Highlights

- The weekly average WTI crude oil spot price decreased by $1.93 per barrel (3.4%) to $54.99 per barrel since last week. The weekly average price has decreased by $20.14 per barrel (26.8%) over the past seven weeks.
- For the week ending November 24, New York statewide heating degree-days (246) were 36.7% more than last year and 39.8% greater than the 30-year normal.
- New York Statewide average retail prices of ultra-low sulfur (ULS) heating oil and kerosene decreased while the average price of propane increased since the last survey.

Retail Petroleum Prices—On a statewide basis since the last survey on November 19th, prices decreased $0.041/gallon (1.2%) to $3.321/gallon for ULS heating oil, $0.017/gallon (0.5%) to $3.719/gallon for kerosene, and the price increased $0.007/gallon (0.2%) to $2.976/gallon for propane. Compared to a year earlier, prices increased $0.423/gallon (14.6%) for heating oil, $0.422/gallon (12.8%) for kerosene and $0.120/gallon (4.2%) for propane.

Crude Oil Prices—For the week ending 11/23/18, WTI crude oil spot prices averaged $54.99/bbl, a decrease of $1.93/bbl (3.4%) from the week-ago average of $56.92/bbl. WTI prices are now $2.48/bbl (4.3%) below the year-ago weekly average of $57.47/bbl. The all-time weekly average high of $142.52/bbl occurred on 7/07/08.

Spot Natural Gas Prices—For the week ending 11/23/18, Henry Hub natural gas spot prices averaged $4.670 per million Btu (mmBtu), an increase of $0.384/mmBtu (9.0%) from the prior week level of $4.286/mmBtu. Prices are currently $1.675/mmBtu (55.9%) above the year-earlier weekly average of $2.995/mmBtu.

Residential Natural Gas Prices—The NYS average price in August 2018 was $2.016/therm, an increase of $0.069/therm (3.6%) from the July 2018 price of $1.947/therm, and was $0.172/therm (9.3%) higher than the year earlier average of $1.844/therm.

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

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>11/23/2018</th>
<th>11/16/2018</th>
<th>% Change vs. Last Week</th>
<th>Year Ago</th>
<th>% Change vs. Year Ago</th>
<th>5-Year Average</th>
<th>% Change vs. 5-Year Avg</th>
</tr>
</thead>
<tbody>
<tr>
<td>ULS Distillate (0-15 ppm)</td>
<td>17.8</td>
<td>17.8</td>
<td>0.4%</td>
<td>25.6</td>
<td>-30.4%</td>
<td>23.2</td>
<td>-23.2%</td>
</tr>
<tr>
<td>Non-road Diesel (15-500 ppm)</td>
<td>0.6</td>
<td>0.6</td>
<td>-8.2%</td>
<td>1.0</td>
<td>-46.3%</td>
<td>1.2</td>
<td>-53.8%</td>
</tr>
<tr>
<td>High Sulfur Distillate (&gt;500 ppm)</td>
<td>2.8</td>
<td>2.7</td>
<td>4.9%</td>
<td>2.9</td>
<td>-5.0%</td>
<td>4.5</td>
<td>-37.7%</td>
</tr>
<tr>
<td>Total Distillate Oil</td>
<td>21.2</td>
<td>21.0</td>
<td>0.7%</td>
<td>29.6</td>
<td>-28.4%</td>
<td>28.9</td>
<td>-26.7%</td>
</tr>
<tr>
<td>Propane</td>
<td>5.226</td>
<td>4.911</td>
<td>6.4%</td>
<td>4.626</td>
<td>13.0%</td>
<td>3.927</td>
<td>33.1%</td>
</tr>
<tr>
<td>#6 Residual Oil</td>
<td>4.1</td>
<td>3.8</td>
<td>6.9%</td>
<td>5.0</td>
<td>-18.4%</td>
<td>6.3</td>
<td>-34.9%</td>
</tr>
<tr>
<td>US Natural Gas</td>
<td>3,054</td>
<td>3,113</td>
<td>-1.9%</td>
<td>3,698</td>
<td>-17.4%</td>
<td>3,774</td>
<td>-19.1%</td>
</tr>
<tr>
<td>US Crude Oil</td>
<td>450.5</td>
<td>446.9</td>
<td>0.8%</td>
<td>453.7</td>
<td>-0.7%</td>
<td>420.5</td>
<td>7.1%</td>
</tr>
</tbody>
</table>

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
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.
- 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.

Heating Degree Days—On a statewide basis during the past week, the number of heating degree-days (246) was 36.7% above the year-ago level (180) and 39.8% above the normal trend (176). On a cumulative basis since October 1st, current year heating degree-days (1,057) are ahead of the year-ago level (814) by 29.9% and ahead of the normal trend (932) by 13.4%.

### New York State Heating Degree Day Information, Weekly & Cumulative

<table>
<thead>
<tr>
<th>Region</th>
<th>2018</th>
<th>2017</th>
<th>Normal</th>
<th>2018-19</th>
<th>2017-18</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albany</td>
<td>262</td>
<td>188</td>
<td>185</td>
<td>1,143</td>
<td>860</td>
<td>1,040</td>
</tr>
<tr>
<td>Binghamton</td>
<td>292</td>
<td>204</td>
<td>203</td>
<td>1,310</td>
<td>1,018</td>
<td>1,148</td>
</tr>
<tr>
<td>Buffalo</td>
<td>256</td>
<td>182</td>
<td>185</td>
<td>1,186</td>
<td>885</td>
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<tr>
<td>Glens Falls</td>
<td>290</td>
<td>220</td>
<td>208</td>
<td>1,326</td>
<td>1,054</td>
<td>1,202</td>
</tr>
<tr>
<td>Massena</td>
<td>320</td>
<td>236</td>
<td>222</td>
<td>1,460</td>
<td>1,045</td>
<td>1,251</td>
</tr>
<tr>
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<td>134</td>
<td>135</td>
<td>690</td>
<td>486</td>
<td>649</td>
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<tr>
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<td>262</td>
<td>172</td>
<td>187</td>
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<td>246</td>
<td>180</td>
<td>176</td>
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<td>1,057</td>
<td>814</td>
<td>932</td>
</tr>
</tbody>
</table>

### NY Statewide Heating Degree Days
Current, Previous and Normal Year

Source: NOAA National Climate Data Center

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

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

<table>
<thead>
<tr>
<th>Fuel</th>
<th>11/21/2018</th>
<th>Year Ago</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra LS Diesel</td>
<td>2.016</td>
<td>1.933</td>
<td>4.3%</td>
</tr>
<tr>
<td>#2 Fuel Oil</td>
<td>2.001</td>
<td>1.844</td>
<td>8.5%</td>
</tr>
<tr>
<td>#6 Residual 0.3%</td>
<td>1.814</td>
<td>1.468</td>
<td>23.6%</td>
</tr>
<tr>
<td>Propane</td>
<td>0.746</td>
<td>1.000</td>
<td>-25.3%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>5.199</td>
<td>3.051</td>
<td>70.4%</td>
</tr>
</tbody>
</table>

Note: Fuel in $/gallon, natural gas ($/MMBtu)=NYCitygate
Weather Outlooks – Based on data and maps provided by the National Oceanic and Atmospheric Administration (NOAA)

Forecast HDD: On a statewide basis for the week ending December 1st, the number of forecasted heating degree-days (176) is 11.4% higher than last year (158) and 6.4% lower than the normal trend (188).

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 4-8. 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 6-12. This is in comparison to the 30-year normal (1981-2010).

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