

EIA-Short-Term Energy Outlook – Highlights

Global liquid fuels

U.S. crude oil production averaged 9.4 million barrels per day (b/d) in 2015, and it is forecast to average 8.8 million b/d in 2016 and 8.7 million b/d in 2017. Forecast production in 2017 is more than 0.1 million b/d higher than in last month's STEO.

EIA expects Brent crude oil prices will average close to \$48/ barrel (b) in the fourth quarter of 2016 and in the first quarter of 2017. Forecast Brent prices average \$43/b in 2016 and \$51/b in 2017. West Texas Intermediate (WTI) crude oil prices are forecast to average about \$1/b less than Brent prices in 2017. The values of futures and options contracts indicate significant uncertainty in the price outlook, with NYMEX contract values for February 2017 delivery traded during the five-day period ending November 3 suggesting that a range from \$35/b to \$66/b encompasses the market expectation of WTI prices in February 2017 at the 95% confidence level.

Higher crude oil prices contributed to U.S. average retail regular gasoline prices in October increasing by 3 cents/gallon (gal) from September to an average of \$2.25/gal. With the switch to less-expensive winter gasoline blends and the typical seasonal decline in gasoline consumption, EIA expects gasoline prices to fall to an average of \$1.97/gal in January. Retail gasoline prices are forecast to average \$2.13/gal in 2016 and \$2.27/gal in 2017.

Global oil inventory builds are forecast to average 0.8 million b/d in 2016 and 0.5 million b/d in 2017.

Natural gas

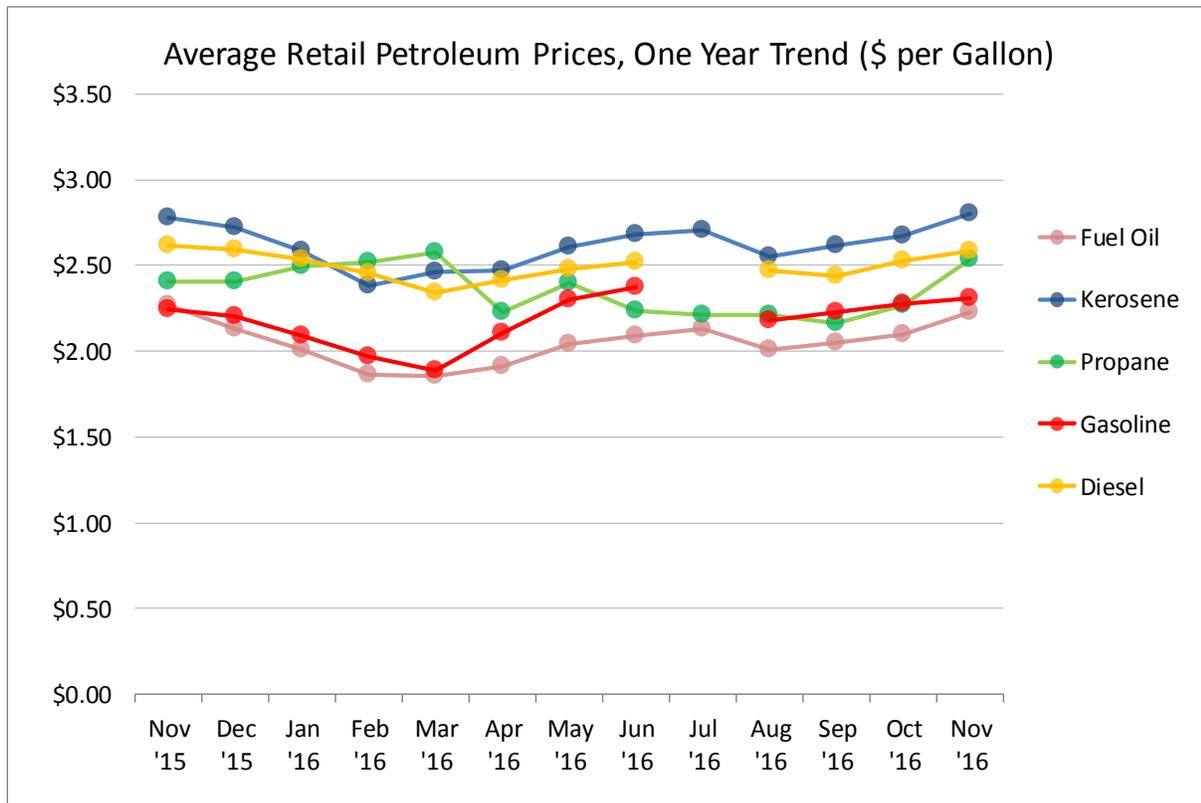
Natural gas marketed production is forecast to average 77.3 billion cubic feet per day (Bcf/d) in 2016, a 1.4 Bcf/d decline from the 2015 level, which would be the first annual decline since 2005. EIA expects production to start rising in November as a result of increases in drilling activity and infrastructure build-out that connects natural gas production to demand centers. In 2017, forecast natural gas production increases by an average of 2.9 Bcf/d from the 2016 level.

Growing domestic natural gas consumption, along with higher pipeline exports to Mexico and liquefied natural gas exports, contribute to the Henry Hub natural gas spot price rising from an average of \$2.50/million British thermal units (MMBtu) in 2016 to \$3.12/MMBtu in 2017. NYMEX contract values for February 2017 delivery traded during the five-day period ending November 3 suggest that a price range from \$2.01/MMBtu to \$4.84/MMBtu encompasses the market expectation of Henry Hub natural gas prices in February 2017 at the 95% confidence level.

Editor's Note: Data presented in the Vermont Fuel Price Report, as in the past, is collected on the first Monday of the month.

Vermont Fuel Price Report

November
2016



Percentage Change in Average Retail Petroleum Prices, Month over Month & Year to Date

	<u>Nov '16</u>	<u>Oct '16</u>	<u>% Change</u>	<u>Nov '15</u>	<u>% Change</u>
No. 2 Fuel Oil	\$2.23	\$2.10	6.0%	\$2.27	-2.0%
Kerosene	\$2.80	\$2.67	5.0%	\$2.78	0.9%
Propane	\$2.54	\$2.27	11.8%	\$2.41	5.5%
Reg. Unleaded Gasoline	\$2.31	\$2.28	1.3%	\$2.25	2.8%
Diesel	\$2.58	\$2.53	2.0%	\$2.62	-1.4%

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Comparing the Cost of Heating Fuels

Type of Energy	BTU/unit	Typical Efficiency	\$/unit	\$/MMBtu	High Efficiency	\$/MMBtu
Fuel Oil, gallon	138,200	80%	\$2.23	\$20.14	95%	\$16.96
Kerosene, gallon	136,600	80%	\$2.80	\$25.65		
Propane, gallon	91,600	80%	\$2.54	\$34.64	95%	\$29.17
Natural Gas, Ccf	100,000	80%	\$1.41	\$17.67 *	95%	\$14.88
Electricity, kWh (resistive)	3,412	100%	\$0.15	\$43.46		
Electricity, kWh (heat pump)	3,412		\$0.15	#	240%	\$18.32
Wood, cord (green)	22,000,000	60%	\$227	\$17.21 ^		
Pellets, ton	16,400,000	80%	\$275	\$20.96 ^		

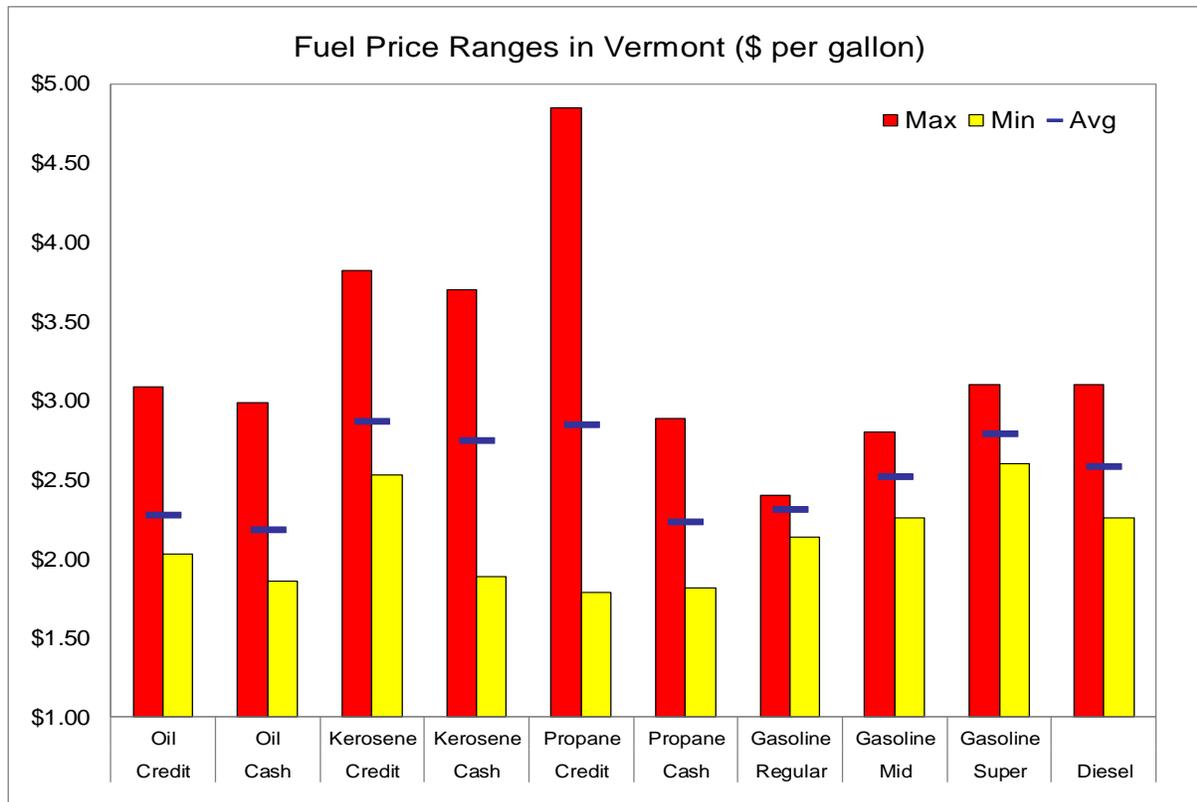
* Natural Gas price is based on VGS residential rate effective Aug 5th, 2016.

see October 2015 Fuel Price Report for discussion of heat pump coefficient of performance

^ Cord Wood price updated 8/2015 from small survey sample. Pellet price updated 5/2016 from small survey sample

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NOTE: The Vermont Fuel Price Report is published monthly by the Vermont Department of Public Service. Prices are collected on or about the first Monday of each month and reflect dealer discounts for cash or self-service, except propane prices, which are an average of the credit and discount price. Propane prices are based on 1,000 + gallons. For more information please contact John Woodward at (802) 828-3061 or by email at john.woodward@vermont.gov.