



Commonwealth of Massachusetts

Division of Energy Resources

**State Heating Oil & Propane Program
Final Report
Winter 2005/2006**

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INTRODUCTION

During the 2005/06 heating season, the Massachusetts Division of Energy Resources (DOER) continued its annual participation in the US Department of Energy's *State Heating Oil and Propane Program* (SHOPP). SHOPP requires states to collect and monitor retail heating oil and propane prices from October through March. SHOPP augments existing DOER data collection efforts and serves several important purposes. The information provides policy-makers with timely, accurate and consistent data to monitor current heating oil and propane markets and develop, when necessary, appropriate state responses to potential fuel problems. The information also helps the federal and state governments respond to consumer, congressional and media inquiries regarding heating oil and propane.

The following report summarizes the results from the Massachusetts retail heating oil and propane price surveys, including supply and demand events that affected those markets. Also included are a seasonal overview and summary of how the SHOPP program is used to augment DOER functions.

Findings

- ***Hurricanes Disrupt US Oil and Gas Supplies Causing Price Spikes***
- ***Warm Winter Weather Cushions Heating Prices***
- ***Adequate Inventory Levels Helped Stabilize Prices***
- ***Heating Oil Prices Hit Historic High Levels***
- ***SHOPP Data Used To Support DOER Activities***

Hurricanes Disrupt US Oil and Gas Supplies Causing Price Spikes

The largest impact on winter prices happened in the fall of 2005. Gulf hurricanes, Katrina and Rita, shut down production at all the refineries in the region at the beginning of October. Spot crude oil prices immediately spiked to the \$70 mark. Shut-in oil production was equivalent to 90% of the daily oil production in the Gulf of Mexico, which is approximately 1.5 million barrels of oil per day. Several refineries were down for months and others returned slowly. By November, 53% of Gulf oil and 47% of natural gas production was still down, with recovery of all lost production not expected until the second quarter of 2006. The lack of and need to import more refined petroleum products, as opposed to crude oil supplies and prices, caused the resulting energy problem.

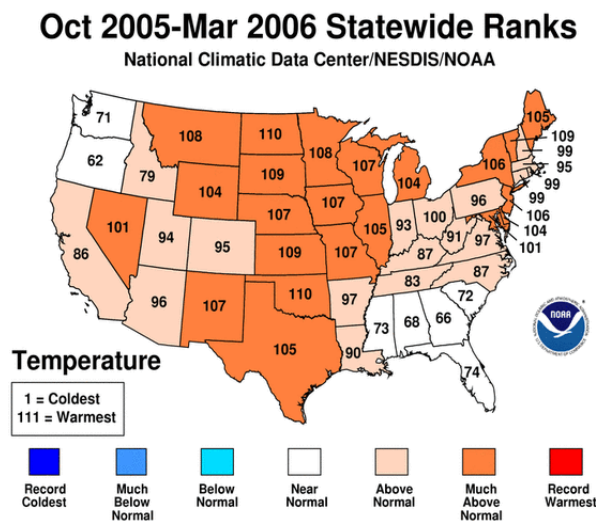
As a result of constrained petroleum supplies gasoline prices spiked to over \$3 in most of the country and other petroleum products began to spike. Heating oil prices reached \$2.64, 19% over the previous record high of \$2.21 recorded in April of 2005. Propane prices also rose due pipeline shutdowns and damage from the hurricanes.

Warm Winter Weather Cushions Heating Prices

Weather is one of the primary factors effecting heating demand; influencing available supplies and heating fuel prices. Warmer weather usually translates to lower demand and prices while colder weather translates to higher prices. Early season forecasts from the National Oceanic and Atmospheric Association (NOAA), predicted Massachusetts and the rest of New England had an equal chance for normal, above normal, and below normal temperatures.

As it happened, most of New England had warm winter temperatures. Massachusetts' temperatures were in the above normal range across the state. Overall this winter was about 10% warmer than normal. Across the US, most states also experienced warmer than normal temperatures. Figure 1 shows winter temperatures across the United States.

Figure 1



In addition to the warmer temperatures, Massachusetts also experienced below normal snowfall. This was a welcome respite from the past two heating seasons, where snowfall reached record levels in areas of Massachusetts, including Boston's record monthly snowfall in January 05.

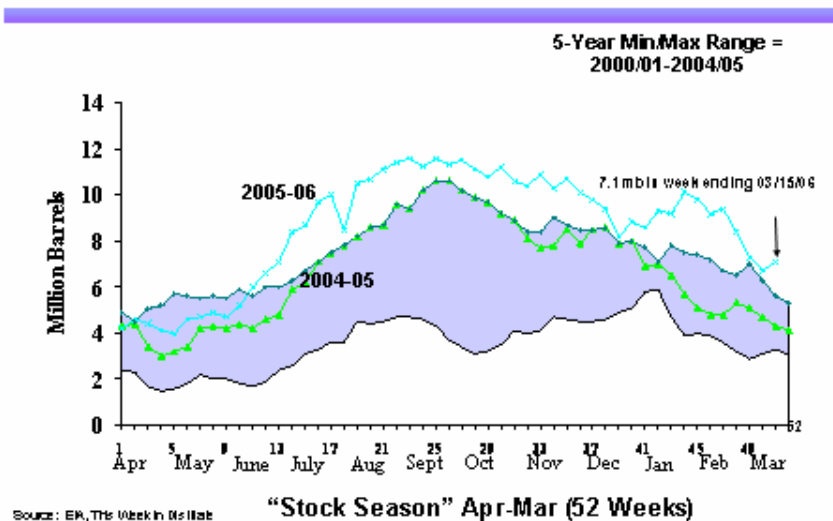
Adequate Inventories Levels Helped Stabilize Prices

Heating Oil

With the warmer winter weather, inventories for heating oil rose throughout the winter. Heating oil stocks started the heating season at 13% above last year's level and ended the heating at 51% above last year. At one

point in February, inventories rose to 96% above the previous year's levels. Figure 2 illustrates heating oil stock movement over the past year.

Weekly New England Heating Oil Stocks



Sales of No. 2 fuel oil (heating oil) in New England account for approximately 31% of total East Coast sales, with sales in Massachusetts accounting for 36% of total New England sales. Approximately 39% percent of homes in Massachusetts heat with fuel oil.

Propane

In the Northeast, propane demand is highly seasonal and its price is influenced by several factors including weather, inventory levels, and the price of crude oil and natural gas.

As the season began, propane stocks on the East Coast were 8% below last year's level. Propane inventory levels fluctuate throughout the winter. Only a few New England terminals store propane brought in by ships; the rest of the supply comes in by trucks. Caverns in New York and terminals in New Hampshire and Rhode Island are the primary sources of New England's propane.

Sales of propane in New England account for approximately 9% of total East Coast sales, with sales in Massachusetts accounting for 16% of total New England sales. Nearly 3% of homes in Massachusetts heat with propane.

Heating Fuel Prices Reach Record Levels

Heating Oil

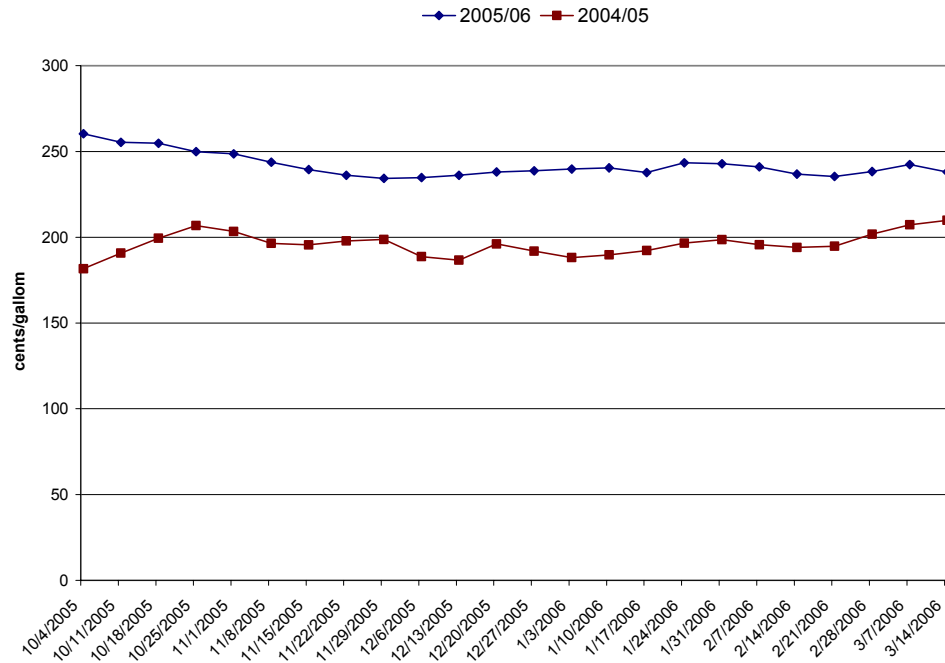
Despite the warm weather and surplus inventories, heating oil prices never receded to pre-hurricane levels, largely due to the continued fluctuations in crude oil prices.

In October 2005, WTI spot crude oil prices started the month at about \$65 per barrel. That price was \$15 per barrel more than the \$50 per barrel price of crude at the beginning of October 2004. Factors such as the high gasoline demand in the summer 2005; the damage to energy infrastructure from hurricanes at the end of the summer 2005; high global petroleum demand; and geopolitical uncertainty in petroleum producing countries led crude oil prices to rise to the \$65 per barrel level at the beginning of the winter 2005/06 heating season. By the end of October 2005, crude prices dropped to about \$60/barrel.

During November and December 2005, crude oil prices hovered around a couple of dollars above or below the \$60 level. But, in January 2006, the price started to increase to the \$67-68 range. With an unseasonably warm winter heating season, crude prices subsided somewhat in February to a low of \$59 per barrel, and during March, crude prices were about \$60-63 per barrel, but by the end of March, crude oil prices had increased to about \$66 per barrel.

Heating oil prices began the season at 23% higher than October 2004 at \$2.61. This was the peak price following the hurricanes. Prices started to drop after this peak as crude prices stabilized but never reached 2004/05 levels the rest of the winter. Prices fluctuated for most of the season in the \$2.40's. However, at the beginning of March, crude prices started rising again and heating oil prices followed. The high and low price, respectively, of the 2005/06 winter was \$2.61 per gallon compared to \$2.14 the previous year and \$2.33 compared to \$1.82. Figure 3 illustrates the price comparison for the past two winters.

Figure 3: Weekly MA Heating Oil Prices



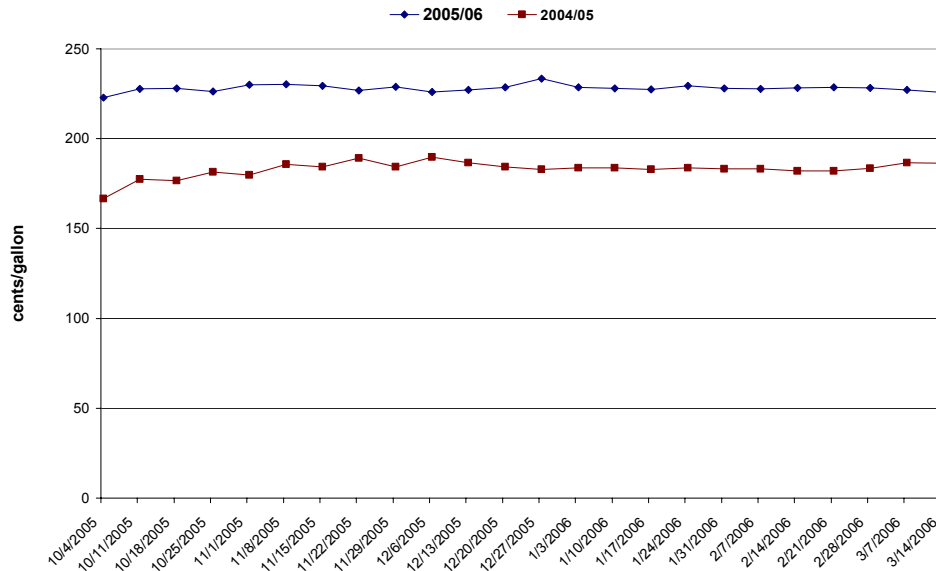
Overall, this winter's average price was 23% more than last year's. **The average price of \$2.42 is 45 cents higher than last year's average of \$1.97.**

Propane

Propane prices also started the season higher than the previous year. In October 2005, the retail price per gallon of propane began the heating season at \$2.23 compared to \$1.67 in October 2004, a 34% increase.

This winter's average propane price was 25% higher than last season. The high price of the winter was \$2.33 per gallon compared to \$1.90 last winter and the low was \$2.23 compared to \$1.67. Figure 4 compares the prices over that last 2 years.

Figure 4: Weekly MA Propane Prices



The average price per gallon for the winter 2005/06 was \$2.28 compared to \$1.83 last year.

This season's heating oil and propane prices reflect the vulnerability of heating fuels to supply disruption and market forces. In the past, a warm winter and high inventories lead to a drop in prices from the previous heating season. However, the Gulf Hurricanes coupled with continued high crude prices mitigated any decrease. Double digit percentage increases in prices over the past two seasons is an alarming trend for consumers.

SHOPP Data Used to Support DOER Activities

One of DOER's most important functions is to provide accurate and timely information on energy prices and supplies to the government, media and consumers of the Commonwealth. SHOPP is a valuable asset to the data collection and price monitoring activities involved in this function. It enables DOER to provide information to policy makers who must act quickly in the event of an emergency. This was particularly evident after the hurricanes in the Gulf caused price spikes at the beginning of the heating season.

DOER collects and posts pricing information from the SHOPP surveys for heating oil and propane on our website, www.mass.gov/doer. This information is updated weekly during the winter and monthly during the off-season. Numerous groups and consumers use these surveys to measure their prices. DOER's website also contains consumer tip sheets for fuel assistance, oil heat contracts, oil heat maintenance, and natural gas.

In addition to our own website, DOER maintains the Commonwealth's **Winterheating.com** website. Started in late 2001, Winterheating.com is part of the state's effort to coordinate information on the Commonwealth's Energy Services. Besides DOER, other agencies linked to the Winterheating.com

include DHCD, the Department of Telecommunications and Energy (DTE), and the Division of Standards.

DOER also uses the SHOPP information during the New England States' and Energy Industry Conference Calls. From October through March, DOER staff participates in weekly calls regarding the winter fuels situation. The calls are hosted by the New England Governors' Conference (NEGC) and participants include energy offices in New England and New York; energy industry representatives including the Northeast Gas Association, ISO-New England; the U.S. Coast Guard, Massachusetts Petroleum Council and the U.S. DOE. Participants exchange data about heating oil, natural gas and electricity winter supplies and prices.

As in every winter, DOER uses information from its SHOPP surveys and the NEGC calls to advise the Massachusetts Emergency Management Agency (MEMA) on whether it should issue driver hour waivers for truck drivers of heating fuels. Fortunately, the warmer weather meant no need for waivers this season.

Other meetings attended by DOER that utilize SHOPP data include the Massachusetts Department of Housing and Community Development's (DHCD) Energy Advisory Meetings. As part of its duties under its management of the Commonwealth's Weatherization Assistance Program (WAP), DHCD holds quarterly meetings on its weatherization and Low-Income Home Energy Assistance Program (LIHEAP), also known as fuel assistance. As a member of this group, DOER provides information on prices and supplies. DHCD briefs group members on the status of these federal programs including funds, allocations, and number of recipients.

DOER also continued its monitoring of the **Energy Benefits Task Force**. This task force meets throughout the year to develop marketing strategies for energy programs including fuel assistance, energy efficiency and utility discounts programs. Members of this group include gas and electric utilities, consumer advocates, state agencies (mainly DOER and DHCD), and community action agencies. This past year, the task force continued its "Energy Bucks" campaign raising public awareness about the aforementioned benefit programs. The utilities plan to continue this campaign through 2006.

The SHOPP program is a critical component in DOER's mission to provide accurate energy price information to the Commonwealth and its citizens. Massachusetts residents traditionally endure long and cold winters and knowing what prices are as well as where they are headed is extremely important. For these reasons, DOER looks forward to its continued participation in SHOPP.