provided on a monthly basis and delayed by 3 months. The monthly average price of natural gas is higher during the summer months due to low delivery volumes and fixed delivery charges and does not necessarily indicate a higher underlying supply price. Higher average natural gas prices in the summer months are not indicative of higher future prices during the winter months.



Spot Btu Price Equivalents—The Btu spot market graph equates the spot market price, in table below, for NY Harbor ultra-low sulfur diesel fuel and 0.3% sulfur high pour #6 residual fuel, Mont Belvieu propane, and the New York Citygate natural gas price on a dollar per million Btu (MMBtu) basis.



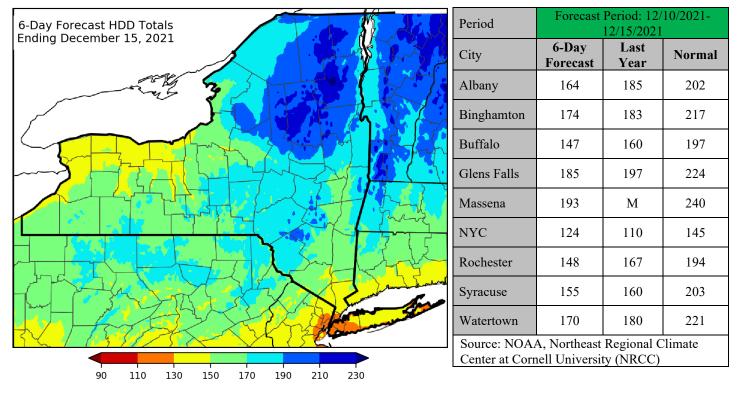
| New York Spot Prices, Weekly Average | | | | | | | |
|--------------------------------------|-----------|----------|----------|--|--|--|--|
| Fuel | 12/3/2021 | Year Ago | % Change | | | | |
| Ultra LS Diesel | 2.096 | 1.368 | 53.2% | | | | |
| #2 Fuel Oil | 1.957 | 1.302 | 50.2% | | | | |
| #6 Residual 0.3% | 2.084 | 1.419 | 46.9% | | | | |
| Propane | 1.020 | 0.580 | 75.9% | | | | |
| Natural Gas | 4.825 | 1.977 | 144.1% | | | | |

Note: Fuel in \$/gallon, natural gas (\$/MMBtu)=NYCitygate

Weather Outlooks – Based on data and maps provided by the National Oceanic and Atmospheric Administration (NOAA) and the Northeast Regional Climate Center at Cornell University (NRCC).

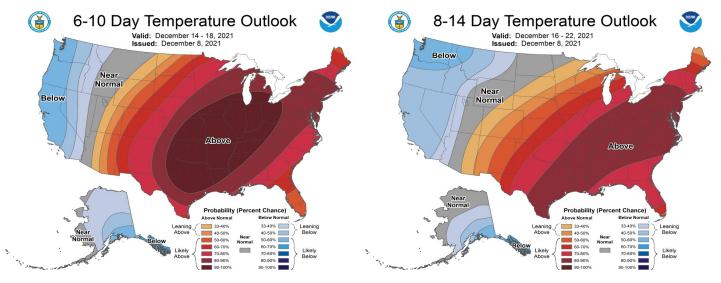
Statewide Forecast HDD: On a statewide basis for the week ending December 11th, the number of forecasted heating degree-days (190) is 7.3% below last year (205) and 10.4% below the normal trend (212). Regional HDD forecasts are provided in the map and table below.





6-10 Day Outlook Temperature Probability from the Climate Prediction Center (NOAA). The forecasted map presents the 6-10 day temperature probability outlook for the United States for December 14, 2021 – December 18, 2021. This is in comparison to the 30-year normal (1981-2010).

8-14 Day Outlook Temperature Probability from the Climate Prediction Center (NOAA). The forecasted map presents the 8-14 day temperature probability outlook for the United States for December 16, 2021 – December 22, 2021. This is in comparison to the 30-year normal (1981-2010).



Additional historic <u>regional specific prices and supply information</u> is available at NYSERDA's website. For more information, please contact Matthew Milford at (518) 862-1090 ext. 3416, e-mail <u>matthew.milford@nyserda.ny.gov.</u>