NYSERDA Heating Fuels Report

October 14, 2019

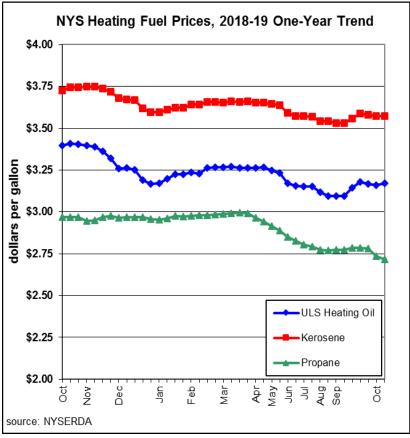
Highlights

- Mid-Atlantic ultra-low sulfur (ULS) distillate inventories decreased 1.7 million barrels (9.4%) since last week to 16.2 million barrels. Current inventories are 19.4% below last year's level and 35.3% below the 5-year average.
- U.S. natural gas inventories increased by 104 billion cubic feet since last week to 3,519 billion cubic feet. Inventories are now above the 5-year average for the first time since September 2017.
- New York Statewide average retail prices of ultra-low sulfur (ULS) heating oil and kerosene increased while the average retail price of propane decreased since the last survey.

Retail Petroleum Prices—On a statewide basis since the last survey on October 7th, prices increased 0.010/gallon (0.3%) to 3.171/gallon for ULS heating oil, 0.001/gallon (0.0%) to 3.574/gallon for kerosene, and the price decreased 0.017/gallon (0.6%) to 2.718/gallon for propane. Compared to a year earlier, prices decreased 0.226/gallon (6.7%) for heating oil, 0.154/gallon (4.1%) for kerosene, and 0.252/gallon (8.5%) for propane.

Crude Oil Prices—For the week ending 10/11/19, WTI crude oil spot prices a veraged \$53.27/bbl, an increase of \$0.15/bbl(0.3%) from the week-ago average of \$53.12/bbl. WTI prices are now \$19.69/bbl (27.0%) below the year-ago weekly average of \$72.96/bbl. The all-time weekly average high of \$142.52/bbl occurred on 7/04/08.

Spot Natural Gas Prices—For the week ending 10/11/19, Henry Hub natural gas spot prices a veraged \$2.266 per million Btu (mmBtu), a decrease of \$0.030/mmBtu (1.3%) from the prior week level of \$2.296/mmBtu. Prices are currently \$1.010/mmBtu (30.8%) below the year-earlier weekly average of \$3.276/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 Stocks-Current and historic heating fuel inventory data is presented in	n the table below.
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Middle Atlantic Region, Weekly Inventories (million barrels)							
Fuel Type	10/11/2019	10/4/2019	% Change vs. Last Week	Year Ago	% Change vs. Last Year	5-Year Average	% Change vs. 5-Year Avg
ULS Distillate (0-15 ppm)	16.2	17.9	-9.4%	20.1	-19.4%	25.0	-35.3%
Non-road Diesel (15-500 ppm)	0.6	0.7	-19.4%	0.6	-1.9%	1.2	-51.5%
High Sulfur Distillate (>500 ppm)	2.5	2.4	7.2%	2.2	17.7%	3.7	-30.5%
Total Distillate Oil	19.3	20.9	-7.9%	22.8	-15.5%	29.8	-35.4%
Propane	5.095	4.987	2.2%	6.296	-19.1%	3.694	37.9%
#6 Residual Oil	5.9	6.1	-2.8%	4.3	37.3%	5.9	0.2%
US Natural Gas	3,519	3,415	3.0%	3,025	16.3%	3,505	0.4%
US Crude Oil	434.9	425.6	2.2%	416.4	4.4%	424.6	2.4%

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	10/14/2019	10/7/2019	% Change vs. Prior Survey	Year Ago	% Change vs. Last Year
Long Island	3.353	3.351	0.1%	3.599	-6.8%
New York City	3.326	3.290	1.1%	3.469	-4.1%
Lower Hudson	3.190	3.165	0.8%	3.562	-10.4%
Upper Hudson	3.017	3.013	0.1%	3.301	-8.6%
Capital District	2.896	2.904	-0.3%	3.130	-7.5%
North Country	3.217	3.208	0.3%	3.237	-0.6%
Central	2.901	2.906	-0.2%	3.247	-10.7%
Western	3.345	3.331	0.4%	3.432	-2.5%
Statewide	3.171	3.161	0.3%	3.397	-6.7%
New York St	tate Retail Propane Po	sted Credit Prices	- 1,100 gallon usage ca	tegory (dollars p	er gallon)
Long Island	3.075	3.075	0.0%	3.270	-6.0%
Mid-Hudson	2.698	2.730	-1.2%	2.958	-8.8%
Capital District	2.518	2.539	-0.8%	2.874	-12.4%
North Country	3.491	3.482	0.3%	3.690	-5.4%
Central	2.443	2.458	-0.6%	2.737	-10.7%
Western	2.442	2.471	-1.2%	2.642	-7.6%
Statewide	2.718	2.735	-0.6%	2.970	-8.5%
	New York State Ret	ail Kerosene Poste	d Credit Prices (dollar	s per gallon)	
Mid-Hudson*	3.666	3.662	0.1%	3.825	-4.2%
Capital District*	3.329	3.342	-0.4%	3.544	-6.1%
North Country	3.689	3.689	0.0%	3.715	-0.7%
Central	3.382	3.378	0.1%	3.694	-8.4%
Western	3.801	3.790	0.3%	3.788	0.3%
State wide *	3.574	3.573	0.0%	3.728	-4.1%
	New York State	Average Residentia	al 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.

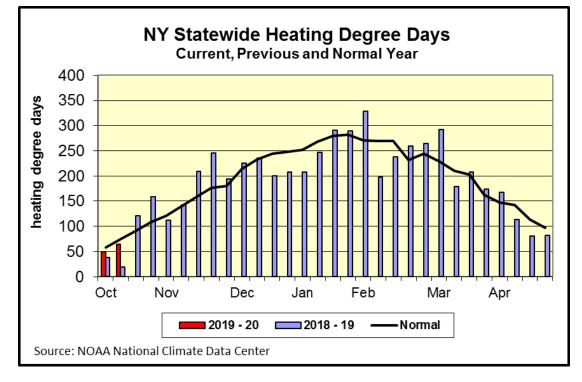
- Heating oil—highest price \$4.778/gallon on 7/14/08, lowest price \$0.876/gallon on 9/08/98.
- Propane—highest price \$3.811/gallon on 2/17/14, lowest price \$1.072/gallon on 9/20/99.
- Kerosene—highest price \$5.068/gallon on 7/14/08, lowest price \$1.309/gallon on 9/09/02.

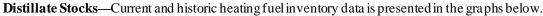
Residential Natural Gas Prices: Statewide average prices are derived from US EIA most currently a vailable data. NYS gas utility specific prices can be found on the NYS DPS website at http://www.dps.ny.gov/TypicalBills.htm#GasRes.

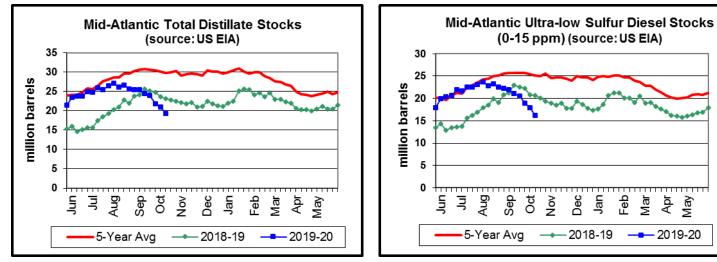
New York State Regions: Long Island: Nassau and Suffolk New York City: Bronx, Kings, New York, Queens, and Richmond Lower Hudson: Dutchess, Putnam, Rockland, and Westchester Upper Hudson: Columbia, Greene, Orange, Sullivan, and Ulster Capital District: Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, and Washington North Country: Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, St. 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, 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— On a statewide basis during the past week, the number of heating degree-days (64) was 236.8% above the year-ago level (19) and 14.7% below the normal trend (75). On a cumulative basis since October 1st, current year heating degree-days (113) are ahead of the year-ago level (57) by 98.2% and behind the normal trend (133) by 15.0%.

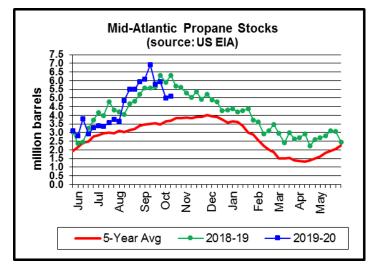
New York State Heating Degree Day Information, Weekly & Cumulative							
Week Ending October 12				Cumulative From October 1			
Region	2019	2018	Normal	2019-20	2018-19	Normal	
Albany	64	32	88	128	87	155	
Binghamton	89	25	99	166	93	181	
Buffalo	70	29	84	133	91	150	
Glens Falls	93	45	107	187	124	194	
Massena	102	78	109	216	170	198	
NYC	19	2	42	42	2	72	
Rochester	73	21	84	126	83	152	
Syracuse	73	22	88	138	88	158	
Watertown	92	38	105	186	132	191	
Statewide	64	19	75	113	57	133	



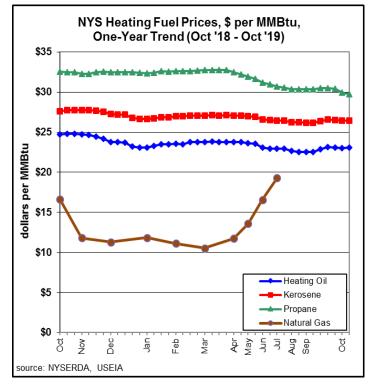




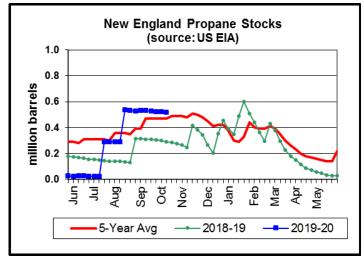
Propane Stocks—Current and historic heating fuel inventory data is presented in the graphs below.



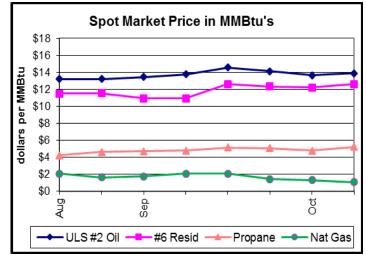
Retail Btu Price Equivalents—The New York State heating fuel prices Btu graph equates the retail price for New York Statewide a verage residential ultra-low sulfur heating oil, kerosene, propane, and natural gas on a dollar per million Btu (MMBtu) basis.



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.



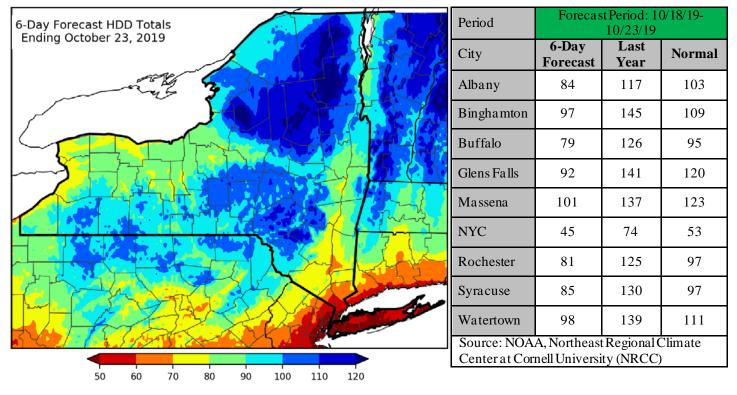
New York Spot Prices, Weekly Average					
Fuel	10/11/2019	Year Ago	% Change		
Ultra LS Diesel	1.929	2.370	-18.6%		
#2 Fuel Oil	1.907	2.350	-18.9%		
#6 Residual 0.3%	1.887	1.975	-4.5%		
Propane	0.477	1.002	-52.4%		
Natural Gas	1.069	2.274	-53.0%		

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).

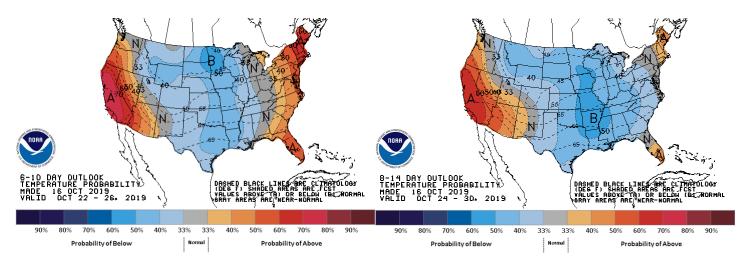
Statewide Forecast HDD: On a statewide basis for the week ending October 19th, the number of forecasted heating degree-days (70) is 34.6% less than last year (107) and 23.9% less than the normal trend (92). Regional HDD forecasts are provided in the map and table below.

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 22, 2019 – October 26, 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 24, 2019 – October 30, 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>