

## Crude oil, Gasoline, and Ethanol Price Update (10-30-2015)

Data from U.S. Energy Information Administration (EIA) show that U.S. crude oil monthly prices averaged \$1.06/gallon in September 2015, an increase of \$0.06/gallon from the previous month and \$1.14/gallon lower than in September 2014 (see Figure 1). Based on EIA estimates, total U.S. crude oil production declined by about 120,000 barrels/day in September relative to August.

U.S. crude oil prices in August and September of this year were the lowest since the beginning of the year (\$1.12/gallon). From January to September 2015, U.S. crude oil prices averaged \$1.21/gallon compared to \$2.34, the average price during the same period last year. According to EIA, global liquids (petroleum and other liquids) consumption has not kept pace with continued increase in global liquids production since August 2014, expanding global liquids inventories, which in turn have been putting downward pressure on prices. Total liquids world supply from August 2014 to August 2015 averaged 95.12 million barrels/day, compared to liquids world consumption equal to 93.35 million barrels/day during the same period. EIA projected U.S. crude oil production to average 9.25 million barrels/day in 2015 in contrast to 8.71 million barrels/day in 2014. U.S. motor gasoline consumption is projected to increase in 2015 to an average of 9.11 million barrels/day (including an average of 0.90 million barrels/day of ethanol) compared to the average volume in 2014 (8.92 million barrels/day (including 0.88 million barrels/day of ethanol)). According to EIA, the projected U.S. gasoline consumption in 2015 will be the highest since the top level in 2007 (averaging 9.3 million barrels/day). Improved vehicle fuel economy has influenced lower U.S. gasoline consumption during the last eight years. The projection also indicates that U.S. crude oil production will decline through mid-2016 but resume growth by the end of the year. EIA's projected U.S. crude oil price at \$1.17/gallon in 2015 and \$1.25/gallon in 2016.

For the second month in a row, monthly average wholesale gasoline prices declined, reaching \$1.86/gallon in September (see Figure 1 and Figure 2). Gasoline price in September 2015 decreased \$0.33/gallon relative to the previous month (\$2.19/gallon). However, gasoline price in September remained \$0.43/gallon (30%) above the price in January 2015 (\$1.43/gallon). The average wholesale price of gasoline this year (January to September) has been \$1.97 compared to \$2.84/gallon during the same period last year.

According to EIA's Short-Term Energy and Winter Fuels Outlook (STEO, October 2015), September 2015 U.S. regular gasoline monthly retail price decreased 10% to an average of \$2.37/gallon relative to August 2015 (\$2.64/gallon). In addition, the price in September 2015 was \$1.04/gallon lower year-over-year (see Figure 1). EIA projects U.S. regular gasoline to average \$2.03/gallon by the end of this year for an annual average of \$2.41/gallon. The average price for 2016 is projected at \$2.37/gallon (see Figure 1).

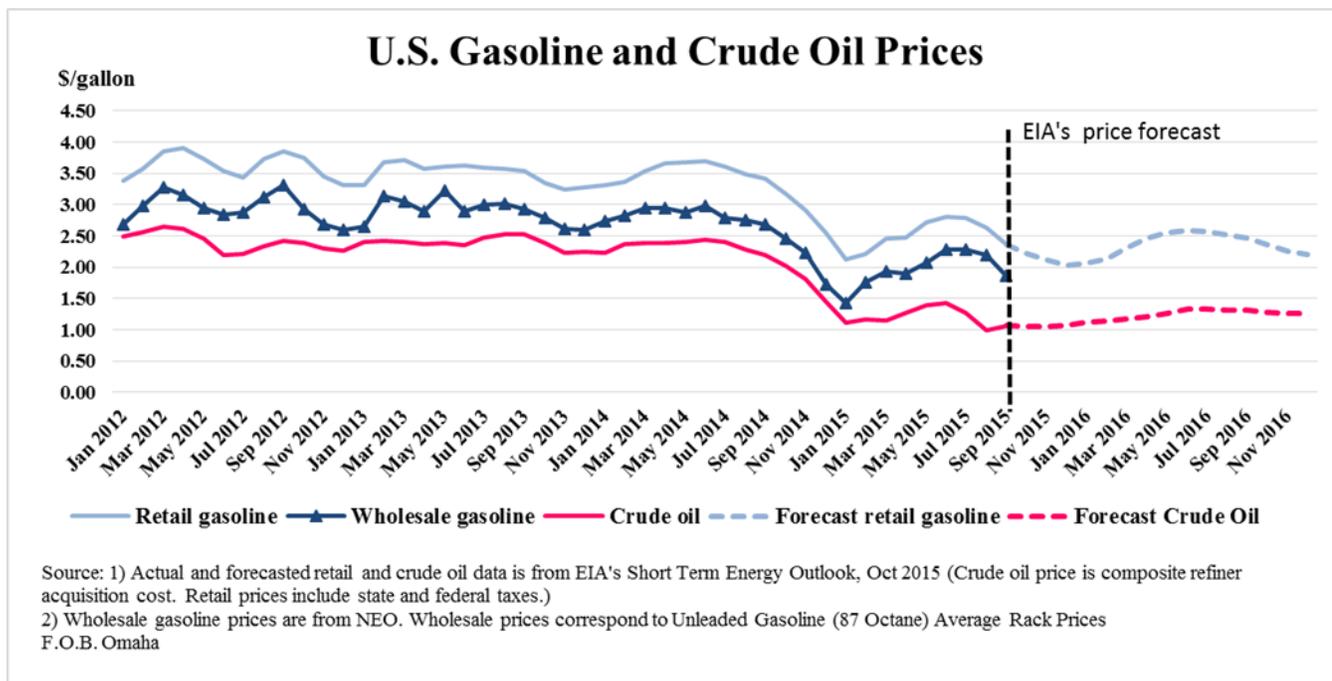


Figure 1. U.S. Gasoline and Crude Oil Prices

September 2015 wholesale ethanol price (\$1.61/gallon) decreased 1% relative to the previous month (\$1.62/ gallon). The price of ethanol during the first nine months of this year fluctuated between \$1.50 in February and \$1.71 in May. The

average ethanol price from January to September was \$1.61/gallon (see Figure 2). Ethanol price in September 2015 was down 26% or \$0.58 cheaper year-over-year (\$2.19/gallon). Overall ethanol prices in 2015 have remained below prices during the previous year, reflecting ethanol price adjustment to the decline in crude oil and gasoline prices which started in July of 2014 (see Figure 2).

Wholesale ethanol price was \$0.25/gallon below wholesale gasoline price during September 2015. On average, ethanol price has been \$0.35/gallon below gasoline price during the first nine months this year, allowing ethanol to stay competitive in gasoline blends (see Figure 1).

EIA's STEO October report indicates that from January to September 2015 ethanol production, which averaged 0.96 million barrels/day, increased 3.5% compared to the same period last year (0.93 million barrels/day). Ethanol consumption, averaged 0.9 barrels/day during the first nine months of 2015, indicating an average 9.9% ethanol share of the total gasoline pool equal to 9.13 million barrels/day, the total consumption of gasoline and ethanol, during that period. This year increased ethanol production has been diverted into international markets. Based on the latest data ethanol export data from EIA, U.S. ethanol exports from January to July 2015 totaled 12.273 million barrels compared to 11.568 million barrels exported during the same period last year, representing a 6% increase year-over-year.

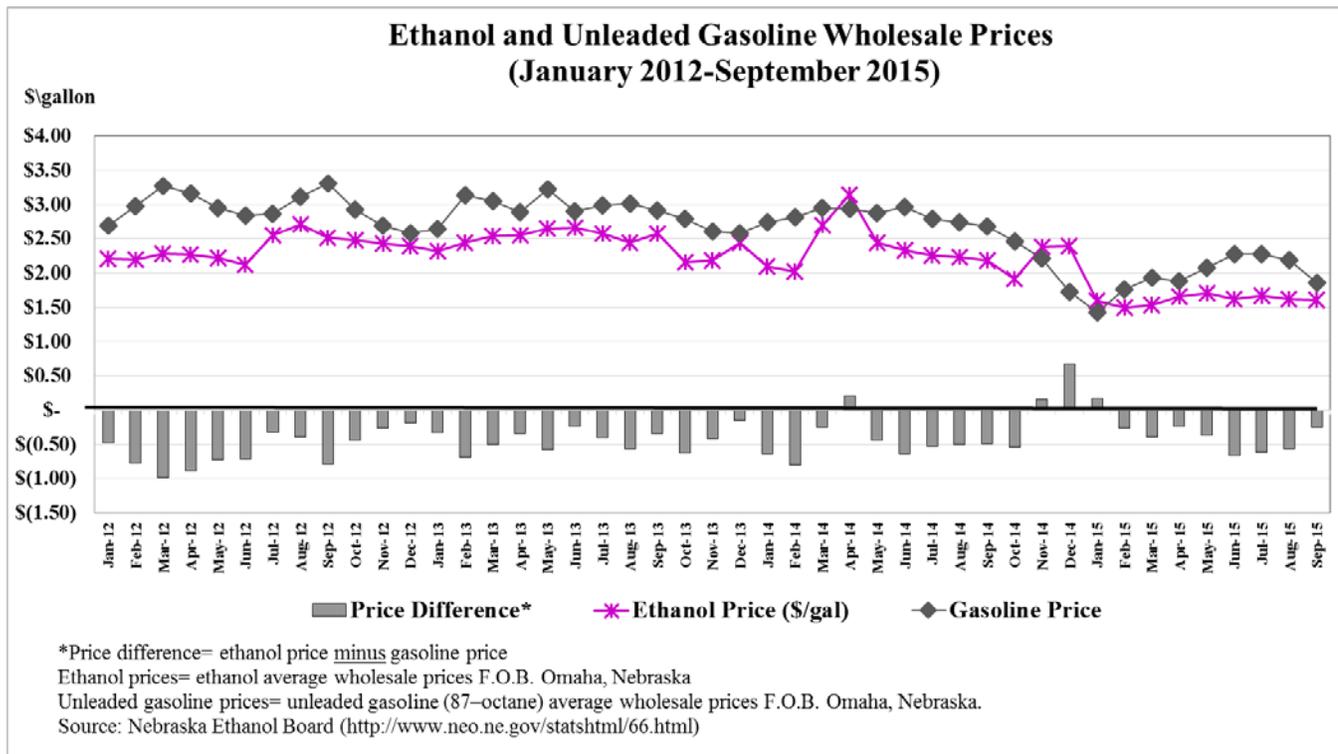


Figure 2. Ethanol and Unleaded Gasoline Prices (Jan 2012-Sep 2015)

Continued global liquids production growth has been exceeding consumption since August 2014. As a result, inventories have been increasing while prices have been declining. U.S. crude oil prices from January to September 2015 were 45% below the average price during the first nine months of last year; therefore, related gasoline prices have been trending downward.

Average ethanol prices so far (January to September) have been 31% below average ethanol prices last year. Ethanol has been competitive in gasoline blends since February of this year as ethanol average prices have been below average gasoline prices since that month.