

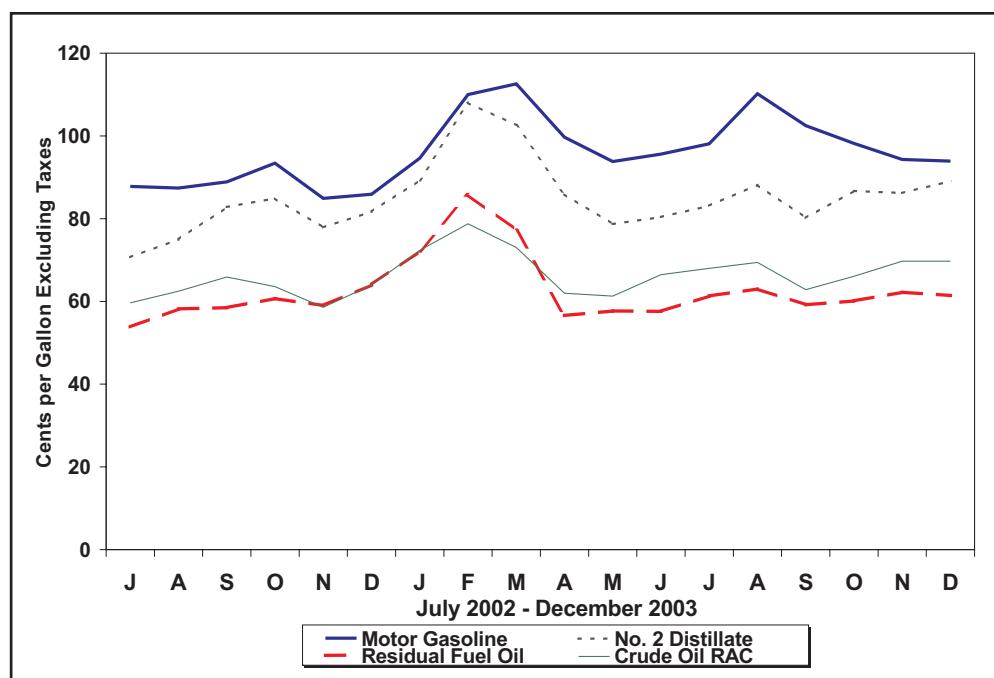
# Highlights

Ongoing solid demand for petroleum products in Asian markets and low U.S. crude oil inventories helped lead world crude oil prices higher in December. Improved economic conditions in Asian markets, particularly China, have stimulated a significant increase in demand for crude oil and other petroleum products during 2003. Continued robust demand from China influenced international crude oil price trends again in December, helping to underpin the higher range of prices. Weather also had an impact on the direction of prices, particularly a spate of cold and inclement weather at mid-month in the Northeastern United States. Combined with inventory reports that showed sizable declines in crude oil stock levels in the largest oil consuming market in the world, the cold temperatures provided an additional layer of support for higher crude oil prices. Political issues played a less prominent role in the direction of prices during December. Values for benchmark streams showed little reaction to the Organization of Petroleum Exporting Countries (OPEC) December 4 decision to maintain official production output at 24.5 million barrels per day. The group added that it would not revisit the issue again until a February 10 meeting in Algeria. Prices also registered little reaction to the capture of Saddam Hussein by U. S. troops on December 13, despite some initial optimism that his capture would reduce attacks on Iraqi oil production facilities and pipelines.

Crude oil and petroleum product prices in the United States increased in December as market attention focused on the decline of crude oil stocks to long-term lows. While some of the decline can be attributed to year-end tax issues, crude oil imports have been between 9.0 and 9.5 million barrels per day in November and

December. Generally, market observers believe imports of approximately 10 million barrels per day are needed to avoid constricted supplies. By the end of the month, the Energy Information Administration (EIA) weekly inventory data put commercial crude oil stocks (supplies excluding Strategic Petroleum Reserve volumes) at 270.7 million barrels, 700,000 barrels above the Lower Operational Inventory (LOI). EIA defines the LOI as "indicative of a situation where inventory-related supply flexibility could be constrained or nonexistent." Forecasts for, and the arrival of cold temperatures and inclement weather also played a part in rising crude oil and product prices. Colder weather typically promotes interest in distillates that usually leads to higher prices, which was the case in December. However, with distillate supplies at comfortable levels because of warm temperatures in October and November, prices did not experience exceptional changes. While gasoline supplies were adequate, prices contin-

**Figure HL1. Crude Oil and Petroleum Product Wholesale Prices**



Sources: Energy Information Administration. Crude oil refiner acquisition cost: Form EIA-14, "Refiners' Monthly Cost Report"; petroleum product prices: Form EIA-782A, "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report."

**Table HL1. U.S. Refiner Prices and Volumes of Petroleum Products**

(Prices: Cents per Gallon Excluding Taxes, Volumes: Million Gallons per Day)

Products	Sales to End Users						Sales for Resale					
	December 2003		November 2003		December 2002		December 2003		November 2003		December 2002	
	Price	Volume	Price	Volume	Price	Volume	Price	Volume	Price	Volume	Price	Volume
<b>Motor Gasoline</b> .....	106.5	63.4	109.5	63.8	98.1	63.1	93.9	312.3	94.3	305.5	85.9	304.8
<b>Conventional</b> .....	102.0	34.5	104.1	35.0	95.4	35.1	90.6	208.3	90.0	203.7	82.8	200.4
Regular .....	99.2	27.0	101.4	27.1	92.4	26.8	89.0	173.6	88.4	171.0	81.2	164.5
Midgrade .....	108.3	4.1	109.5	4.4	101.4	4.6	95.6	11.3	95.1	11.3	87.3	11.6
Premium .....	116.2	3.4	118.3	3.4	109.8	3.8	99.4	23.4	99.8	21.4	91.3	24.3
<b>Oxygenated</b> .....	109.2	3.9	113.0	3.9	98.9	3.7	97.5	12.1	99.1	11.4	87.0	11.5
Regular .....	106.2	3.0	109.9	3.0	95.5	2.8	96.0	9.5	97.7	9.0	85.4	8.9
Midgrade .....	114.7	0.6	118.8	0.6	106.2	0.5	98.9	1.4	99.8	1.3	88.5	1.4
Premium .....	124.4	0.4	129.6	0.4	115.7	0.3	107.2	1.2	110.0	1.1	97.0	1.2
<b>Reformulated</b> .....	112.2	25.0	116.5	25.0	101.7	24.3	100.8	91.8	103.4	90.3	92.6	92.9
Regular .....	107.7	18.0	112.1	18.0	97.4	17.3	98.1	70.4	100.6	69.3	89.6	69.0
Midgrade .....	119.0	3.2	123.1	3.1	108.8	3.3	106.3	5.9	109.9	5.7	98.8	6.9
Premium .....	127.4	3.9	131.7	3.9	116.0	3.7	111.1	15.5	114.1	15.3	102.5	17.1
<b>Aviation Gasoline</b> .....	146.4	0.1	W	W	139.8	0.1	124.4	0.4	124.4	0.4	113.2	0.4
<b>Kerosene-Type Jet Fuel</b> .....	92.9	45.4	87.9	43.9	81.1	45.9	91.2	11.5	87.1	11.4	79.9	14.0
<b>Propane (Consumer Grade)</b>	61.2	3.0	55.8	2.7	49.9	2.7	64.9	50.6	58.7	40.4	53.3	45.3
<b>Kerosene</b> .....	NA	0.2	120.9	0.1	115.2	0.2	97.0	3.5	89.4	2.9	87.9	3.9
<b>No. 1 Distillate</b> .....	103.3	0.4	101.9	0.3	94.5	0.4	100.7	2.6	100.2	2.3	93.9	2.8
<b>No. 2 Distillate</b> .....	93.7	18.6	91.4	18.8	86.2	20.8	89.1	131.7	86.2	123.0	81.7	130.0
No. 2 Fuel Oil .....	94.5	2.8	89.1	2.6	87.5	3.6	88.6	24.4	84.2	18.1	80.8	33.5
No. 2 Diesel Fuel .....	93.6	15.8	91.8	16.2	85.9	17.2	89.2	107.3	86.5	104.9	82.0	96.5
Low Sulfur .....	96.2	10.5	94.0	10.9	88.2	11.5	89.7	88.1	87.1	88.7	82.4	84.4
High Sulfur .....	88.4	5.3	87.2	5.3	81.4	5.7	86.9	19.2	83.5	16.2	79.0	12.1
<b>No. 4 Fuel<sup>a</sup></b> .....	84.5	0.5	77.7	0.3	81.1	0.4	W	W	80.3	0.0	71.9	0.3
<b>Residual Fuel Oil</b> .....	66.8	10.8	66.7	8.2	62.0	12.7	61.4	11.3	62.2	5.7	64.1	9.5
Sulfur Content not > 1 % .....	79.3	3.5	76.7	2.5	73.9	3.9	66.5	6.3	67.0	2.4	67.6	5.3
Sulfur Content > 1 % .....	60.7	7.3	62.2	5.7	56.6	8.8	54.9	5.0	58.8	3.4	59.7	4.2

NA = Not available.

W = Withheld to avoid disclosure of individual company data.

<sup>a</sup> Includes No. 4 fuel oil and No. 4 diesel fuel.

Notes: Motor gasoline averages and totals prior to October 1993 include leaded gasoline.

Notes: Values shown for the current month are preliminary. Values shown for previous months are revised. Data are final upon publication in the *Petroleum Marketing Annual*.

Source: Energy Information Administration Form EIA-782A, "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report."

ued to be influenced by the ban of MTBE in gasoline as of January 1, 2004 in California, New York, and Connecticut. Although gasoline blendstock prices declined on both coasts, prices for ethanol, the oxygenate mandated for use in both states, continued at high levels, supporting higher prices for the finished gasoline in those markets. A look at New York Harbor spot market prices helps to illustrate price trends during the final month of 2003. The monthly average price for regular gasoline was 88.5 cents per gallon in December 2003, 88.2 cents per gallon last month, and 80.8 cents per gallon in December 2002. The average price for No. 2 heating oil was 89.1 cents per gallon in December 2003, 83.5 cents per gallon in November 2003, and 82.1 cents per gallon in December 2002. At Cushing, Oklahoma, the December 2003 monthly average price for West Texas Intermediate crude oil was \$32.13 per

barrel, compared with \$31.11 per barrel last month, and \$29.46 per barrel in December 2002.

Additional December market and sales activity for crude oil and the principal petroleum products are summarized in the following sections.

## Crude Oil

After opening December at \$29.89 per barrel, its lowest level for the month, the daily spot price for West Texas Intermediate (WTI) crude oil at Cushing, Oklahoma continued to rise steadily during the coming weeks as pressure from shrinking inventories and colder temperatures spurred it upwards. The price moved higher as weekly inventory reports showed crude stocks

dropping to long-term lows. The price reached its high of \$33.72 per barrel on December 18, the day after the Energy Information Administration released data showing an inventory decline of more than 5 million barrels. The price eased modestly during the final days of the month, and closed December at \$32.51 per barrel, \$2.62 higher than where it began the month.

- December monthly average crude oil prices rose from November levels. The average domestic crude oil first purchase price increased \$1.32 (4.9 percent), to \$28.53 per barrel.
- The average free-on-board (f.o.b.) cost of imported crude oil rose 50 cents (1.9 percent), to \$26.51 per barrel. The average landed cost of foreign crude oil increased 75 cents (2.7 percent), to \$28.34 per barrel.
- The average refiner acquisition cost for domestic crude oil climbed 72 cents (2.4 percent), to \$30.27 per barrel. The average cost of imported crude oil to U.S. refiners rose \$1.16 (4.2 percent), to \$28.63 per barrel, while the composite refiner acquisition cost for crude oil increased \$1.00 (3.5 percent), to \$29.28 per barrel.

motor gasoline marketers, the national average price at company-operated retail outlets fell 2.2 cents to \$1.063 per gallon. The average wholesale price remained at 94.6 cents per gallon. The average dealer tank wagon (DTW) price fell 1.1 cents to \$1.000 per gallon, while the average rack price inched up 0.5 cent to 93.1 cents per gallon. The average price for bulk sales increased 0.4 cent to 84.4 cents per gallon. The difference between reformulated gasoline and conventional gasoline prices declined to 8.5 cents at the retail level and 8.8 cents at the wholesale level. Oxygenated gasoline prices were 5.9 cents more than conventional gasoline prices at retail, and 6.7 cents higher at wholesale.

- Refiner motor gasoline sales increased slightly in December. Total sales rose 6.4 million gallons per day (1.7 percent), to an average of 375.7 million gallons per day. Retail sales decreased 400,000 gallons per day (0.6 percent), while wholesales climbed 6.8 million gallons per day (2.2 percent). Rack sales formed 67.8 percent of wholesales, while DTW and bulk sales accounted for 18.4 percent and 13.8 percent, respectively. RFG made up 31.1 percent of total motor gasoline sales, while oxygenated gasoline explained 4.3 percent of sales.

## Petroleum Products

### *Motor Gasoline*

The December daily spot price for regular gasoline at New York Harbor, while less volatile than in November, remained in an unsettled mode. Opening at its lowest point for the month, 83.8 cents per gallon, the price rose fitfully during the coming weeks as factors such as low inventories, still-brisk demand, and supply issues exerted their influence. Concern about the possibility of supply shortages caused by the impending ban on gasoline containing MTBE in several states underpinned the price during the last week of the month. After reaching its high of 95.8 cents per gallon on December 30, the price closed the month at 94.5 cents per gallon, more than 10 cents above December's opening level.

- December monthly average gasoline prices show modest changes from November levels. The average price for retail sales of motor gasoline by refiners decreased 3.0 cents to \$1.065 per gallon, while the average wholesale price declined 0.4 cent to 93.9 cents per gallon. Including data reported by a sample of

### *No. 2 Distillate*

Along with the general upward trend seen in market prices caused in large part by shrinking crude oil inventories, the arrival of cold weather helped propel the daily spot price for No. 2 heating oil at New York Harbor higher in December. After opening at 82.3 cents per gallon, its lowest level for the month, the price rose during the following weeks as predictions for cold temperatures in the Northeast were realized and two storms hitting the region on successive weekends. The price dropped sharply after reaching the month's high of 95.7 cents per gallon on December 18, but rebounded during the final days of the month. Closing at 88.8 cents per gallon, the price was 6.5 cents higher than where it began December.

- Monthly average prices for No. 2 distillates rose across the board in December. Once again the national average residential sales price for No. 2 distillate experienced the largest increase, climbing 5.7 cents to \$1.340 per gallon. The average wholesale price rose 2.9 cents to 89.8 cents per gallon. The average price for No. 2 diesel fuel at company-operated retail outlets rose 1.0 cent, while the average No. 2 diesel fuel wholesale price increased 2.7 cents. The spread between low- and high-sulfur diesel fuel

prices was 3.3 cents at retail and 2.9 cents at wholesale.

- Refiner sales of No. 2 distillates climbed in December. Total sales rose 8.5 million gallons per day (6.0 percent), to 150.3 million gallons per day. Sales of No. 2 fuel oil jumped 6.5 million gallons per day (31.4 percent), while sales of No. 2 diesel fuel increased 2.0 million gallons per day (1.7 percent). Low-sulfur diesel fuel made up 80.1 percent of all refiner diesel fuel sales, and 65.6 percent of all refiner No. 2 distillate sales.

### ***Residual Fuel Oil***

- The direction of monthly average prices for residual fuel oil were mixed in December. Refiner prices for low-sulfur residual fuel oil increased 2.6 cents to 79.3 cents per gallon at retail, but fell 0.5 cent to 66.5 cents per gallon at wholesale. The average retail price for high-sulfur residual fuel oil declined 1.5 cents to 60.7 cents per gallon, while the wholesale price decreased 3.9 cents to 54.9 cents per gallon. Including data reported by a sample of residual fuel oil marketers, the average price for low-sulfur residual fuel oil increased 2.6 cents to 76.5 cents per gallon at retail, and 0.9 cent to 66.8 cents per gallon at wholesale. The retail price for high-sulfur residual fuel oil declined 1.6 cents to 60.8 cents per gallon, while the wholesale price fell 3.2 cents to 59.3 cents per gallon.

- Residual fuel sales by refiners jumped in December. Total sales rose 8.2 million gallons per day (59.0 percent) to 22.1 million gallons per day. Low-sulfur residual fuel sales increased 4.9 million gallons per day (100.0 percent), while high-sulfur residual fuel oil sales rose 3.2 million gallons per day (35.2 percent).

### ***Other Products***

- December monthly average prices for the remaining surveyed products generally increased. Refiner propane prices rose 5.4 cents per gallon at retail and 6.2 cents per gallon at wholesale. Including data from a sample of propane marketers, the average residential propane price climbed 6.2 cents per gallon. The average retail price increased 7.4 cents per gallon, while the average wholesale propane price rose 6.0 cents per gallon. Prices for kerosene-type jet fuel and No. 1 distillate rose at both levels, while the retail price for No. 4 distillate also showed an increase. The wholesale price for aviation gasoline remained flat in December, while it increased for kerosene.
- Refiner sales of these products largely rose in December. Sales of propane, kerosene, kerosene-type jet fuel, and No. 1 distillate increased at both levels. Sales of No. 4 distillate rose at retail, while sales of aviation gasoline fell at the wholesale level.