

# Oilheat Price Analysis 2011

## Economics and Statistics Administration U.S. Department of Commerce

### SUMMARY

Pursuant to the requirements of the National Oilheat Research Alliance Act of 2000 (NOHRAA),<sup>1</sup> the Department of Commerce (Department) analyzed changes in oilheat prices relative to other energy sources. The report presents the relevant price data and concludes that oilheat prices did not exceed the threshold established by the Act.

### BACKGROUND

The National Oilheat Research Alliance (NORA) was established under NOHRAA to implement a coordinated national oilheat industry program of research and development, training, and consumer education. With regard to the Department's price analysis and restrictions, Section 708 of NOHRAA provides as follows:

#### **SEC. 708. MARKET SURVEY AND CONSUMER PROTECTION.**

(a) **PRICE ANALYSIS.**--Beginning 2 years after establishment of the Alliance and annually thereafter, the Secretary of Commerce, using only data provided by the Energy Information Administration and other public sources, shall prepare and make available to the Congress, the Alliance, the Secretary of Energy, and the public, an analysis of changes in the price of oilheat relative to other energy sources. The oilheat price analysis shall compare indexed changes in the price of consumer grade oilheat to a composite of indexed changes in the price of residential electricity, residential natural gas, and propane on an annual national average basis. For purposes of indexing changes in oilheat, residential electricity, residential natural gas, and propane prices, the Secretary of Commerce shall use a 5-year rolling average price beginning with the year 4 years prior to the establishment of the Alliance.

(b) **AUTHORITY TO RESTRICT ACTIVITIES.**--If in any year the 5-year average price composite index of consumer-grade oilheat exceeds the 5-year rolling average price composite index of residential electricity, residential natural gas, and propane in an amount greater than 10.1 percent, the activities of the Alliance shall be restricted to research and development, training, and safety matters. The Alliance shall inform the Secretary of Energy and the Congress of any restriction of activities under this subsection. Upon expiration of 180 days after the beginning of any such restriction of activities, the Secretary of Commerce shall again conduct the oilheat price analysis described in subsection (a). Activities of the Alliance shall continue to be restricted under this subsection until the price index excess is 10.1 percent or less.

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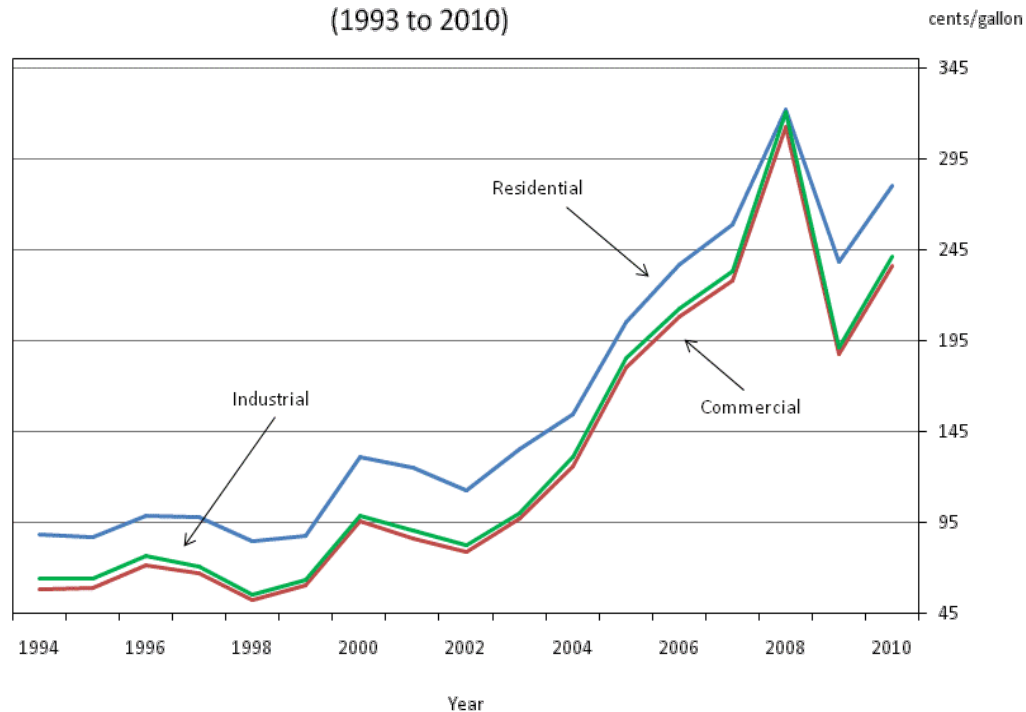
<sup>1</sup> See Pub. L. No. 106-469, title VII, 114 Stat. 2043 (2000).

## ANALYSIS

Annual energy prices from the U.S. Department of Energy's Energy Information Administration (EIA) are used to compare oilheat prices among oilheat users and to a composite energy price for residential electricity, residential natural gas, and residential propane.

Figure 1 shows that oilheat prices for residential users typically have been higher than for commercial or industrial users over time. Prices for all users rose rapidly between 2002 and 2008. Energy prices for residential consumers increased an average of 19.3 percent per year from 2002 to 2008, a period of rapid growth in energy prices. This was less than the average percentage increase in the average price for all oilheat consumers, which was 24.8 percent during the same time period. Since 2000, when NORA was established, the price of residential oilheat has increased a total of 145.5 percent through 2008, again with a majority of the growth occurring after 2002. In comparison, the total price increase between 2000 and 2008 for all oilheat prices was 208.6 percent. After a fall in prices in 2009, prices rose in 2010 and the price gap between residential and other users widened.

**Figure 1**  
**Consumer Grade Oilheat Prices by Sales Type**  
(1993 to 2010)

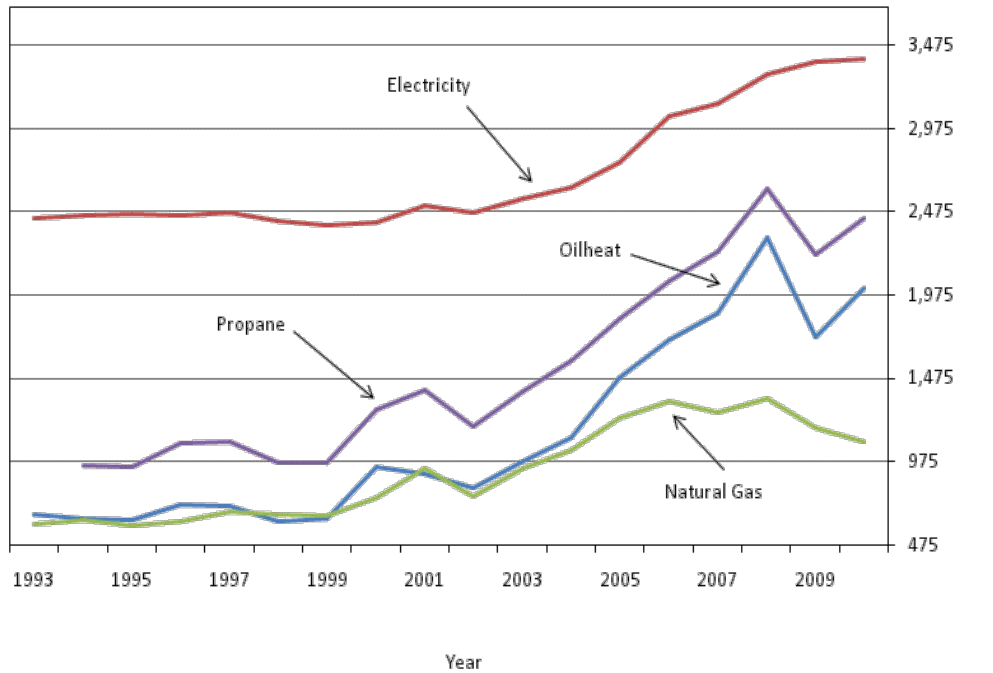


Source: Energy Information Administration, 2011

Residential oilheat prices and the prices of the energy sources that comprise the composite residential price index have all increased since NOHRAA was enacted (Figure 2). Prices for oilheat increased a total of 113.4 percent since 2000, a much more rapid increase than the other energy prices used to calculate the composite energy price index. Residential electricity prices and natural gas prices rose only modestly during this time period, by 40.5 percent and 44.2

percent respectively, since 2000. In contrast, residential propane prices increased nearly 90 percent since 2000.

**Figure 2**  
**Consumer Grade Oilheat Price and**  
**Residential Electricity, Natural Gas, and Propane Prices**  
 (1993 to 2010)



Source: Energy Information Administration, 2011

The ratio of the 5-year rolling average residential oilheat price to the residential composite energy price index covering the years 2000 to 2010 is presented in Table 1. As noted above, to calculate this, EIA's annual price data for residential electricity, residential natural gas, residential consumer grade propane, and residential oilheat<sup>2</sup> were used. Each energy source was then converted to MMBTUs, or million British Thermal Units. The composite energy price index for residential electricity, residential natural gas, and residential propane was weighted by household expenditures on each energy source.<sup>3</sup> Data used to calculate the weights that were applied to the 5-year rolling average composite price index were from EIA's 2005 Residential Energy Consumption Survey (RECS) (see Appendix 1 for more information on the energy price data, conversion rates, and composite energy price index weights used in this oilheat price analysis). The RECS is conducted every 4 years. The weights are recalculated whenever new data become available. The latest data from 2005 were published in 2009 and were used to calculate the weights for this analysis.

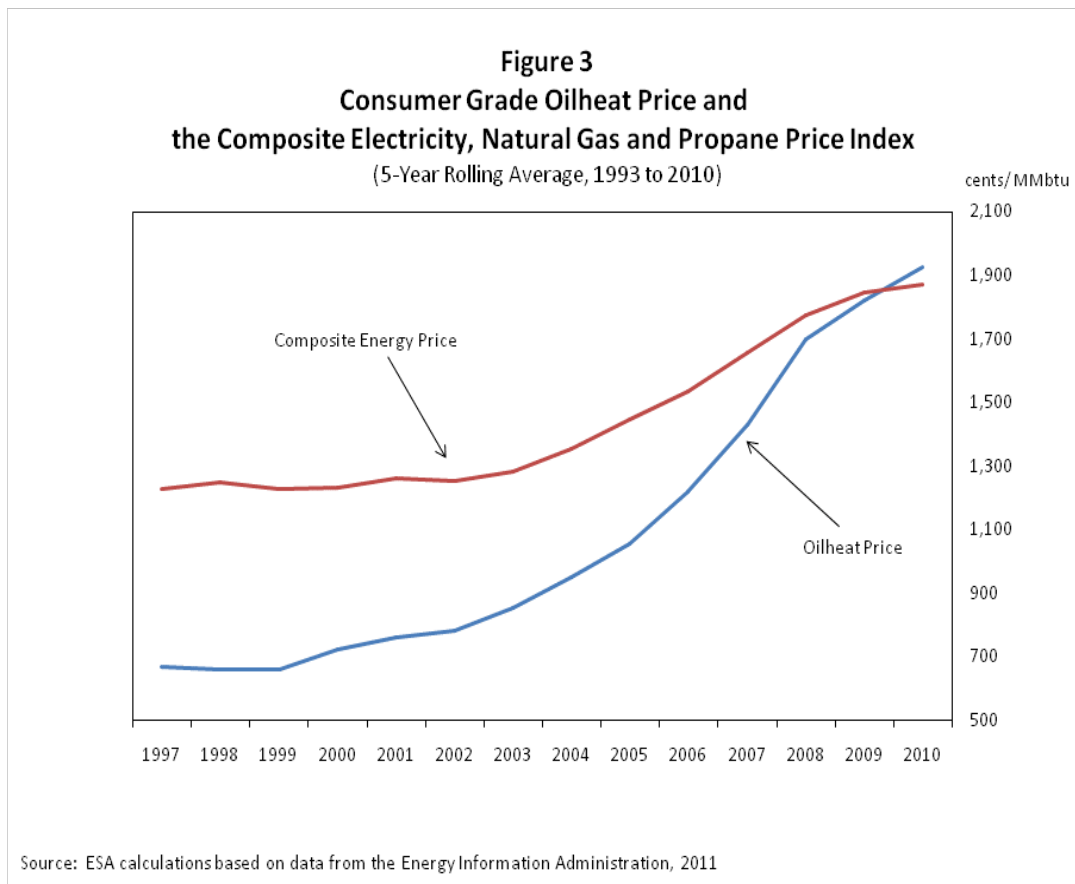
<sup>2</sup> The oilheat price used was the No. 2 Distillate Fuel Oil price for residential consumers.

<sup>3</sup> The weight for propane prices was based on household expenditures for Liquid Petroleum Gas.

**Table 1**  
**Ratio of Consumer Grade Oilheat Prices to Composite Index of Residential Electric, Natural Gas, and Propane Prices**  
 (2000 to 2010)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Oilheat price/ Composite price index</b>	0.59	0.60	0.62	0.67	0.70	0.73	0.79	0.86	0.96	0.99	1.03

This oilheat price analysis concludes that the ratio of the 5-year rolling average price index of residential consumer grade oilheat relative to the composite index of other residential energy sources increased from 0.59 in 2000 to 1.03 in 2010. These ratios have remained consistently below the threshold of 1.101 mandated under Section 708 of NOHRAA. However, the 5-year rolling average residential oilheat price is increasing more rapidly than the 5-year rolling average composite energy price index (Figure 3).



Pursuant to the Department’s reporting responsibility under Section 708 of NOHRAA, the Department will update this oilheat price analysis annually.

## **Appendix 1: Energy Information Administration Data Sources for Energy Prices and Composite Energy Price Weights**

Residential Electricity Prices: Table 5.3. Average Retail Price of Electricity to Ultimate Customers: Total by End-Use Sector (cents per kilowatt hour), Electric Power Monthly, [http://www.eia.doe.gov/cneaf/electricity/epm/table5\\_3.html](http://www.eia.doe.gov/cneaf/electricity/epm/table5_3.html). The conversion rate used was 3,412 BTUs per kilowatt hour \* 1,000,000.

Residential Natural Gas Prices: Annual U.S. Natural Gas Residential Price (dollars per thousand cubic feet), Natural Gas Navigator, <http://tonto.eia.doe.gov/dnav/ng/hist/n3010us3a.htm>. The conversion rate for converting cubic feet to BTUs varies by year.

Consumer Grade Oilheat Prices: No. 2 Distillate Prices by Sales Type (cents per gallon excluding taxes), [http://tonto.eia.doe.gov/dnav/pet/pet\\_pri\\_dist\\_dcu\\_nus\\_a.htm](http://tonto.eia.doe.gov/dnav/pet/pet_pri_dist_dcu_nus_a.htm). The conversion rate used was 5.285 BTUs per 42 gallons.

Residential Propane Prices: Table 14. U.S. Propane (Consumer-Grade) Prices by Sales Type (cents per gallon excluding taxes), Petroleum Marketing Monthly, [http://tonto.eia.doe.gov/dnav/pet/pet\\_pri\\_prop\\_dcu\\_nus\\_a.htm](http://tonto.eia.doe.gov/dnav/pet/pet_pri_prop_dcu_nus_a.htm), accessed November 2007. The conversion rate was 3.836 BTUs per 42 gallons.

Household Energy Expenditure Weights: Expenditure weights were based on share of expenditures by households that either used electricity, natural gas, or propane (liquid petroleum gas) for space and water heating, from the 2005 Residential Energy Consumption Survey: Household Energy Consumption and Expenditures Tables (see [http://www.eia.doe.gov/emeu/recs/recs2005/c&e/detailed\\_tables2005c&e.html](http://www.eia.doe.gov/emeu/recs/recs2005/c&e/detailed_tables2005c&e.html)) The calculated expenditure shares for electricity, natural gas and propane (liquid petroleum gas) were 0.24, 0.63 and 0.13, respectively.