NYSERDA Heating Fuels Report

October 7, 2019

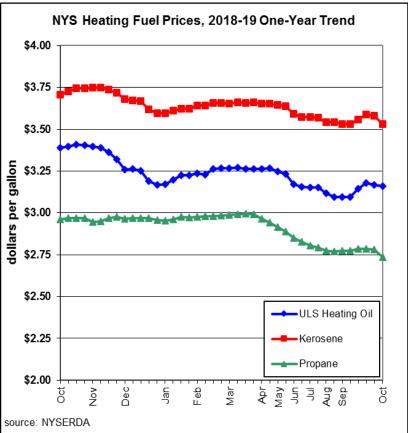
Highlights

- Mid-Atlantic ultra-low sulfur (ULS) distillate inventories decreased 1.1 million barrels (5.8%) since last week to 17.9 million barrels. Current inventories are 13.3% below last year's level and 29.0% below the 5-year average.
- The weekly average WTI crude oil spot price decreased \$3.78 per barrel (6.6%) to \$53.12 per barrel since last week. The weekly average is now 29.3% below last year's level of \$75.13 per barrel.
- New York Statewide average retail prices of ultra-low sulfur (ULS) heating oil, kerosene, and propane all decreased since the last survey.

Retail Petroleum Prices—On a statewide basis since the last survey on September 30^{th} , prices decreased 0.007/gallon (0.2%) to 3.161/gallon for ULS heating oil, 0.047/gallon (1.3%) to 3.533/gallon for kerosene, and 0.045/gallon (1.6%) to 2.735/gallon for propane. Compared to a year earlier, prices decreased 0.229/gallon (6.8%) for heating oil, 0.174/gallon(4.7%) for kerosene, and 0.225/gallon (7.6%) for propane.

Crude Oil Prices—For the week ending 10/4/19, WTI crude oil spot prices a veraged \$53.12/bbl, a decrease of \$3.78/bbl(6.6%) from the week-ago average of \$56.90/bbl. WTI prices are now \$22.01/bbl(29.3%) below the year-ago weekly a verage of \$75.13/bbl. The all-time weekly a verage high of \$142.52/bbl occurred on 7/04/08.

Spot Natural Gas Prices—For the week ending 10/4/19, Henry Hub natural gas spot prices a veraged \$2.296 per million Btu (mmBtu), a decrease of \$0.198/mmBtu (7.9%) from the prior week level of \$2.494/mmBtu. Prices are currently \$0.910/mmBtu (28.4%) below the year-earlier weekly average of \$3.206/mmBtu.



Residential Natural Gas Prices—The NYS average price in July 2019 was 1.930/therm, an increase of 0.273/therm (16.5%) from the June 2019 price of 1.657/therm, and was 0.019/therm (1.0%) lower than the year earlier average of 1.949/therm.

Middle Atlantic Region, Weekly Inventories (million barrels)							
Fuel Type	10/4/2019	9/27/2019	% Change vs. Last Week	Year Ago	% Change vs. Last Year	5-Year Average	% Change vs. 5-Year Avg
ULS Distillate (0-15 ppm)	17.9	19.0	-5.8%	20.6	-13.3%	25.2	-29.0%
Non-road Diesel (15-500 ppm)	0.7	0.4	98.9%	0.6	15.4%	1.2	-39.5%
High Sulfur Distillate (>500 ppm)	2.4	2.5	-5.3%	1.9	23.3%	3.4	-31.1%
Total Distillate Oil	20.9	21.8	-4.1%	23.1	-9.5%	29.8	-29.7%
Propane	4.987	5.929	-15.9%	5.893	-15.4%	3.656	36.4%
#6 Residual Oil	6.1	6.1	-1.2%	4.6	32.2%	6.1	0.2%
US Natural Gas	3,415	3,317	3.0%	2,943	16.0%	3,424	-0.3%
US Crude Oil	425.6	422.6	0.7%	410.0	3.8%	420.1	1.3%

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



REGION	10/7/2019	9/30/2019	% Change vs. Prior Survey	Year Ago	% Change vs. Last Year
Long Island	3.351	3.353	-0.1%	3.600	-6.9%
New York City	3.290	3.314	-0.7%	3.484	-5.6%
Lower Hudson	3.165	3.173	-0.3%	3.569	-11.3%
Upper Hudson	3.013	3.018	-0.2%	3.281	-8.2%
Capital District	2.904	2.918	-0.5%	3.101	-6.4%
North Country	3.208	3.235	-0.8%	3.219	-0.3%
Central	2.906	2.903	0.1%	3.240	-10.3%
Western	3.331	3.307	0.7%	3.396	-1.9%
Statewide	3.161	3.168	-0.2%	3.390	-6.8%
New York St	ate Retail Propane Po	sted Credit Prices	· 1,100 gallon usage ca	ntegory (dollars p	er gallon)
Long Island	3.075	3.053	0.7%	3.270	-6.0%
Mid-Hudson	2.730	2.750	-0.7%	2.960	-7.8%
Capital District	2.539	2.687	-5.5%	2.872	-11.6%
North Country	3.482	3.629	-4.1%	3.689	-5.6%
Central	2.458	2.458	0.0%	2.719	-9.6%
Western	2.471	2.483	-0.5%	2.610	-5.3%
Statewide	2.735	2.780	-1.6%	2.960	-7.6%
	New York State Ret	ail Kerosene Poste	l Credit Prices (dollar	s per gallon)	
Mid-Hudson	3.623	3.688	-1.8%	3.805	-4.8%
Capital District	3.192	3.352	-4.8%	3.534	-9.7%
North Country	3.689	3.717	-0.8%	3.692	-0.1%
Central	3.378	3.363	0.4%	3.684	-8.3%
Western	3.790	3.757	0.9%	3.743	1.3%
Statewide	3.533	3.580	-1.3%	3.707	-4.7%
	New York State	Average Residentia	l Natural Gas Prices ((\$/therm)	
REGIO N	July 2019	June 2019	% Change vs. Prior Month	July 2018	% Change vs. Last Year
Statewide	1.930	1.657	16.5%	1.949	-1.0%

* Revision

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

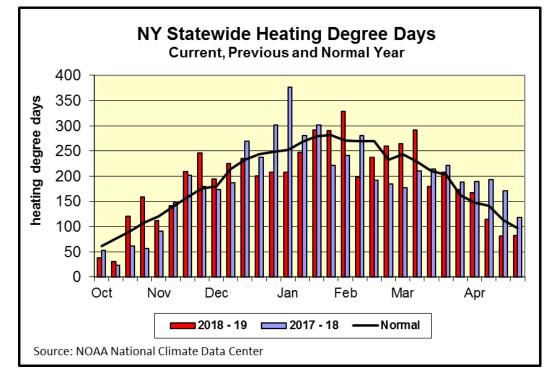
- Heating oil—highest price \$4.778/gallon on 7/14/08, lowest price \$0.876/gallon on 9/08/98.
- Propane—highest price \$3.811/gallon on 2/17/14, lowest price \$1.072/gallon on 9/20/99.
- Kerosene—highest price \$5.068/gallon on 7/14/08, lowest price \$1.309/gallon on 9/09/02.

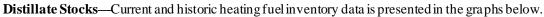
Residential Natural Gas Prices: Statewide average prices are derived from US EIA most currently a vailable data. NYS gas utility specific prices can be found on the NYS DPS website at http://www.dps.ny.gov/TypicalBills.htm#GasRes.

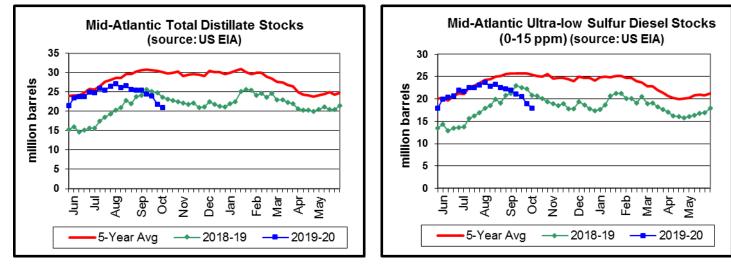
New York State Regions: Long Island: Nassau and Suffolk New York City: Bronx, Kings, New York, Queens, and Richmond Lower Hudson: Dutchess, Putnam, Rockland, and Westchester Upper Hudson: Columbia, Greene, Orange, Sullivan, and Ulster Capital District: Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, and Washington North Country: Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, St. La wrence, and Warren Central: Broome, Cayuga, Chenango, Cortland, Dela ware, Herkimer, Madison, Oneida, Onondaga, Oswego, Otsego, Tioga, and Tompkins Western: Allegany, Cattaraugus, Chautauqua, Chemung, Erie, Genesee, Livingston, Monroe, Nia gara, 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— Until the start of the next heating season in October, the heating degree-day information below reflects weekly information through April 27, 2019. Cumulative statewide heating degree-days from October 1st through April 27th end the current season at 5,740, which is a head of the year-ago level (5,739) by 0.0% and ahead of the normal trend (5,722) by 0.3%.

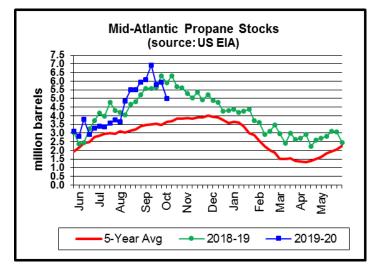
New York State Heating Degree Day Information, Weekly & Cumulative							
Week Ending April 27				Cumulative From October 1			
Region	2019	2018	Normal	2018-19	2017-18	Normal	
Albany	63	109	101	5,965	6,080	6,004	
Binghamton	106	120	120	6,607	6,605	6,553	
Buffalo	116	111	116	6,257	6,168	6,146	
Glens Falls	90	131	116	6,778	6,902	6,874	
Massena	101	120	124	7,634	7,169	7,426	
NYC	51	65	72	4,371	4,313	4,561	
Rochester	95	103	113	6,009	5,979	6,163	
Syracuse	95	113	112	6,332	6,337	6,253	
Watertown	117	136	127	7,076	6,860	6,956	
Statewide	82	118	97	5,740	5,739	5,722	



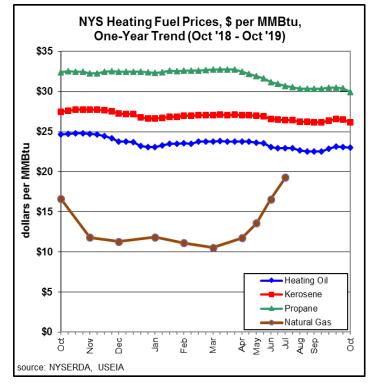




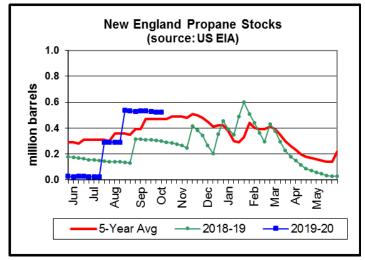
Propane Stocks—Current and historic heating fuel inventory data is presented in the graphs below.



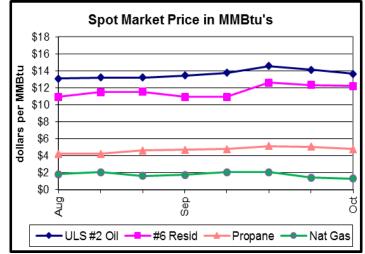
Retail Btu Price Equivalents—The New York State heating fuel prices Btu graph equates the retail price for New York Statewide a verage residential ultra-low sulfur heating oil, kerosene, propane, and natural gas on a dollar per million Btu (MMBtu) basis.



Note: Natural gas prices are from the U.S. EIA and provided on a monthly basis and delayed by 3 months.



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.



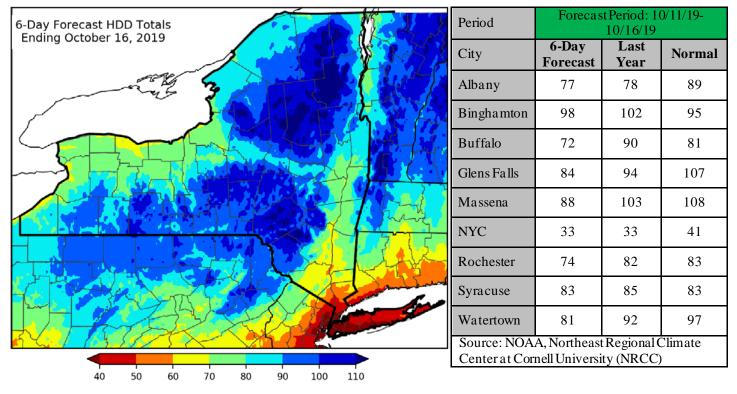
New York Spot Prices, Weekly Average						
Fuel	10/4/2019	Year Ago	% Change			
Ultra LS Diesel	1.893	2.406	-21.3%			
#2 Fuel Oil	1.873	2.384	-21.4%			
#6 Residual 0.3%	1.829	2.006	-8.8%			
Propane	0.437	1.063	-58.9%			
Natural Gas	1.316	2.609	-49.6%			

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).

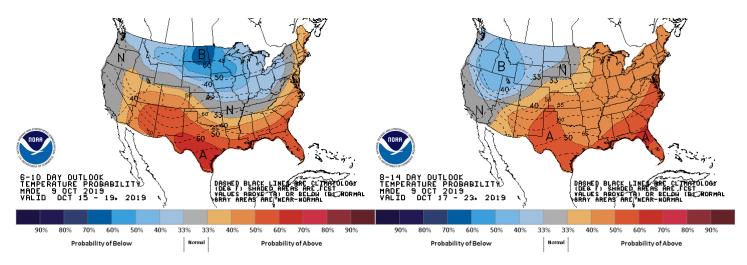
Statewide Forecast HDD: On a statewide basis for the week ending October 12th, the number of forecasted heating degree-days (47) is 235.7% more than last year (14) and 38.2% less than the normal trend (76). Regional HDD forecasts are provided in the map and table below.

Regional Heating Degree-Day Forecast



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 October 15, 2019 – October 19, 2019. 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 October 17, 2019 – October 23, 2019. This is in comparison to the 30-year normal (1981-2010).



Additional historic **regional specific** prices and supply information is a vailable 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>