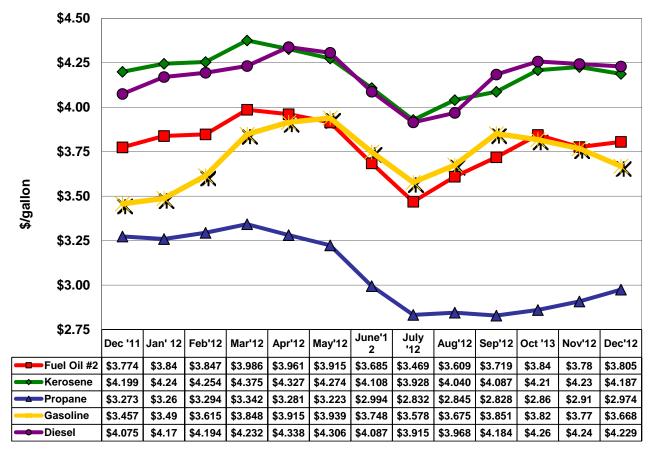
EIA-Short-Term Energy Outlook – Highlights

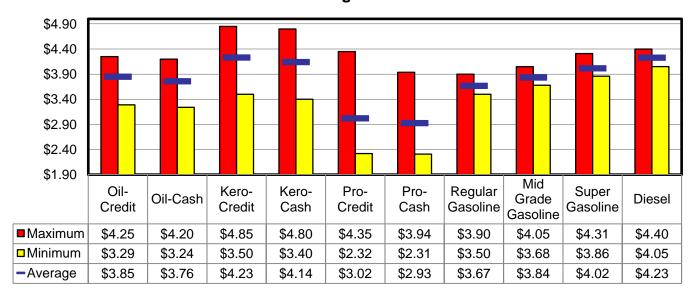
- EIA expects that the Brent crude oil spot price will average \$110 per barrel in the fourth quarter of 2012, while the West Texas Intermediate (WTI) crude oil spot price will average \$89 per barrel. The Brent and WTI crude oil spot prices are forecast to average \$104 per barrel and \$88 per barrel, respectively, in 2013. The projected WTI discount to Brent crude oil, which averaged \$23 per barrel in November 2012, falls to an average of \$11 per barrel by the fourth quarter of 2013. This forecast rests on the assumption that U.S. real gross domestic product (GDP) grows by 2.1 percent in 2012 and 1.8 percent in 2013, while world-oil-consumption-weighted real GDP grows by 2.7 percent and 2.4 percent in 2012 and 2013, respectively.
- U.S. monthly average regular gasoline retail prices fell from \$3.85 per gallon in September to \$3.45 per gallon in November, as crude oil prices fell and the gasoline market transitioned from summer-grade to lower-cost winter-grade gasoline specifications. Projected national average regular gasoline retail prices average \$3.63 per gallon in 2012 and \$3.43 per gallon in 2013, compared with \$3.53 per gallon in 2011. Forecast diesel fuel retail prices average \$4.02 per gallon during the fourth quarter of 2012 before falling to an average of \$3.84 per gallon in 2013.
- EIA's projections of average household fuel bills this winter have not changed significantly from last month's STEO. EIA expects household expenditures for space heating fuels will be higher this winter than last winter, primarily because of the return to roughly normal winter temperatures east of the Rocky Mountains compared with last winter's unusual warmth. Average expenditures for households that heat with heating oil are forecast to be higher than any previous winter on record.
- EIA expects U.S. total crude oil production to average 6.4 million barrels per day (bbl/d) in 2012, an increase of 0.8 million bbl/d from the previous year. Projected domestic crude oil production increases to 7.1 million bbl/d in 2013, 0.2 million bbl/d higher than projected in last month's STEO and the highest annual average rate of production since 1992.

Natural gas working inventories, which reached an all-time weekly record in early November, ended the month at an estimated 3.8 trillion cubic feet (Tcf), almost equal to the level at the same time last year. EIA expects the Henry Hub natural gas spot price, which averaged \$4.00 per million British thermal units (MMBtu) in 2011, will average \$2.78 per MMBtu in 2012 and \$3.68 per MMBtu in 2013. For additional information visit http://www.eia.gov/





Fuel Price Ranges in Vermont



Comparing the Cost of Heating Fuels									
Type of Energy	BTU/unit Adj Effic		\$/unit	\$/MMBtu					
Fuel Oil, gallon	138,200	80%	\$3.81	\$34.42					
Kerosene, gallon	136,600	80%	\$4.19	\$38.32					
Propane, gallon	91,600	80%	\$2.97	\$40.59					
Natural Gas, therm	100,000	80%	\$1.57	\$19.62					
Electricity, kwh	3,412	100%	\$0.15	\$43.46					
Wood, cord (green)	22,000,000	60%	\$190.00	\$14.39					
Pellets, ton	16,400,000	80%	\$247.00	\$18.83					

^{*} The natural gas price is based on the rate effective 11/1/12

Vermont Average Retail Petroleum Prices (per gallon)										
	Dec '12	Nov'12	%change	%change						
No. 2 Fuel Oil	\$3.805	\$3.776	0.77%	\$3.774	0.82%					
Kerosene	\$4.187	\$4.226	0.08%	\$4.199	0.71%					
Propane	\$2.974	\$2.908	2.29%	\$3.273	-9.13%					
Reg. Unleaded Gasoline	\$3.668	\$3.768	-2.64%	\$3.457	6.11%					
Diesel	\$4.229	\$4.243	-0.33%	\$4.075	3.79%					

Notes From the editor:

Often discussions about the winter heating season and weather turn to anecdotal comparisons of this season to last year or winters past. In the course of the conversation the terms heating and cooling degree days is dropped into the conversation followed by "what are you talking about".

Simply stated - Degree days measure approximately how many degrees you need to heat or cool your home for the month and allow you to make comparisons to previous months or years. This can help you assess how much temperature fluctuations will affect your energy use.

^{*}Wood green updated 11/16/11

How are Degree Days Calculated? There are two types of degree days: cooling ("CDD") and heating ("HDD"). Each compare the current day's average temperature to a baseline standard of 65 degrees Fahrenheit to determine the energy demands of cooling or heating your home. Days with an average temperature of 65°F have no cooling or heating degree days.

- •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=ClaZvMf8krQCFQqk4AodFRYArQ

Monthly Degree Day Comparison (Station: VTNO)²

	Base	Base Year (2011)			arison Year	r (2012)	Comparison Percentages			
<u>Month</u>	HDD	CDD	TDD	HDD	CDD	TDD	HDD	CDD	TDD	
January	1400	0	1400	1151	0	1151	-17%		-17%	
February	1175	0	1175	957	0	957	-18%		-18%	
March	1014	0	1014	622	3	625	-38%		-38%	
April	551	7	558	463	13	476	-15%		-14%	
May	138	78	216	111	86	197	-19%	10%	-8%	
June	36	120	156	26	162	188		35%	20%	
July	0	284	284	0	300	300		5%	5%	
August	0	237	237	4	246	250		3%	5%	
September	54	121	175	149	50	199	175%	-58%	13%	
October	348	2	350	333	0	333	-4%		-4%	
November	539	0	539	826	0	826	53%		53%	
December	966	0	966							
Through November	5255	849	6104	4642	860	5502	-12%	1%	-10%	
Annual Total	6221	849	7070							

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

² http://www.weatherdatadepot.com/?pi_ad_id=8426228665&gclid=ClaZvMf8krQCFQqk4AodFRYArQ

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.

Average Daily Temperature (Station: VTNO)³

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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2011	14	18	27	41	58	62	69	67	62	48	42	28
2012	22	27	40	45	59	64	69	67	56	49	32	

³ http://www.weatherdatadepot.com/?pi ad id=8426228665&gclid=ClaZvMf8krQCFQqk4AodFRYArQ