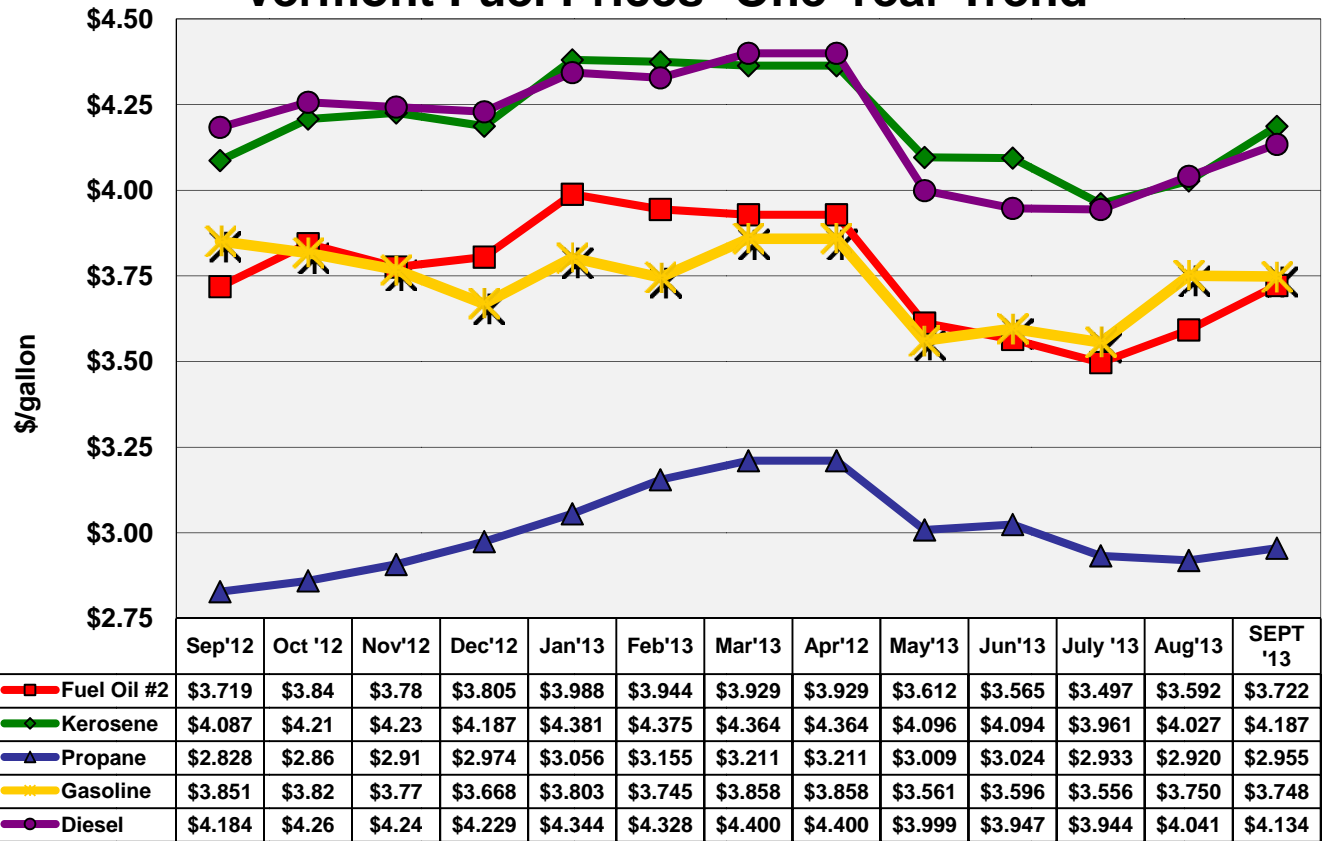


EIA-Short-Term Energy Outlook – Highlights

- Monthly average crude oil prices increased for the fourth consecutive month in August 2013, as supply disruptions in Libya increased and concerns over the conflict in Syria intensified. The U.S. Energy Information Administration's (EIA) forecast for Brent crude oil spot price, which averaged \$108 per barrel during the first half of 2013, averages \$109 per barrel over the second half of 2013 and \$102 per barrel in 2014, \$5 per barrel and \$2 per barrel higher than forecast in last month's STEO, respectively. Projected West Texas Intermediate (WTI) crude oil prices average \$101 per barrel during the fourth quarter of 2013 and \$96 per barrel during 2014. Energy price forecasts are highly uncertain and could differ significantly from the projected levels. The current values of futures and options contracts suggest the lower and upper limits of the 95% confidence interval for the market's expectations of monthly average WTI prices in December 2013 at \$86 per barrel and \$131 per barrel, respectively.
- In August, unplanned disruptions among the Organization of the Petroleum Exporting Countries (OPEC) and non-OPEC producers reached an estimated 2.7 million barrels per day (bbl/d), the highest level since at least January 2011 (see EIA [Estimates of Crude Oil and Liquid Fuels Supply Disruptions](#) and [Status of Libyan Loading Ports and Oil and Natural Gas Fields](#)). Of this volume, 0.6 million bbl/d was attributable to non-OPEC producers, while OPEC producers accounted for the remaining 2.1 million bbl/d of outages. OPEC disruptions reached the highest level since at least January 2009, when EIA began tracking this information.
- EIA's forecast for the regular gasoline retail price averages \$3.44 per gallon in the fourth quarter of 2013, 11 cents per gallon higher than in last month's STEO. The annual average regular gasoline retail, which was \$3.63 per gallon in 2012, is expected to be \$3.55 per gallon in 2013 and \$3.43 per gallon in 2014. As in the case of crude oil, the current value of futures and options contracts suggests a wide uncertainty in market expectations.
- U.S. crude oil production increased to an average of 7.6 million bbl/d in August, the highest monthly level of production since 1989. EIA forecasts U.S. total crude oil production will average 7.5 million bbl/d in 2013 and 8.4 million bbl/d in 2014, about 0.1 million bbl/d and 0.2 million bbl/d higher, respectively, than forecast in last month's STEO.
- Natural gas working inventories ended August at an estimated 3.2 trillion cubic feet (Tcf), 0.21 Tcf below the level at the same time a year ago and 0.04 Tcf above the five-year average (2008-12). EIA expects the Henry Hub natural gas spot price, which averaged \$2.75 per million British thermal units (MMBtu) in 2012, will average \$3.68 per MMBtu in 2013 and \$3.91 per MMBtu in 2014.

Vermont Fuel Prices -One-Year Trend



Vermont Average Retail Petroleum Prices (per gallon)

	SEPT '13	Aug'13	%change	Sep'12	%change
No. 2 Fuel Oil	\$3.722	\$3.592	3.61%	\$3.719	0.09%
Kerosene	\$4.187	\$4.027	3.96%	\$4.087	2.44%
Propane	\$2.955	\$2.920	1.22%	\$2.828	4.49%
Reg. Unleaded Gasoline	\$3.748	\$3.750	-0.06%	\$3.851	-2.67%
Diesel	\$4.134	\$4.041	2.31%	\$4.184	-1.19%

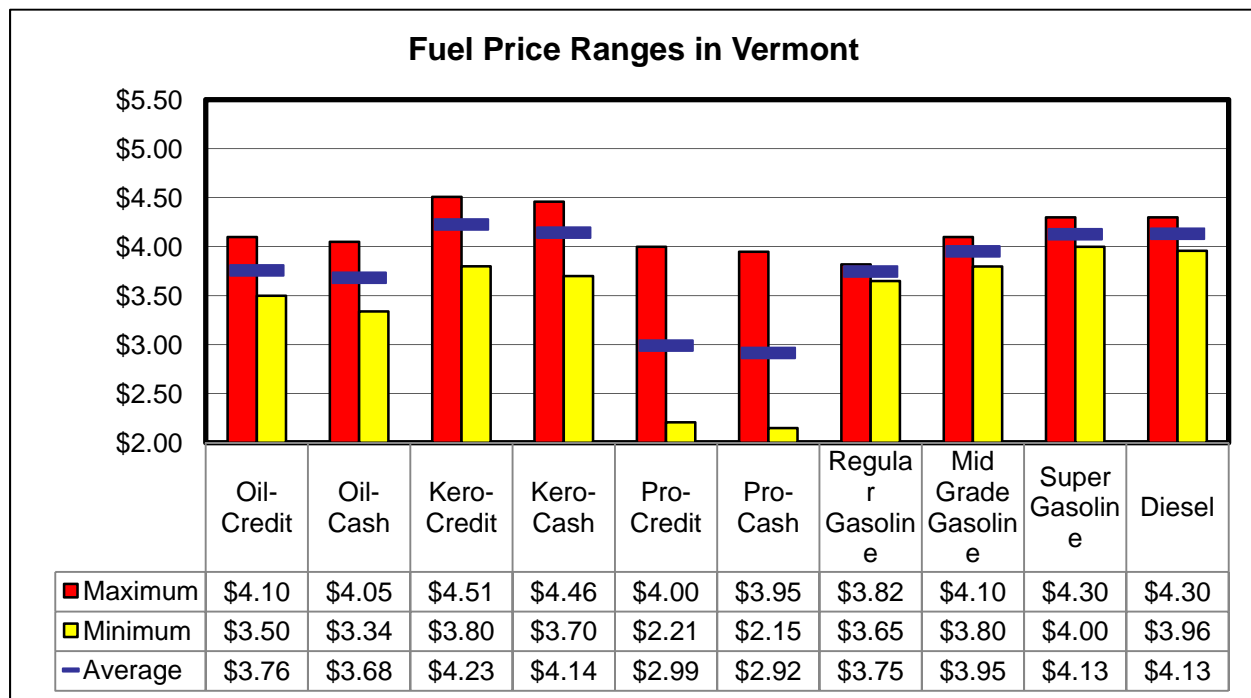
NOTE: The Vermont Fuel Price Report is published monthly by the Vermont Department of Public Service. Prices are collected on or about the first Monday of each month and reflect dealer discounts for cash or self-service, except propane prices, which are an average of the credit and discount price. Propane 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				
Type of Energy	BTU/unit	Adj Effic	\$/unit	\$/MMBtu
Fuel Oil, gallon	138,200	80%	\$3.72	\$33.67
Kerosene, gallon	136,600	80%	\$4.19	\$38.31
Propane, gallon	91,600	80%	\$2.96	\$40.33
Natural Gas, therm	100,000	80%	\$1.55	\$19.31
Electricity, kwh	3,412	100%	\$0.15	\$43.46
Wood, cord (green)	22,000,000	60%	\$193.33	\$14.65
Pellets, ton	16,400,000	80%	\$247.00	\$18.83

* The natural gas price is based on the rate effective 8/8/13. *Wood green updated 9/25/13.

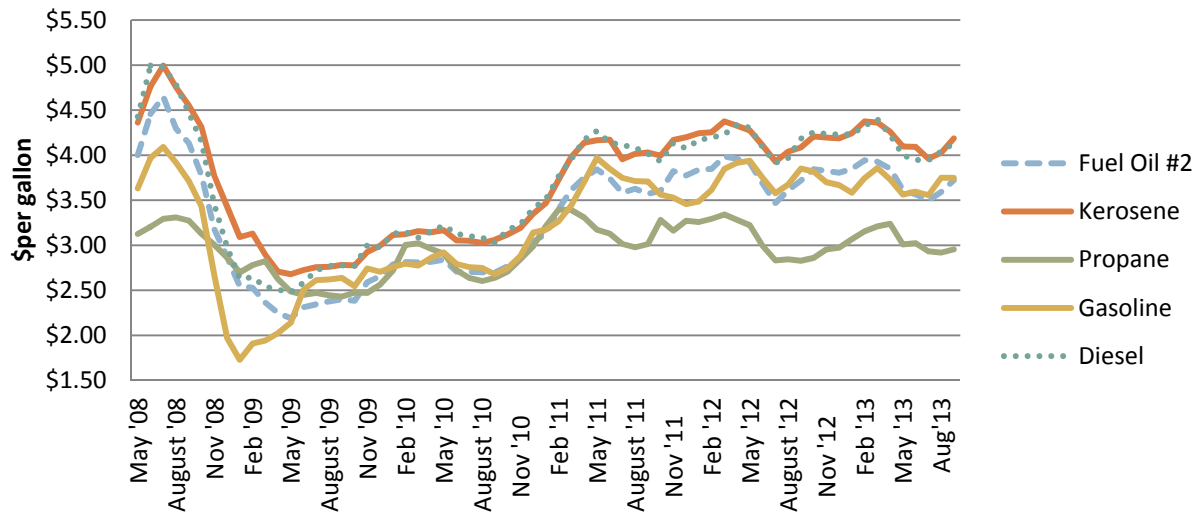


Fuel Price Ranges in Vermont

	<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>
Stan.Dev \$	\$0.17	\$0.18	\$0.18	\$0.17	\$0.48	\$0.48	\$0.26	\$0.94	\$0.24	\$0.42
Stan.Dev%	4.50%	4.88%	4.35%	4.14%	15.90%	16.28%	2.05%	5.88%	1.93%	2.22%

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Vermont Ave Fuel Prices May 2008 - September 2013

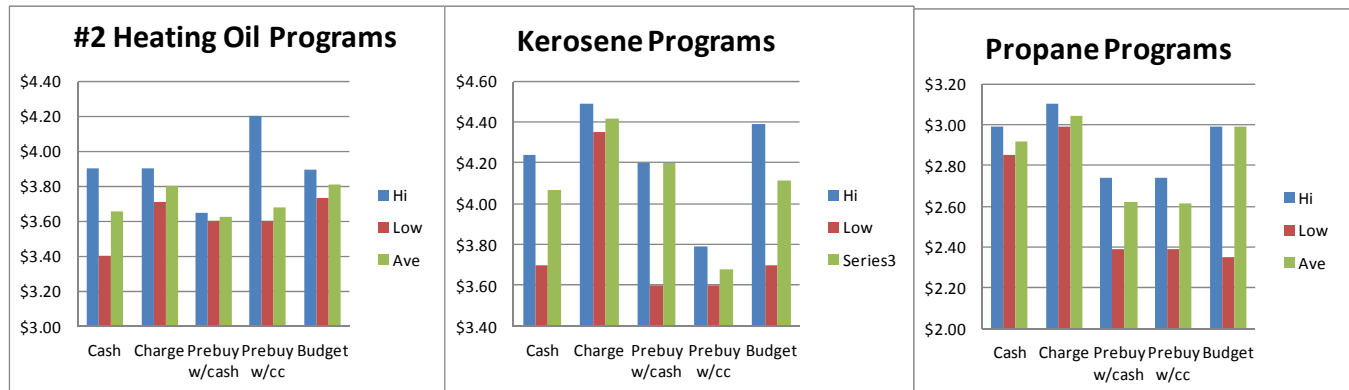


PRICE PROTECTION PROGRAMS

At this time of the year many fuel dealers offer their customers “price protection” programs. Such as “Pre-Buy” programs, participating customers can purchase a specified volume of fuel at a discounted price by paying for the heating season’s fuel in advance. In “Fixed Price” programs, a pre-determined price per unit is set for all of the fuel delivered during the heating season. In “Cap” programs, the fuel price will not exceed a pre-determined value and may go down based on market conditions at time of delivery. Cap and Fixed Price programs may be part of “Budget” programs, in which the customer agrees to make equal monthly payments, often for 10 to 12 months. Price protection programs can be beneficial, as they provide a degree of certainty, and customers are better able to budget their finances and thus are not caught short during the heating season. However, price protection programs don’t guarantee savings, so consumers need to consider their options carefully.

At the time of the survey several dealers had not yet issued their programs therefore the data for July is based on a small sample and is representative of program availability and average price per gallon for price protection programs as of August 5th. Contact your Dealer for up to date terms and conditions of their “price protection” programs.

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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.¹

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=CIaZvMf8krQCFQqk4Ao_dFRYArQ

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

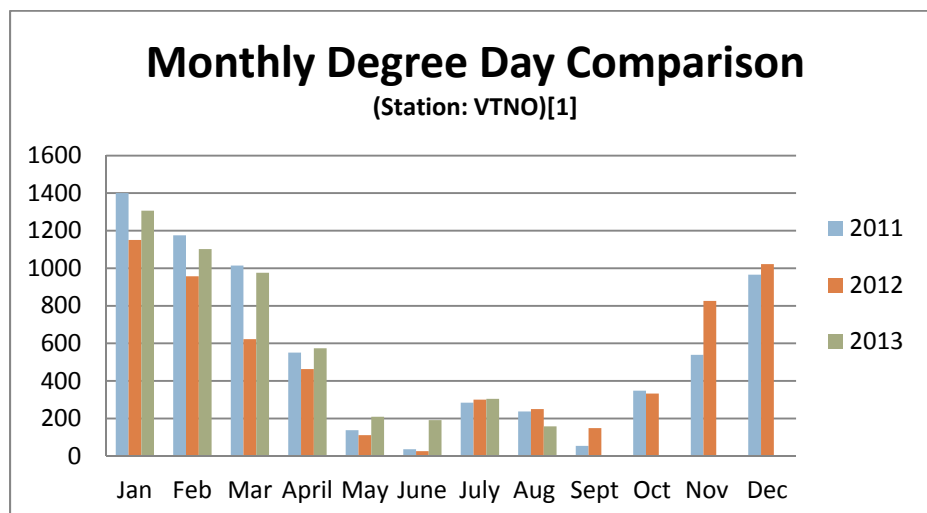
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A negative percentage means the Comparison Year was milder than the Base Year. A positive percentage means the Comparison Year was more severe than the Base Year. When the monthly degree days in either the base year or the comparison year are less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

Monthly Degree Day Comparison (Station: VTNO)[1]													
Month	Base Year (2011)			Comparison Year (2012)			Comparison Year (2013)			Comparison Percentages			
	HDD	CDD	TDD	HDD	CDD	TDD	HDD	CDD	TDD	HDD	CDD	TDD	
September	54	121	175	149	50	199							
October	348	2	350	333	0	333							
November	539	0	539	826	0	826							
December	966	0	966	1022	0	1022							
January	1400	0	1400	1151	0	1151	1307	0	1307	13%		13%	
February	1175	0	1175	957	0	957	1102	0	1102	15%		15%	
March	1014	0	1014	622	3	625	976	0	976	56%			
April	551	7	558	463	13	476	574	2	574	23%		21%	
May	138	78	216	111	86	197	178	31	209	60%	-63%	6%	
June	36	120	156	26	162	188	61	130	191		-19%	1%	
July	0	284	284	0	300	300	2	203	305		1%	1%	
August	0	237	237	4	246	250	13	145	158		-41%	-36%	
Annual Total	6221	849	7070	5664	860	6524	4361	4522	4361				

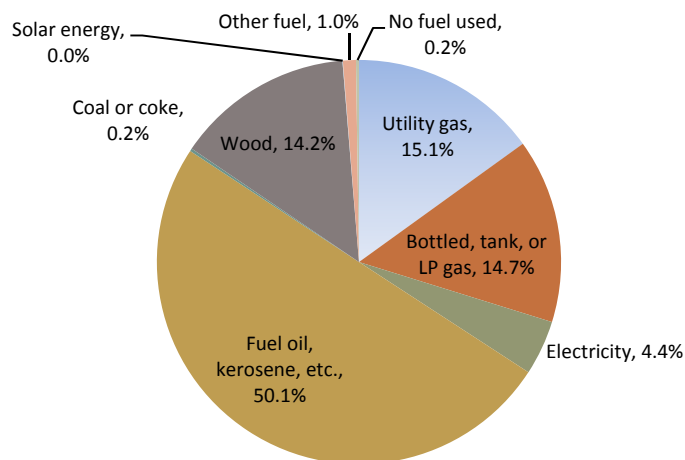


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Wood Heating in Vermont

“It warms you twice once when you cut and stack it and the second time when you burn it”

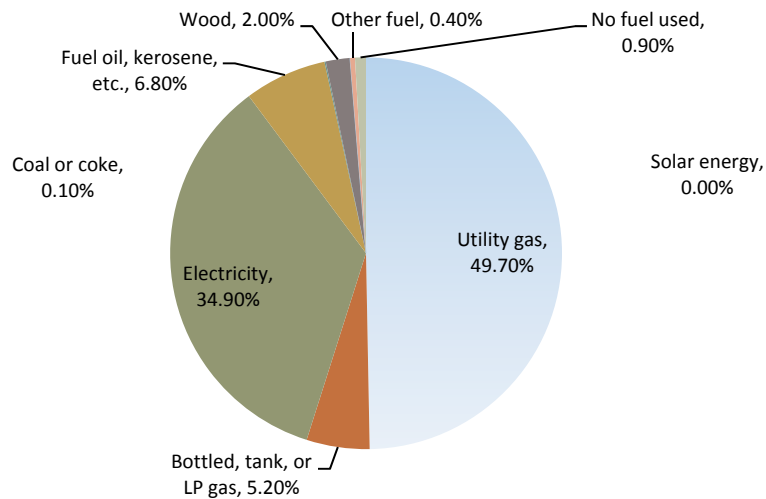
According to data compiled by the EIA 14.2% of Vermont households use wood as their primary heating source. An additional portion use supplemental stoves fired by wood or wood-burning fireplaces²



Vermont Thermal Energy by Source

² <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

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U.S. Thermal Energy by Source

The Vermont 2011 Comprehensive Energy Plan reports that Vermont households burned an estimated 314,000 cords (~785,000 tons) of wood in 2007–08. This represented an increase of about 64,000 cords over the amount used during the 1997–98 season. In 2007–08, about 32% of Vermont households burned wood for at least some space heating, a 15% increase from the 1997–98 survey. Those using wood for primary heating consumed about 5.4 cords in 2007–08, while those using wood as a supplementary source used 2.25 cords. In that same year, Vermont households burned about 20,155 tons of wood pellets, with primary-heat-source consumers burning 3.8 tons and supplementary-heat-source consumers burning 1.2 tons for the season. Combining cordwood with the 40,000 green tons needed to make pellets for residential heating required about 825,000 tons of wood. All uses of wood for fuel in 2009 totaled 1.5 million tons.³

Wood price data was last collected in 2011 by the Dept of Forest and Parks. While wood prices are relatively stable compared to fuels it was of interest to bring information current. During September the Public Service Department conducted a review of various sources including local newspaper classified ads, Penny Savers, suppliers websites and distributors posted pricing. In all over 160 data points were collected and analyzed. The results are presented below.

³ 2011 Comprehensive Energy Plan

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	<u>Green</u>	<u>Dry</u>	<u>Kiln Dry</u>	<u>Pellets</u>
Min	\$ 150.00	\$ 235.00	\$250.00	\$225.00
Max	\$ 225.00	\$ 350.00	\$325.00	\$309.00
Average	\$ 193.33	\$ 288.18	\$296.25	\$273.75

The current average price per cord of green wood is \$193.33 vs. \$190.00 (11/2011) a 1.75% increase in two years. The above prices are FOB and do not include delivery charges which are dependent on distance from the supplier. .

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