NYSERDA Heating Fuels Report

September 16, 2019

Highlights

- On Saturday September 14, an attack against the largest crude oil processing facility in the world initially reduced Saudi Arabia's oil production capacity by more than 50%, 5.7 million barrels/day, equivalent to more than 5% of the world's crude oil supply. Production of 2 million barrels per day at the facility resumed on Tuesday, September 17, and the announced use of crude oil supply from Saudi crude oil inventories to maintain export levels helped to restore confidence in oil markets of a limited disruption stemming from the attack.
- New York Statewide average retail prices of ultra-low sulfur (ULS) heating oil, kerosene, and propane all increased since the last survey.

Retail Petroleum Prices—On a statewide basis since the last survey on September 9th, prices increased 0.046/gallon (1.5%) to 3.143/gallon for ULS heating oil, 0.025/gallon (0.7%) to 3.557/gallon for kerosene, and 0.013/gallon (0.5%) to 2.785/gallon for propane. Compared to a year earlier, prices decreased 0.126/gallon (3.9%) for heating oil, 0.056/gallon(1.5%) for kerosene, and 0.131/gallon (4.5%) for propane.

Crude Oil Prices—For the week ending 9/13/19, WTI crude oil spot prices a veraged \$56.16/bbl, an increase of \$0.43/bbl(0.8%) from the week-ago a verage of \$55.73/bbl. WTI prices are now \$12.80/bbl(18.6%) below the year-ago weekly a verage of \$68.96/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 9/13/19, Henry Hub natural gas spot prices a veraged \$2.604 per million Btu (mmBtu), an increase of \$0.208/mmBtu (8.7%) from the prior week level of \$2.396/mmBtu. Prices are currently \$0.288/mmBtu (10.0%) below the year-earlier weekly average of \$2.892/mmBtu.

\$4.00 \$3.75 \$3.50 dollars per gallon \$3.25 \$3.00 \$2.75 \$2.50 ULS Heating Oil \$2.25 Kerosene Propane \$2.00 Sep ö Dec ep Var Ą Иау Jul Aug 707 Jan ŋ source: NYSERDA

NYS Heating Fuel Prices, 2018-19 One-Year Trend

Residential Natural Gas Prices—The NYS average price in June 2019 was 1.657/therm, an increase of 0.297/therm (21.9%) from the May 2019 price of 1.359/therm, and was 0.215/therm (11.5%) lower than the year earlier average of 1.872/therm.

Middle Atlantic Stocks—Current and historic heating fuel inventory data is presented in the table below.

Middle Atlantic Region, Weekly Inventories (million barrels)							
Fuel Type	9/13/2019	9/6/2019	% Change vs. Last Week	Year Ago	% Change vs. Last Year	5-Year Average	% Change vs. 5-Year Avg
ULS Distillate (0-15 ppm)	21.1	22.0	-4.1%	22.6	-6.7%	25.8	-18.2%
Non-road Diesel (15-500 ppm)	0.4	0.4	8.1%	1.1	-61.1%	1.3	-64.9%
High Sulfur Distillate (>500 ppm)	3.0	3.1	-2.8%	1.5	102.7%	3.3	-9.1%
Total Distillate Oil	24.5	25.5	-3.7%	25.2	-2.7%	30.3	-19.1%
Propane	6.912	6.099	13.3%	5.589	23.7%	3.500	97.5%
#6 Residual Oil	5.9	6.7	-12.6%	5.0	17.1%	6.1	-3.3%
US Natural Gas	3,103	3,019	2.8%	2,710	14.5%	3,178	-2.4%
US Crude Oil	417.1	416.1	0.3%	394.1	5.8%	420.4	-0.8%

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	9/16/2019	9/9/2019	% Change vs. Prior Survey	Year Ago	% Change vs. Last Year
Long Island	3.334	3.294	1.2%	3.511	-5.0%
New York City	3.327	3.251	2.3%	3.365	-1.1%
Lower Hudson	3.159	3.091	2.2%	3.448	-8.4%
Upper Hudson	2.961	2.916	1.5%	3.154	-6.1%
Capital District	2.881	2.842	1.4%	3.015	-4.4%
North Country	3.132	3.115	0.5%	3.086	1.5%
Central	2.912	2.882	1.0%	3.041	-4.2%
Western	3.279	3.264	0.5%	3.305	-0.8%
Statewide	3.143	3.097	1.5%	3.269	-3.9%
New York St	tate Retail Propane Po	sted Credit Prices	- 1,100 gallon usage ca	ntegory (dollars p	er gallon)
Long Island	3.053	3.053	0.0%	3.200	-4.6%
Mid-Hudson	2.755	2.731	0.9%	2.913	-5.4%
Capital District	2.702	2.702	0.0%	2.943	-8.2%
North Country	3.640	3.621	0.5%	3.661	-0.6%
Central*	2.458	2.469	-0.4%	2.648	-7.2%
Western	2.483	2.447	1.5%	2.533	-2.0%
State wide *	2.785	2.772	0.5%	2.916	-4.5%
	New York State Ret	ail Kerosene Poste	d Credit Prices (dollar	s per gallon)	2
Mid-Hudson	3.661	3.628	0.9%	3.748	-2.3%
Capital District	3.329	3.296	1.0%	3.449	-3.5%
North Country	3.651	3.642	0.2%	3.583	1.9%
Central	3.381	3.346	1.0%	3.510	-3.7%
Western	3.735	3.735	0.0%	3.677	1.6%
Statewide	3.557	3.532	0.7%	3.613	-1.5%
	New York State	Average Residenti:	al Natural Gas Prices ((\$/therm)	2
REGIO N	June 2019	May 2019	% Change vs. Prior Month	June 2018	% Change vs. Last Year
Statewide	1.657	1.359	21.9%	1.872	-11.5%

* Revision

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

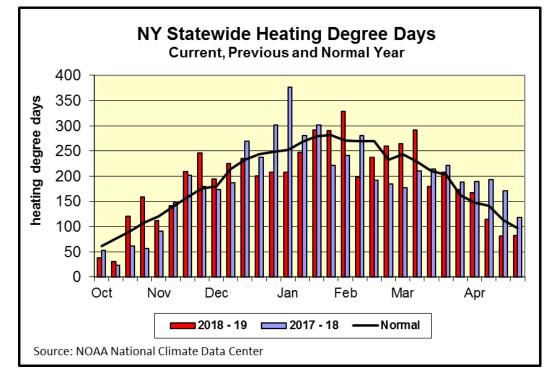
- Heating oil—highest price \$4.778/gallon on 7/14/08, lowest price \$0.876/gallon on 9/08/98.
- Propane—highest price \$3.811/gallon on 2/17/14, lowest price \$1.072/gallon on 9/20/99.
- Kerosene—highest price \$5.068/gallon on 7/14/08, lowest price \$1.309/gallon on 9/09/02.

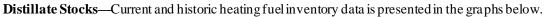
Residential Natural Gas Prices: Statewide average prices are derived from US EIA most currently a vailable data. NYS gas utility specific prices can be found on the NYS DPS website at http://www.dps.ny.gov/TypicalBills.htm#GasRes.

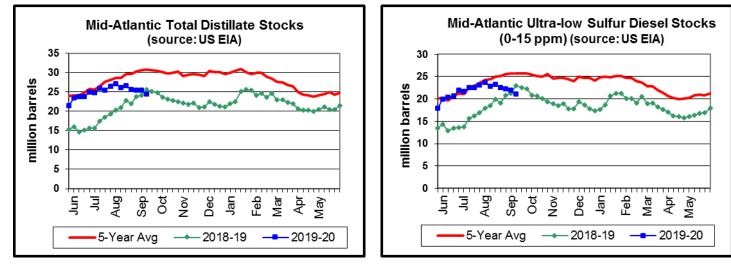
New York State Regions: Long Island: Nassau and Suffolk New York City: Bronx, Kings, New York, Queens, and Richmond Lower Hudson: Dutchess, Putnam, Rockland, and Westchester Upper Hudson: Columbia, Greene, Orange, Sullivan, and Ulster Capital District: Albany, Fulton Montgomery, Rensselaer, Saratoga, 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, 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.

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%.

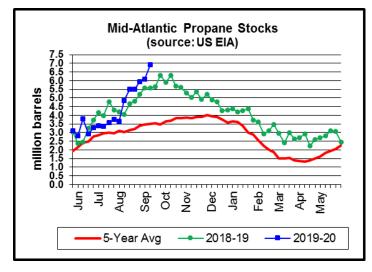
New York State Heating Degree Day Information, Weekly & Cumulative							
Week Ending April 27				Cumulative From October 1			
Region	2019	2018	Normal	2018-19	2017-18	Normal	
Albany	63	109	101	5,965	6,080	6,004	
Binghamton	106	120	120	6,607	6,605	6,553	
Buffalo	116	111	116	6,257	6,168	6,146	
Glens Falls	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	



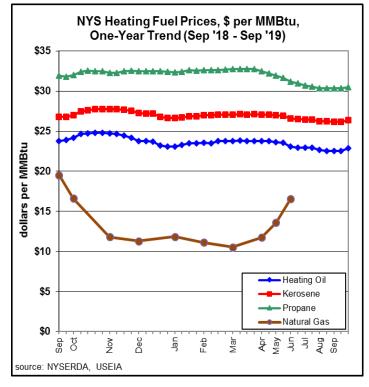




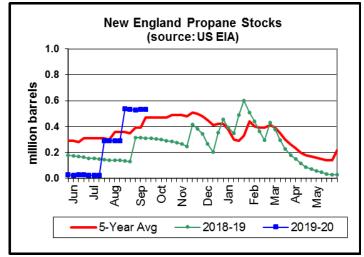
Propane Stocks—Current and historic heating fuel inventory data is presented in the graphs below.



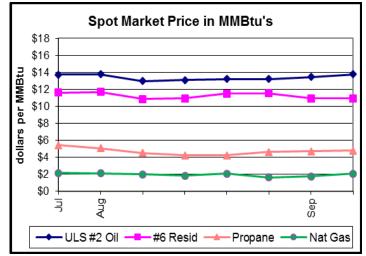
Retail Btu Price Equivalents—The New York State heating fuel prices Btu graph equates the retail price for New York Statewide a verage residential ultra-low sulfur heating oil, kerosene, propane, and natural gas on a dollar per million Btu (MMBtu) basis.



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.



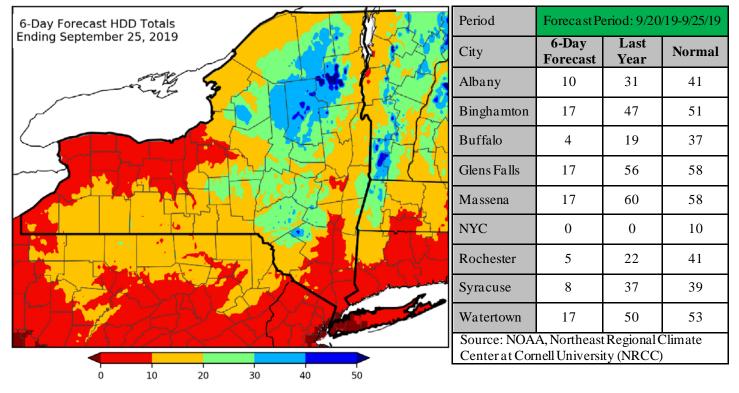
New York Spot Prices, Weekly Average						
Fuel	9/13/2019	Year Ago	% Change			
Ultra LS Diesel	1.909	2.236	-14.6%			
#2 Fuel Oil	1.893	2.207	-14.2%			
#6 Residual 0.3%	1.638	1.831	-10.5%			
Propane	0.436	1.063	-59.0%			
Natural Gas	2.054	2.749	-25.3%			

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).

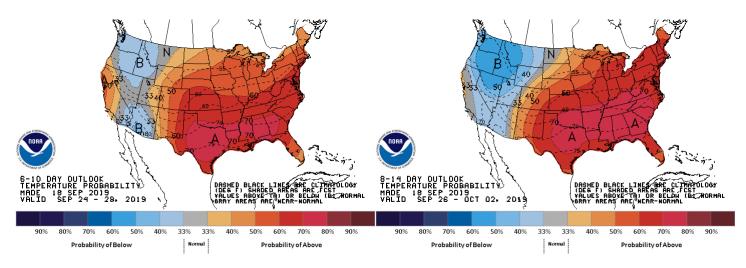
Statewide Forecast HDD: On a statewide basis for the week ending September 21st, the number of forecasted heating degree-days (7) is more than last year (0) and 75.9% less than the normal trend (29). Regional HDD forecasts are provided in the map and table below.

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 September 24, 2019 – September 28, 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 September 26, 2019 – October 2, 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>