

State of Nebraska

Heating Oil and Propane Program

2007/2008 Winter Heating Season

Annual Report

May 2008

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Executive Summary

Nebraska's average [propane](#) prices were fairly volatile throughout the 2007/2008 heating season in comparison to previous years when propane prices were very stable. The average home heating charge price for delivery of consumer grade propane, excluding taxes and cash discounts, in Nebraska for the 2007/2008 heating season was \$1.88 per gallon.

[Heating oil](#) prices began the 2007/2008 heating season 57 cents per gallon higher than the previous heating season yet relatively comparable to two years ago. Heating oil prices were volatile during most of the 2007/2008 heating season ending at \$3.55 per gallon.

Factors that impact prices each season include: national and state inventory and import levels, refinery downtime, prices of crude oil and natural gas, the weather, the economy, and the political situation. Each of these factors can lead to increased demand or lower-than-normal supplies during the winter heating season. Factors that impacted prices during the 2007/2008 heating season included:

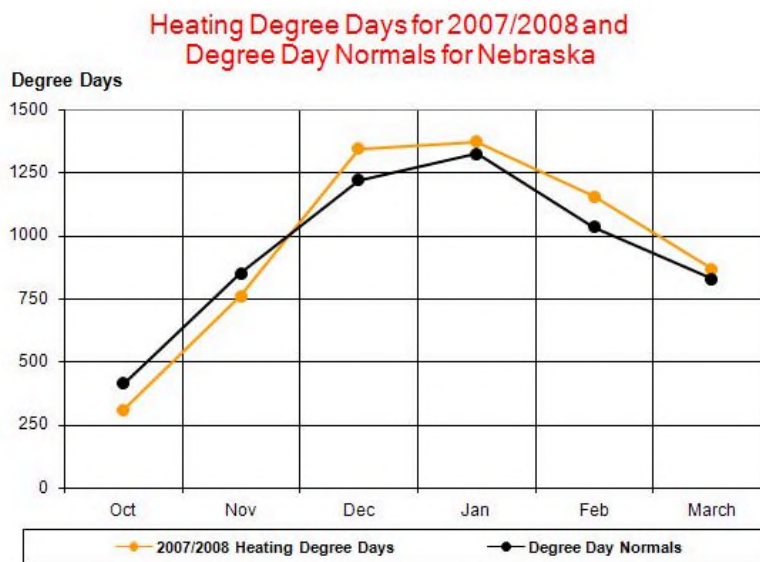
- High crude oil prices;
- High natural gas prices;
- Oil refinery shutdowns due to planned maintenance and unexpected hazards;
- The 108,000 b/d oil refinery operated by Coffeyville Resources Refining & Marketing, LLC in Coffeyville, Kansas, was shut down July 1, 2007, in the wake of intense flooding by the Verdigris River June 30-July 1. The Coffeyville refinery is one of the key contributors to the [Group 3](#) spot market. On August 17, 2007, Coffeyville Resources restarted most of the operating units;
- In June, 2007, the oil battle between ExxonMobil, ConocoPhillips, and Venezuela lent support to crude values. Both ExxonMobil and ConocoPhillips opted to pull out of the Venezuelan fields rather than cede more control to PDVSA. Venezuela's state-run oil company halted sales of crude to ExxonMobil Corp. over a legal tangle in February, 2008;
- Beginning June 1, 2007, refiners were required by an EPA rule to begin production of non-road, locomotive, and marine diesel fuel that meets a maximum sulfur level of 500 ppm. The rule did not include diesel fuel for home heating. As a result, stock builds of heating oil were expected to be rare, as refiners concentrated on making low sulfur or ultra-low sulfur diesel;
- Discussions were held throughout the build season regarding a looming supply crisis in heating oil for the 2007/2008 winter season;
- Normal regional distillate inventory levels at the beginning of the heating season, average levels throughout the season, and above-average levels at the end of the

season. One percent of the state's households (7,009) use heating oil to heat their homes;

- The regional propane storage goal of 25 million barrels was not attained during the traditional build season (April through September). Nine percent of Nebraska households (63,080) use propane to heat their homes;
- A below-average national propane stockbuild from April to September;
- Ongoing war with Iraq;
- Mild hurricane season with only one hurricane, Humberto, making landfall; and
- Three percent colder-than-normal heating season temperatures.

Weather

Of the factors that impact prices, weather remains the key wildcard each winter. While weak La Nina conditions were observed in the Pacific indicating a cold winter, the National Oceanic Atmospheric Administration maintained a forecast that included warmer-than-normal winter weather in 2007/2008. An analysis of [heating degree days](#) indicated weather in Nebraska for the 2007/2008 heating season to be colder than normal by only three percent, which is relatively normal (shown in the graph below). The state had an estimated 5807 heating degree days from October to March compared to 5667 normal heating degree days for that period. Both October and November were warmer than normal—25 percent warmer during October and 10 percent warmer during November. December was 10 percent colder than normal, January was four percent colder than normal, February was 12 percent colder than normal, while March was five percent colder than normal



Multi-Year Comparison of Weekly Average Heating Oil Prices

Heating oil prices began the most recent heating season 57 cents higher than the previous season and \$1.62 higher than six years ago. During October, heating oil prices were relatively comparable to 2005/2006 prices, when the 2005 market was dealing with nationwide supply disruptions in the aftermath of Hurricanes Katrina and Rita. The 2007/2008 heating season saw a continuation of high prices due to high crude oil prices and cold winter weather. High crude oil prices remain a major factor that impacts heating oil prices. Heating season weather was colder than previous years, although only three percent colder than normal. The average price at the end of the 2007/2008 heating season was 86 cents higher than the price at the beginning of the season which reflects the high level of crude oil prices

Seven-Year Comparison of Average Heating Oil Prices 2001/2002 to 2007/2008

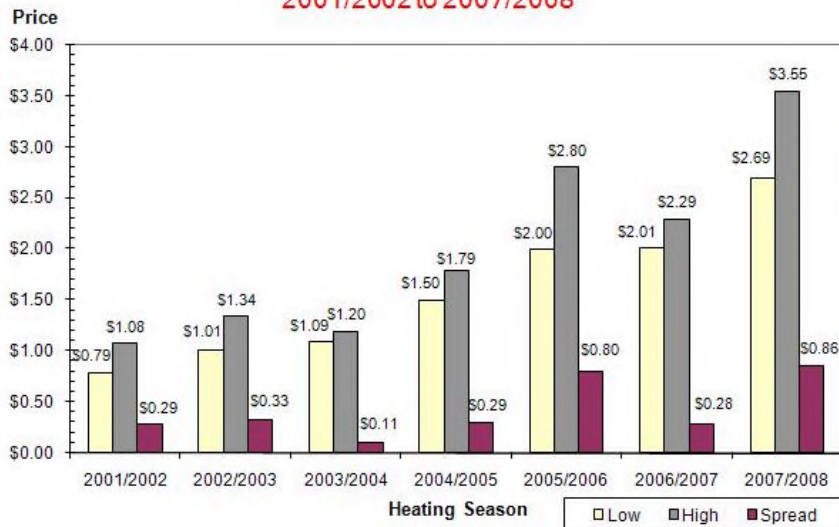


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Heating Oil Price Range and Spread

The graph below shows the price range of the highest average price and the lowest average price per gallon of heating oil from the last seven heating seasons and the difference, or spread, between the high and low prices. A low price spread is indicative of stability, i.e. no large increases or decreases in price during the heating season. The price spread for the 2007/2008 heating season (\$0.86) was much larger than the price spread for previous heating seasons with the exception of 2005/2006. The 80-cent spread in the 2005/2006 heating season may be attributed to supply shortages and disruptions as a result of the hurricanes in 2005, whereas the 86-cent spread in the 2007/2008 heating season may be attributed to the high price of crude oil.

Heating Oil Price Range and Spread Each Heating Season 2001/2002 to 2007/2008



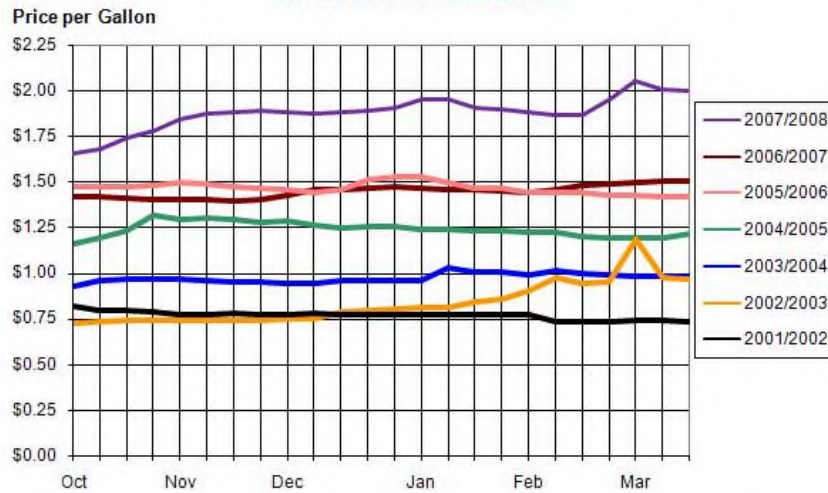
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Multi-Year Comparison of Weekly Average Propane Prices

The 2007/2008 heating season began with a propane price that was 24 cents higher than last year and 84 cents per gallon higher than six years ago. High crude oil and natural gas prices remain major factors that impact propane prices. The 2007/2008 heating season saw a continuation of high prices due to lower inventories, cold

winter weather, high natural gas and crude oil prices, and strong petrochemical sector demand. Inventories started the heating season at a lower level due to reduced Canadian imports during the build season (April through September). Throughout the first half of the heating season, propane prices gradually increased 25 cents reaching \$1.91 by the end of December. This year was the first that the average price of propane rose above \$2 per gallon. Heating season weather was colder than previous years, although only three percent colder than normal. The average price at the end of the 2007/2008 heating season was 34 cents higher than the price at the beginning of the season

**Seven-Year Comparison of Average Propane Prices
2001/2002 to 2007/2008**



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Propane Price Range and Spread

The graph below shows the price range of the highest average price and the lowest average price per gallon of propane from the last seven heating seasons and the difference, or spread, between the high and low prices. A low price spread is indicative of stability, i.e. no large increases or decreases in price during the heating season. The 2007/2008 heating season had a higher spread and higher prices compared to the 2006/2007 heating season. In fact, an analysis of the seven years for which data is available indicates price stability within each heating season except for 2007/2008 and 2002/2003

**Propane Price Range and Spread
Each Heating Season
2001/2002 to 2007/2008**



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Introduction

This report summarizes the results of the heating oil and propane price survey during the 2007/2008 winter heating season in Nebraska. The Nebraska Energy Office conducted the survey under a cooperative agreement with the U.S. Department of Energy's [Energy Information Administration](#).

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Program Objectives

According to the latest [American Community Survey](#) conducted by the U.S. Census Bureau, nine percent, or 63,080 homes, in Nebraska use propane as the primary home heating fuel. One percent, or 7,009 homes, in Nebraska use heating oil as the primary home heating fuel. The Nebraska Energy Office recognizes the need for winter fuels price information to fulfill these objectives: (1) to provide information to the Governor and the public regarding the price and status of winter fuels, (2) to prepare the agency to respond in an effective, efficient manner to potential heating fuel problems, and (3) to strengthen the state, regional, and national analyses of winter heating fuel prices.

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Program Performance

The responsibilities of the Nebraska Energy Office included:

1. Collection of each Monday's retail heating oil and propane prices from suppliers during the winter heating fuel season,
2. Maintenance of a price database,
3. Weekly submission of the price data via an internet data collection system to the Energy Information Administration on a company-identifiable level to the extent permitted by State laws, and
4. Preparation and submission of a midseason report and an annual report.

The responsibilities of the Energy Information Administration included:

1. Preparation of a list of companies to be surveyed and the development of an estimation formula,
2. Technical assistance,
3. Publication of state, regional, and national data online,
4. Review of the midseason report and the annual report for accuracy and consistency, and
5. Preparation and distribution of a report to Congress, the states, and the public.

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Methodology

The Nebraska Energy Office has participated in the State Heating Oil and Propane Program (SHOPP) for seven years. Each year, the Energy Information Administration provides a list of companies to the Nebraska Energy Office. The companies are identified as residential distributors to be contacted regarding their participation in the price survey. The residential price survey for this heating season began on October 8, 2007, and was completed on March 17, 2008. Data from the survey was transmitted to the Energy Information Administration using the Internet Data Collection System. The Energy Information Administration compiled, processed, and aggregated each state's reported data, weighted and stratified against other data streams, to estimate each state's average price.

The Nebraska Energy Office publishes the data in these reports: [Average Residential Propane Prices](#), [Average Wholesale Propane Prices](#), [Average Residential Heating Oil Prices](#), and [Average Wholesale Heating Oil Prices](#). The Energy Information Administration publishes the data in the following reports: Residential Propane Prices by Region and State, Wholesale Propane Prices by Region and State,

Residential Heating Oil Prices by Region and State, and Wholesale Heating Oil Prices by Region and State.

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Residential Heating Oil Prices

In the following sections, additional indicators of price volatility may be viewed. The indicators include the heating season's average price, the average price for the month of October, the weekly average price, the price range, the price spread, a multi-year wholesale price comparison, a retail/wholesale price comparison, and rack-to-retail margins.

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Heating Season's Average Price

The average home heating charge price for delivery of No. 2 heating oil, excluding taxes and cash discounts, in Nebraska for the 2007/2008 heating season was \$3.00 per gallon. The season average increased 85 cents from last season's average of \$2.15 and was \$1.27 higher than the seven-year average of \$1.73 per gallon.

The season averages for the last seven years are listed in the following table:

Heating Season	Average Price	Percent Increase/(Decrease) From Prior Year
2007/2008	\$3.00	40%
2006/2007	\$2.15	(2%)
2005/2006	\$2.19	34%
2004/2005	\$1.63	43%
2003/2004	\$1.14	1%
2002/2003	\$1.13	30%
2001/2002	\$0.87	
Average Seven-Year Price	\$1.73	

October's Average Price

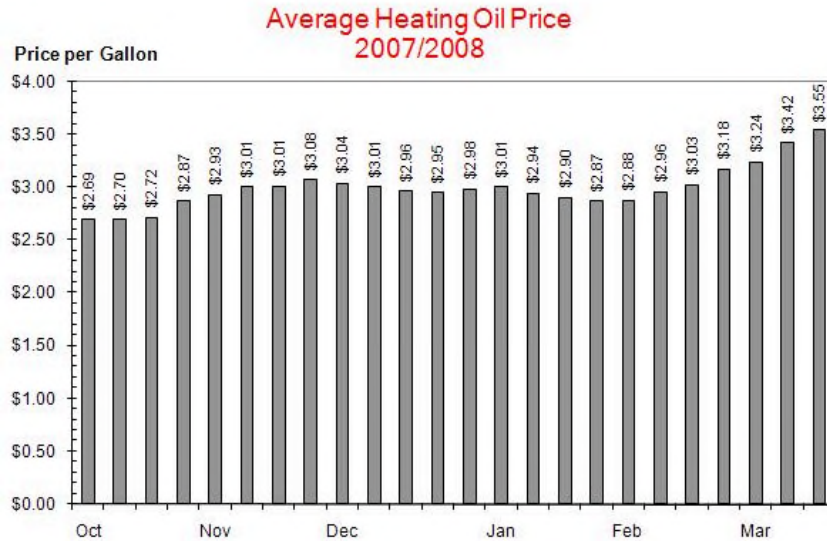
The average price of heating oil in October reflects weather conditions and the winter supply outlook. While weak La Nina conditions were observed in the Pacific, which is an indication of cold weather to come, the National Oceanic Atmospheric Administration maintained a forecast that included warmer-than-normal winter weather in 2007/2008. At the end of September, the Midwest Region had 2.7 million barrels of heating oil in stock, a level of inventory which was normal. The average price for October was \$2.75, which was 97 cents higher than the seven-year average and 62 cents more than the previous October. The October averages for the past seven years are listed in the following table:

Heating Season	Average October Price	Percent Increase/(Decrease) From Prior Year
2007/2008	\$2.75	29%
2006/2007	\$2.13	(20%)
2005/2006	\$2.66	56%
2004/2005	\$1.70	48%
2003/2004	\$1.15	6%
2002/2003	\$1.08	7%
2001/2002	\$1.01	
Average Seven-Year October Price	\$1.78	

Weekly Average Price

The average price of heating oil was volatile during the 2007/2008 season. Over the first three Mondays in October, heating oil prices were stable at \$2.69 to \$2.72 per gallon. But prices started increasing at the end of October and didn't stabilize until

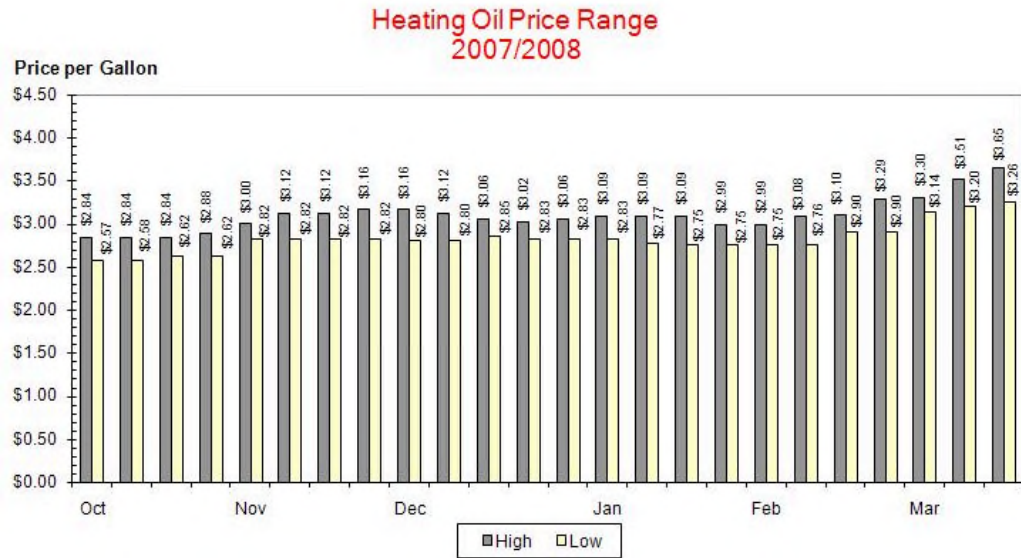
the end of November when prices reached a peak at \$3.08. Prices slowly fell throughout December and January. In February, prices increased with a ferocity reaching \$3.55 per gallon by the end of the heating season, which was 86 cents higher than the price at the beginning of the season



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Price Range

The high to low price range of heating oil from each Monday's survey is shown in the graph below. During the 2007/2008 heating season, the highest price ranged from \$2.84 to \$3.65, and the lowest price ranged from \$2.57 to \$3.26.

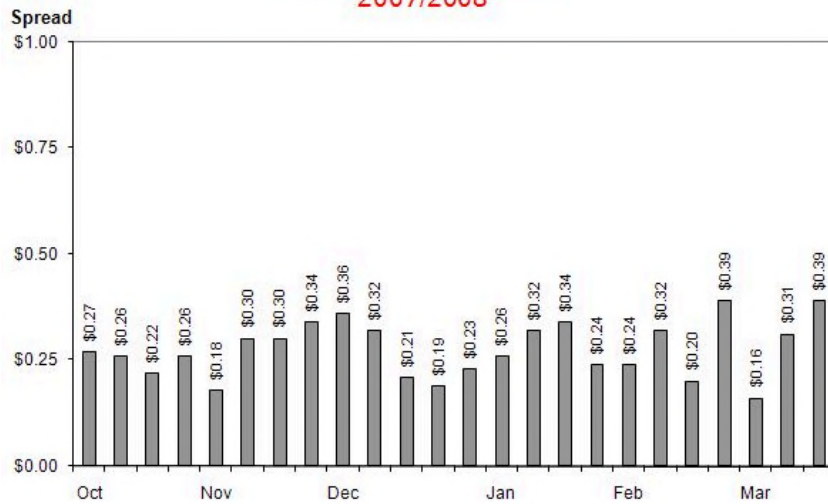


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Price Spread

The price spread between the high price and the low price from each Monday's survey is shown in the graph below. During the 2007/2008 heating season, the price spread ranged from 16 cents to 39 cents.

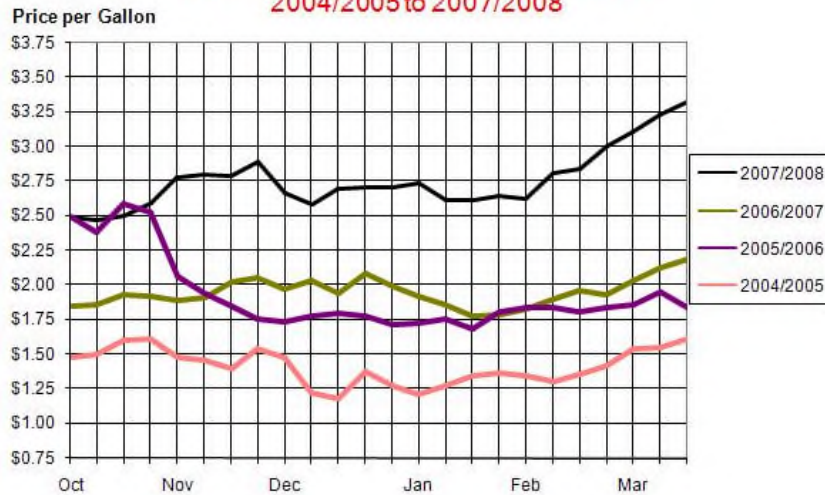
Heating Oil Price Spread 2007/2008



Multi-Year Wholesale Price Comparison

Wholesale heating oil prices began the 2007/2008 heating season 65 cents (35 percent) higher than the previous season, but at the same relative level as two years ago when the 2005 market was dealing with nationwide supply disruptions in the aftermath of Hurricanes Katrina and Rita. The average price at the end of the 2007/2008 season was \$1.26 (or 55 percent) higher than the price at the beginning of the season.

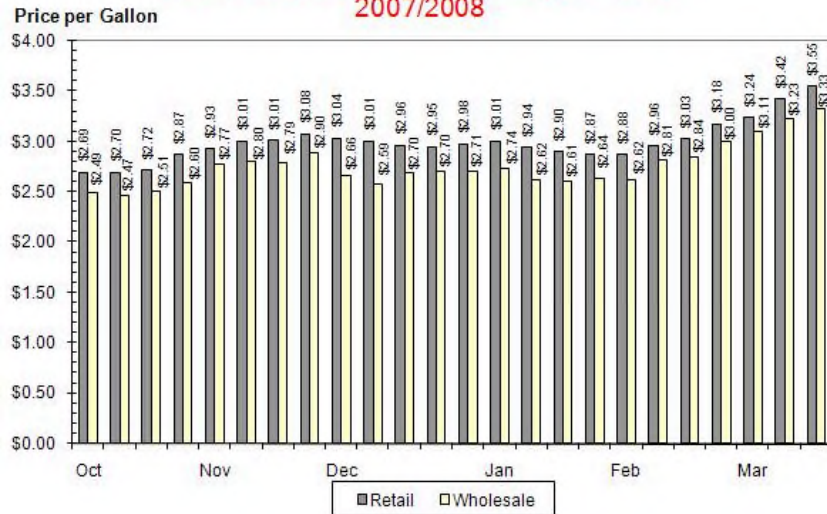
Four-Year Comparison of Average Wholesale Heating Oil Prices 2004/2005 to 2007/2008



Average Retail Prices Versus Average Wholesale Prices

A comparison shows that retail prices during the 2007/2008 heating season ranged from \$2.69 to \$3.55, while wholesale prices ranged from \$2.47 to \$3.33.

Retail Versus Wholesale Heating Oil Prices 2007/2008

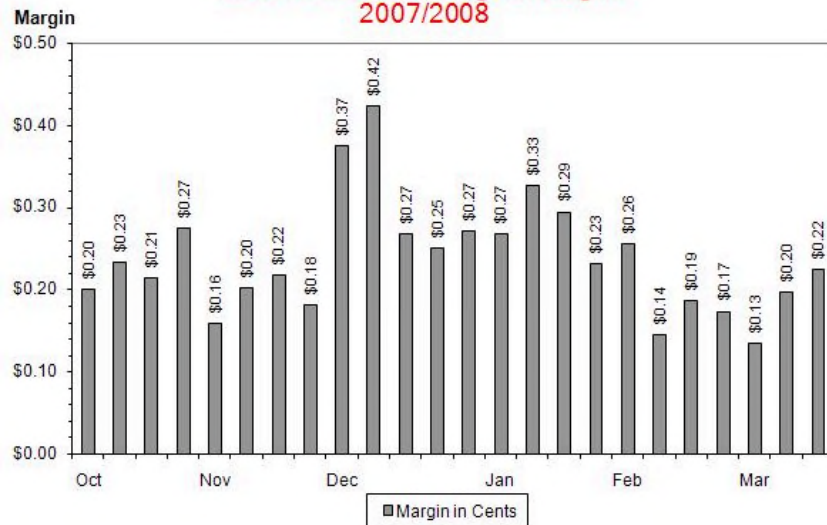


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Margins

The graph below shows the [rack-to-retail](#) margins per gallon of heating oil for each Monday's survey. During the 2007/2008 heating season, the margin ranged from 13 to 42 cents.

Rack-to-Retail Heating Oil Margins 2007/2008



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Residential Propane Prices

In the following sections, additional indicators of price volatility may be viewed. The indicators include the heating season's average price, the average price for the month of October, the weekly average price, the price range, the price spread, a multi-year wholesale price comparison, a retail/wholesale price comparison, and rack-to-retail margins.

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Heating Season's Average Price

The average home heating charge price for delivery of consumer grade propane, excluding taxes and cash discounts, in Nebraska for the 2007/2008 heating season was \$1.88 per gallon. The season average increased 43 cents from last season's average of \$1.45 and was 65 cents higher than the seven-year average of \$1.23 per gallon.

The season averages for the last seven years are listed in the following table:

Heating Season	Average Price	Percent Increase/(Decrease) From Prior Year
2007/2008	\$1.88	30%
2006/2007	\$1.45	(1%)
2005/2006	\$1.46	18%
2004/2005	\$1.24	28%
2003/2004	\$0.97	17%
2002/2003	\$0.83	8%
2001/2002	\$0.77	
Average Seven-Year Price	\$1.23	

October's Average Price

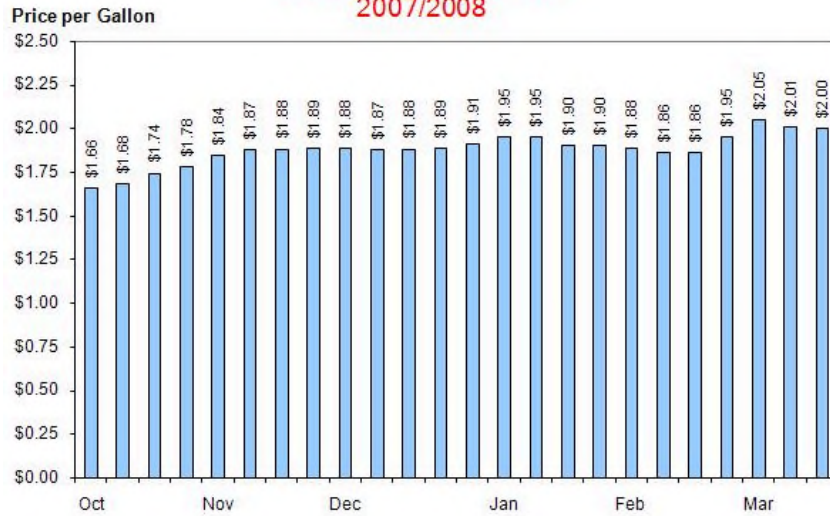
The average price of propane in October reflects weather conditions and the winter supply outlook. While weak La Nina conditions were observed in the Pacific, which is an indication of cold weather to come, the National Oceanic Atmospheric Administration maintained a forecast that included warmer-than-normal winter weather in 2007/2008. At the end of September, the Midwest Region had 23.2 million barrels of propane in stock, a level of inventory which was at the bottom boundary of the normal range. The Energy Information Administration estimates 25 million barrels in storage by the end of September to be a benchmark for the Midwest Region. In other words, 25 million barrels is considered adequate for winter's demand under most conditions. The average price for October was \$1.71, which was 52 cents higher than the seven-year average and 30 cents more than the previous October. The October averages for the past seven years are listed in the following table:

Heating Season	Average October Price	Percent Increase/(Decrease) From Prior Year
2007/2008	\$1.71	21%
2006/2007	\$1.41	(5%)
2005/2006	\$1.48	21%
2004/2005	\$1.22	27%
2003/2004	\$0.96	32%
2002/2003	\$0.73	(8%)
2001/2002	\$0.79	
Average Seven-Year October Price	\$1.19	

Weekly Average Price

The average price of propane remained fairly volatile during the 2007/2008 heating season with a small price spike at the beginning of March. The price spike was small in comparison to the spike shown on the wholesale price graph (farther below)

Average Propane Price 2007/2008

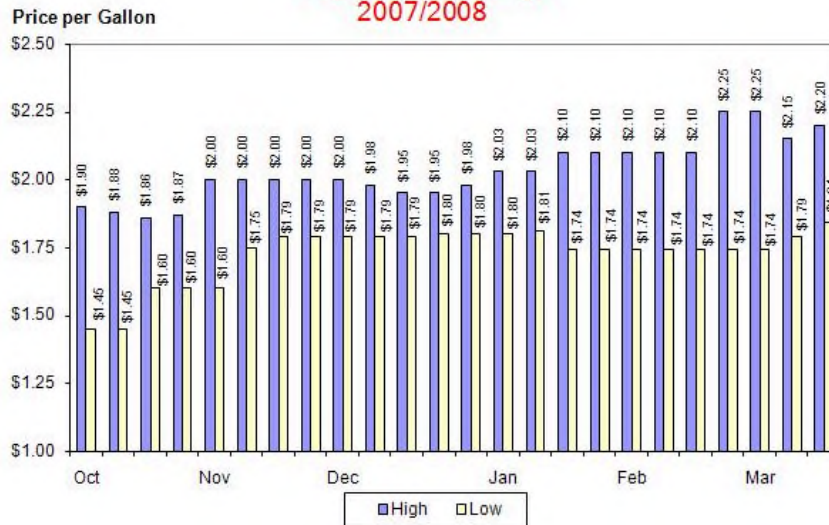


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Price Range

The high to low price range of propane from each Monday's survey is shown in the graph below. During the 2007/2008 heating season, the highest price ranged from \$1.87 to \$2.25, and the lowest price ranged from \$1.45 to \$1.84.

Propane Price Range 2007/2008

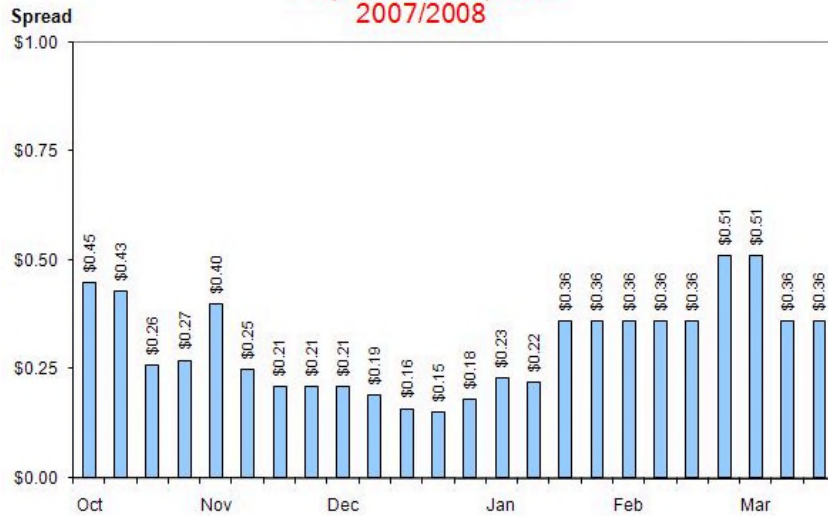


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Price Spread

The price spread between the high price and low price of each Monday's survey is shown in the graph below. During the 2007/2008 heating season, the price spread ranged from 15 cents to 51 cents.

Propane Price Spread 2007/2008

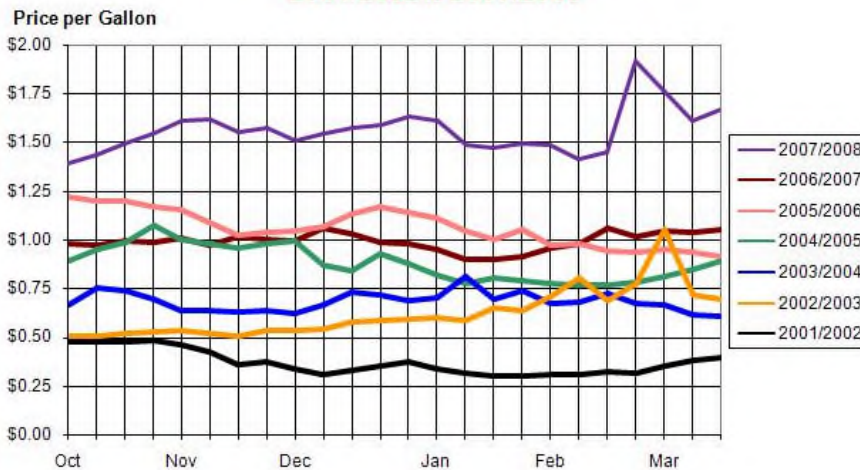


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Multi-Year Wholesale Price Comparison

The 2007/2008 heating season began with a wholesale propane price that was 41 cents higher than last year and 18 cents higher than two years ago when the 2005 market was dealing with nationwide supply disruptions in the aftermath of Hurricanes Katrina and Rita.

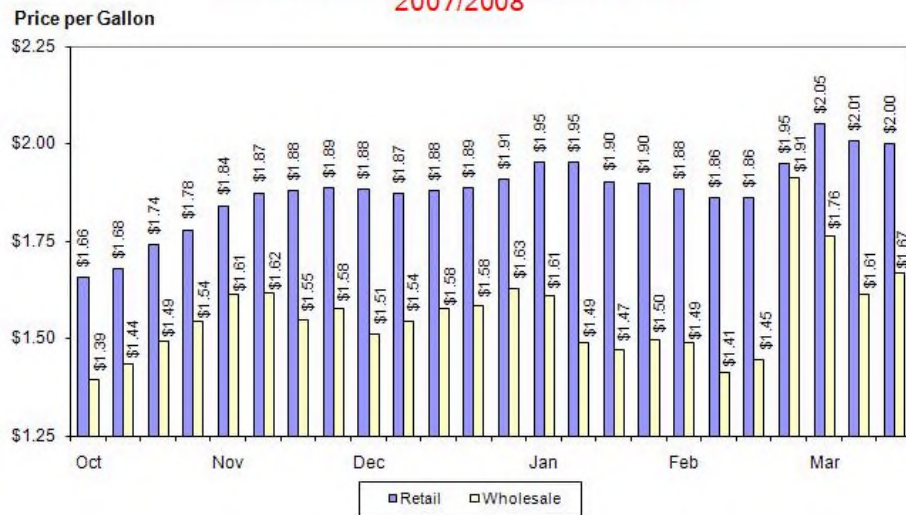
Seven-Year Comparison of Average Wholesale Propane Prices 2001/2002 to 2007/2008



Average Retail Prices Versus Average Wholesale Prices

During the 2007/2008 heating season, the retail propane price ranged from \$1.66 to \$2.05, while the wholesale price ranged from \$1.39 to \$1.91.

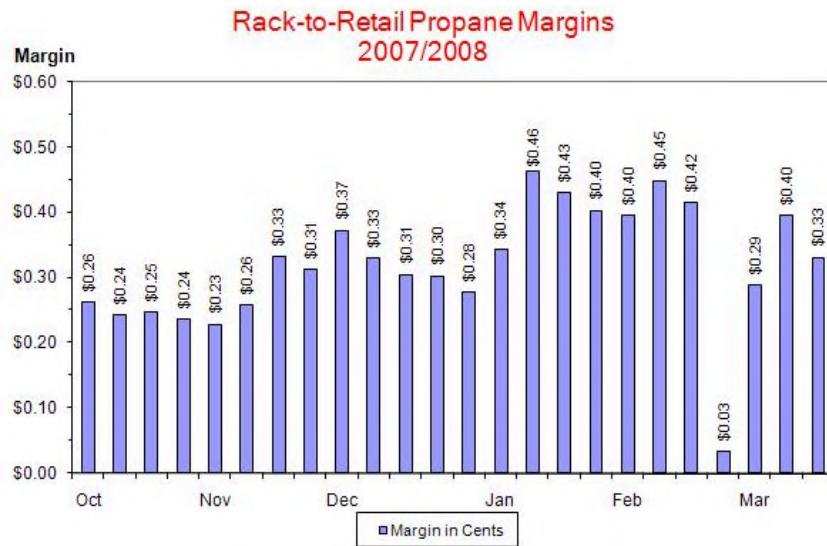
Retail Versus Wholesale Propane Prices 2007/2008



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Margins

The graph below shows the [rack](#)-to-retail margin per gallon of propane for each Monday's survey. During the 2007/2008 heating season, the margin ranged from three to 46 cents per gallon.



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Sources: State Heating Oil and Propane Survey and the Weekly Petroleum Status Report. Energy Information Administration, Washington, DC. Nebraska Energy Office, Lincoln, NE.

This report was completed on May, 2008.