Overview

• EIA expects higher average fuel bills this winter in states east of the Rocky Mountains.

• A return to a near-normal winter is the main driver of higher expenditures.

• Projected changes in residential prices from last winter are:
  – 1% higher natural gas prices
  – 2% lower electricity prices
  – 2% higher heating oil prices
  – 4% lower propane prices

• Forecast average household expenditures for heating oil users are at their highest level ever.
Heating fuel market shares vary regionally

Number of homes by primary space heating fuel and Census Region, winter 2012-13

Source: EIA Short-Term Energy Outlook, October 2012
Expenditures are expected to increase this winter (October 1–March 31) for all fossil fuels

<table>
<thead>
<tr>
<th>Fuel bill</th>
<th>Base case forecast</th>
<th>If 10% warmer than forecast</th>
<th>If 10% colder than forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating oil</td>
<td>19</td>
<td>7</td>
<td>32</td>
</tr>
<tr>
<td>Natural gas</td>
<td>15</td>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>Propane *</td>
<td>13</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Electricity</td>
<td>5</td>
<td>2</td>
<td>11</td>
</tr>
</tbody>
</table>

* Propane expenditures are a volume-weighted average of the Northeast and Midwest regions. All others are U.S. volume-weighted averages. Propane prices in warm and cold cases are not available.

Source: EIA Short-Term Energy Outlook, October 2012
Forecast fuel prices are close to last winter’s averages

% change in fuel price

- natural gas
- electricity
- heating oil
- propane

Source: EIA Short-Term Energy Outlook, October 2012
The U.S. winter 2012-13 heating season forecast is about 2% warmer than the 30-year average, but 18% colder than last winter.

Note: Horizontal bars indicate monthly average degree days over the period 1971-2000. Source: EIA calculations based on NOAA state history and forecasts (August 15, 2012) weighted by same-year populations.
Natural Gas
Higher natural gas consumption raises average fuel bills in the Midwest, Northeast, and South this winter

### Share of all U.S. households that use natural gas as primary space heating fuel

<table>
<thead>
<tr>
<th>Region</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>West</td>
<td>26%</td>
</tr>
<tr>
<td>South</td>
<td>23%</td>
</tr>
<tr>
<td>Midwest</td>
<td>31%</td>
</tr>
<tr>
<td>Northeast</td>
<td>20%</td>
</tr>
</tbody>
</table>

### Percent change from last winter (forecast)

<table>
<thead>
<tr>
<th>Consumption</th>
<th>Average price</th>
<th>Total expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>West</td>
<td>1</td>
<td>-3</td>
</tr>
<tr>
<td>20</td>
<td>-3</td>
<td>16</td>
</tr>
<tr>
<td>Midwest</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td>Northeast</td>
<td>17</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: EIA Short-Term Energy Outlook, October 2012
EIA expects residential natural gas prices to closely follow last winter’s prices

Source: EIA Short-Term Energy Outlook, October 2012
But, future natural gas prices remain highly uncertain

Source: EIA Short-Term Energy Outlook, October 2012, and CME Group
The probability of the January 2013 Henry Hub natural gas price being higher than $5.00 per MMBtu is about 5%.

Source: EIA Short-Term Energy Outlook, October 2012, and CME Group
EIA expects natural gas inventories to remain at high levels

Note: Normal range (colored band) represents the range between the minimum to maximum from Jan. 2007 to Dec. 2011.

Source: EIA Short-Term Energy Outlook, October 2012
Electricity
Winter electricity bill forecasts also higher because of return to near-normal colder weather east of the Rockies

| Share of all U.S. households that use electricity as primary space heating fuel | Percent change from last winter (forecast) |
|---|---|---|
| | Consumption | Average price | Total expenditures |
| West | 1 | 0 | 0 |
| South | 10 | -3 | 7 |
| Midwest | 10 | -1 | 10 |
| Northeast | 10 | -3 | 6 |

Source: EIA Short-Term Energy Outlook, October 2012
Heating Oil
EIA expects residential heating oil prices to average 2% higher this winter than last year, with prices expected to be around 4 dollars per gallon.

The graph shows the historical and forecasted home heating oil retail price and the Brent crude oil spot price from January 2008 to January 2013. The forecast indicates a continuation of the price trend.

Home heating oil retail price includes taxes.

Source: EIA Short-Term Energy Outlook, October 2012
The growing divergence between heating oil and natural gas prices slows this winter with heating oil price up 2% and natural gas price 1% higher

U.S. average residential winter heating fuel prices
dollars per million Btu

Source: EIA Short-Term Energy Outlook, October 2012
Heating oil prices remain uncertain due to their dependence on crude oil prices.
The probability of January 2013 heating oil wholesale price being higher than $3.50 per gallon is about 14%.

Source: EIA Short-Term Energy Outlook, October 2012, and CME Group
Going into winter, distillate inventories remain at the low end of their normal range

Note: Normal range (colored band) represents the range between the minimum to maximum from Jan. 2007 to Dec. 2011.

Source: EIA Short-Term Energy Outlook, October 2012
EIA expects gasoline prices will fall from the recent peak, with regular gasoline prices this winter averaging about 4 cents per gallon higher than last winter.

Regular gasoline retail price includes state and federal taxes.

Source: EIA Short-Term Energy Outlook, October 2012
Over the last 8 winters, residential heating oil prices have increased more than retail gasoline prices.

Retail gasoline – heating oil price difference (dollars per gallon)

Source: EIA Short-Term Energy Outlook, October 2012, and CME Group
Forecast propane expenditures also higher than last winter because of colder weather and increased demand.
Propane inventories remain near the high end of their historical range during the upcoming winter.

Note: Normal range (colored band) represents the range between the minimum to maximum from Jan. 2007 to Dec. 2011.

Source: EIA Short-Term Energy Outlook, October 2012
For more information


Short-Term Energy Outlook | www.eia.gov/steo

Annual Energy Outlook | www.eia.gov/aeo

International Energy Outlook | www.eia.gov/ieo

Monthly Energy Review | www.eia.gov/mer