

## EIA-Short-Term Energy Outlook – Highlights

- This edition of the Short-Term Energy Outlook is the first to include forecasts for 2015.
- After falling to the lowest monthly average of 2013 in November, U.S. regular gasoline retail prices increased slightly to reach an average of \$3.28 per gallon (gal) during December. The annual average regular gasoline retail price, which was \$3.51/gal in 2013, is expected to fall to \$3.46/gal in 2014 and \$3.39/gal in 2015.
- The North Sea Brent crude oil spot price in December averaged near \$110 per barrel (bbl) for the sixth consecutive month. EIA expects the Brent crude oil price to decline gradually to average \$105/bbl and \$102/bbl in 2014 and 2015, respectively. Projected West Texas Intermediate (WTI) crude oil prices average \$93/bbl during 2014 and \$90/bbl during 2015.
- EIA expects liquid fuels production from countries outside of the Organization of the Petroleum Exporting Countries (OPEC) to grow year-over-year by a record high of 1.9 million barrels per day (bbl/d) in 2014. The United States and Canada together are projected to account for almost 70% of total non-OPEC supply growth this year.
- EIA estimates U.S. total crude oil production averaged 7.5 million bbl/d in 2013, an increase of 1.0 million bbl/d from the previous year. Projected domestic crude oil production continues to increase to 8.5 million bbl/d in 2014 and 9.3 million bbl/d in 2015. The 2015 forecast would mark the highest annual average level of production since 1972.
- Natural gas working inventories on December 27 totaled 2.97 trillion cubic feet (Tcf), 0.56 Tcf below the level at the same time a year ago and 0.29 Tcf below the previous five-year average (2008-12). EIA expects that the Henry Hub natural gas spot price, which averaged \$3.73 per million British thermal units (MMBtu) in 2013, will average \$3.89/MMBtu in 2014 and \$4.11/MMBtu in 2015.
- Coal production, which fell by almost 9% between 2011 and 2013, is expected to increase by 36 million short tons (MMst) (3.6%) in 2014 as higher natural gas prices favor the dispatch of coal-fired power plants and the drawdown of coal inventory ends. In 2015, however, forecast coal-fired production falls by 2.5% with declining coal use in the electric power sector as retirements of coal-fired power plants rise due to the implementation of the U.S. Environmental Protection Agency's [Mercury and Air Toxics Standards](#).

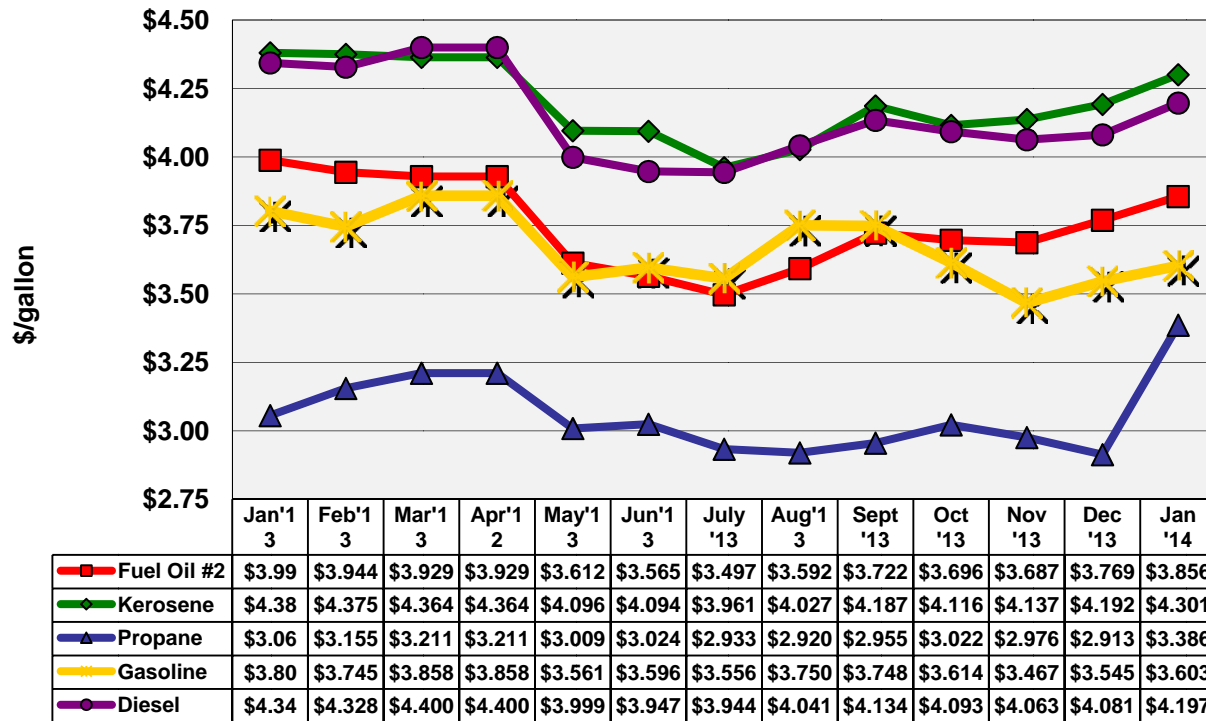
For additional energy related information and data visit the EIA website at <http://www.eia.gov/>

**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

January  
2014

## Vermont Fuel Prices -One-Year Trend



Vermont Average Retail Petroleum Prices (per gallon)					
	Jan '14	Dec '13	%change	Jan'13	%change
No. 2 Fuel Oil	\$3.856	\$3.769	2.30%	\$3.988	-3.32%
Kerosene	\$4.301	\$4.192	2.58%	\$4.381	-1.83%
Propane	\$3.386	\$2.913	16.23%	\$3.056	10.80%
Reg. Unleaded Gasoline	\$3.603	\$3.545	1.62%	\$3.803	-5.26%
Diesel	\$4.197	\$4.081	2.84%	\$4.344	-3.37%

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 Mike Kandrath at (802) 828-4081 or by email at michael.kandrath@state.vt.us.

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Comparing the Cost of Heating Fuels					
<u>Type of Energy</u>	<u>BTU/unit</u>	<u>Adj Effic</u>	<u>\$/unit</u>	<u>\$/MMBtu</u>	
Fuel Oil, gallon	138,200	80%	\$3.86	\$34.88	
Kerosene, gallon	136,600	80%	\$4.30	\$39.35	
Propane, gallon	91,600	80%	\$3.39	\$46.21	
Natural Gas, therm	100,000	80%	\$1.46	\$18.28	*
Electricity, kWh (resistive heat)	3,412	100%	\$0.15	\$43.46	
Electricity, kWh (cold climate heat pump)	3,413	300%	\$0.15	\$14.49	
Wood, cord (green)	22,000,000	60%	\$193.33	\$14.65	*
Pellets, ton	16400000	0.8	247	\$18.83	
* The natural gas price is based on the rate effective 11/1/13. *Wood green updated 9/25/13.					

## Fuel Price Ranges in Vermont

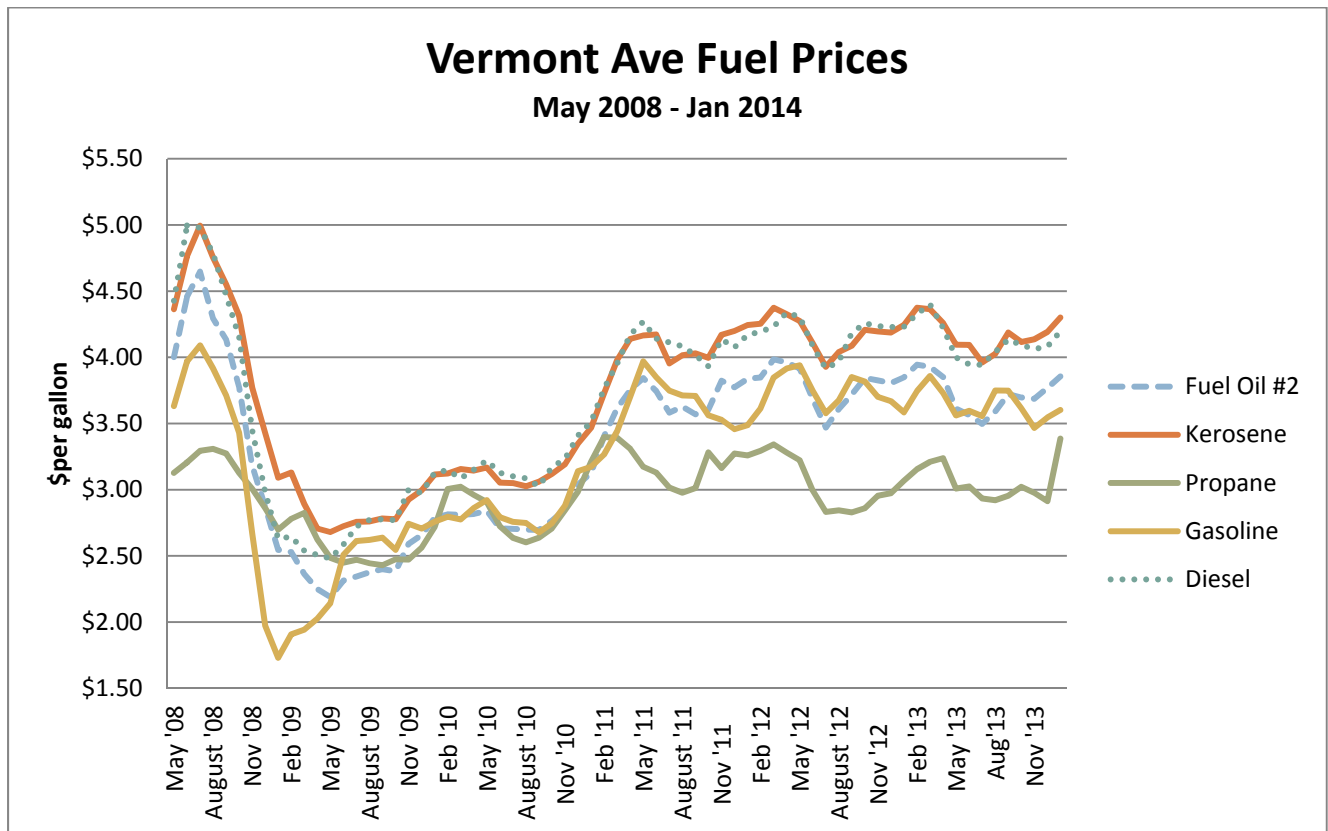
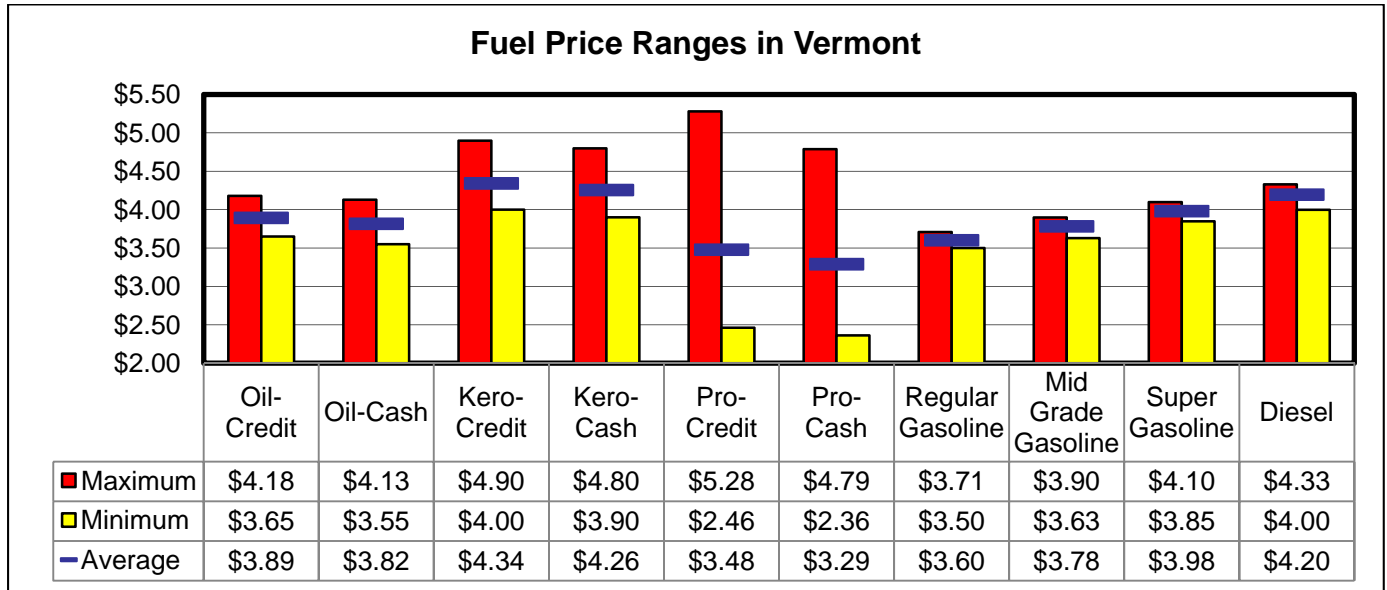
	<u>Oil-Credit</u>	<u>Oil-Cash</u>	<u>Kero-Credit</u>	<u>Kero-Cash</u>	<u>Pro-Credit</u>	<u>Pro-Cash</u>	<u>Regular Gasoline</u>	<u>Mid Grade Gasoline</u>	<u>Super Gasoline</u>	<u>Diesel</u>
<b>Maximum</b>	\$4.18	\$4.13	\$4.90	\$4.80	\$5.28	\$4.79	\$4.00	\$4.88	\$4.34	\$4.58
<b>Minimum</b>	\$3.65	\$3.55	\$4.00	\$3.90	\$2.46	\$2.36	\$3.74	\$3.94	\$4.10	\$4.16
<b>Average</b>	\$3.89	\$3.82	\$4.34	\$4.26	\$3.48	\$3.29	\$3.86	\$4.10	\$4.24	\$4.40
<b>Stan.Dev \$</b>	\$0.14	\$0.15	\$0.25	\$0.22	\$0.64	\$0.51	\$0.26	\$0.94	\$0.24	\$0.42
<b>Stan.Dev%</b>	3.53%	3.80%	5.77%	5.17%	18.36%	15.56%	2.05%	5.88%	1.93%	2.22%

**Editor's Note:** Vermont Propane price increase - As of January 6<sup>th</sup> Propane experienced an unusual 18% price increase over the previous month's price. A record setting Midwestern corn harvest during wet weather put early pressure on constrained propane supplies. (Before storage corn must be dried to avoid mold and other quality problems. The fuel used for drying is propane. Once the corn drying demand began to abate Mother Nature invited the Polar Vortex (aka extremely cold air) to the lower 48 driving up heating demand sustaining upward pressure on prices.

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## Vermont Historical Weather and Degree Day Data

CDD's are used during summer months to compare the current day's average temperature against the 65°F standard to determine the energy demands of cooling your home through air conditioning or fans. For example, if the current day's high is 85°F and the low is 65°F, the day's average temperature will be 75°F. Since 75°F-65°F is 10°F, this day would have 10 cooling degree days. Adding the degree days together for the whole month provides a way to compare previous months or years.

HDD's are used the same way during winter months to determine the energy demands of heating your home. The 65°F standard still is used, however, the day's average temperature is subtracted instead of added to the standard. For example, if the current day's high is 30°F and the low is 10°F, the day's average temperature will be 20°F. Since 65°F-20°F is 45°F, this day would have 45 heating degree days.

Just like cooling degree days, heating degree days may be added together for the entire month to compare to previous months or years.<sup>1</sup>

The primary online source for historical weather and degree day data is the available from the NOAA - National Climatic Data Center (NCDC) web site at:

<http://www7.ncdc.noaa.gov/CDO/CDODivisionalSelect.jsp#>

NCDC maintains the world's largest climate data archive and provides climatological services. Records in the archive range from paleoclimatic data to centuries-old journals to data less than an hour old.

Another source is the Weather Data Depot web site. The data collection is not as extensive as the NOAA collection only covering the years from 1993 forward. But the site is more user friendly.

[http://www.weatherdatadepot.com/?pi\\_ad\\_id=8426228665&gclid=CIaZvMf8krQCFQqk4AodFRYArQ](http://www.weatherdatadepot.com/?pi_ad_id=8426228665&gclid=CIaZvMf8krQCFQqk4AodFRYArQ)

A negative percentage means the Comparison Year was milder than the Base Year. A positive percentage means the Comparison Year was more severe than the Base Year. When the monthly degree days in either the base year or the comparison year are less than 30, a percentage comparison is not calculated. However, the Annual Total comparison percentages include all heating and cooling degree days.

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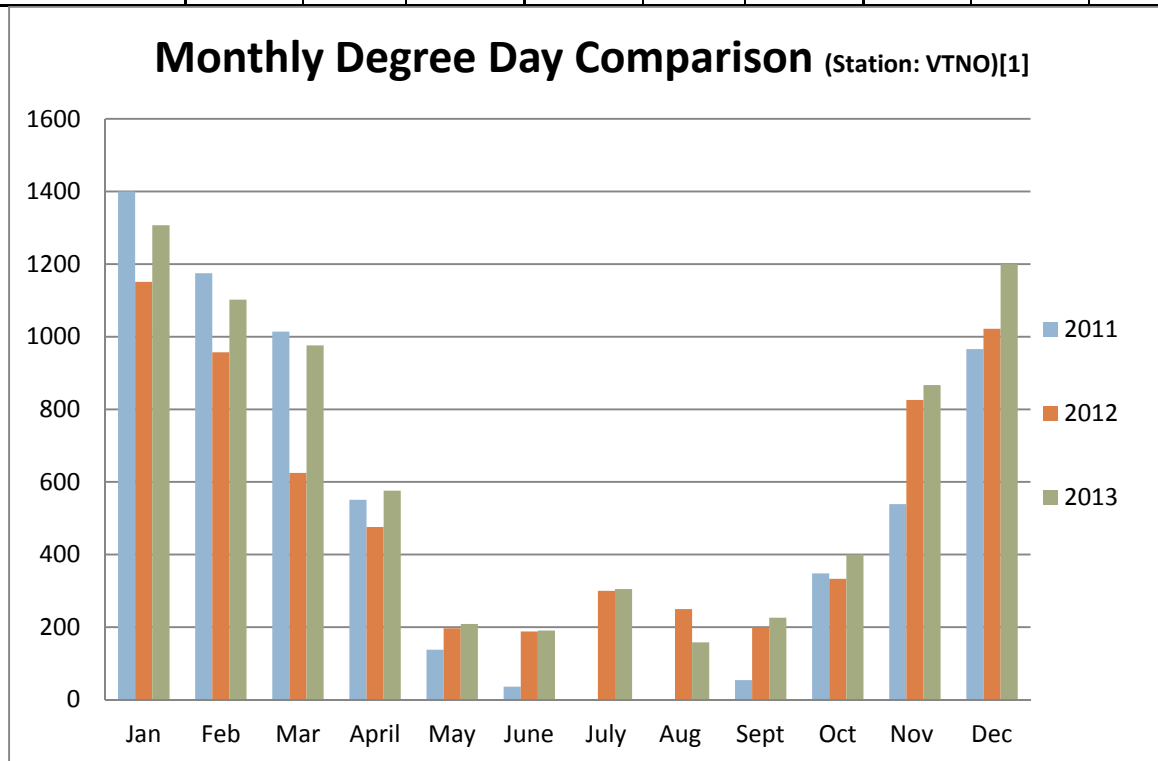
<sup>1</sup> <http://www.consumersenergy.com/content.aspx?id=4582>

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Monthly Degree Day Comparison (Station: VTNO)									
Month	Base Year (2012)			Comparison Year (2013)			Comparison Percentages		
	HDD	CDD	TDD	HDD	CDD	TDD	HDD	CDD	TDD
January	1151	0	1151	1307	0	1307	13%		13%
February	957	0	957	1102	0	1102	15%		15%
March	622	3	625	976	0	976	56%		56%
April	463	13	476	574	2	576	23%		21%
May	111	86	197	178	31	209	60%	-63%	6%
June	26	162	188	61	130	191		-19%	1%
July	0	300	300	2	303	305		1%	1%
August	4	246	250	13	145	158		-41%	-36%
September	149	50	199	167	59	226	12%	18%	13%
October	333	0	333	400	0	400	20%		20%
November	826	0	826	867	0	867	4%		4%
December	1022	0	1022	1200	0	1200	17%		17%
Annual Total	5664	860	6524	6847	670	7517	21%	-22%	15%



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