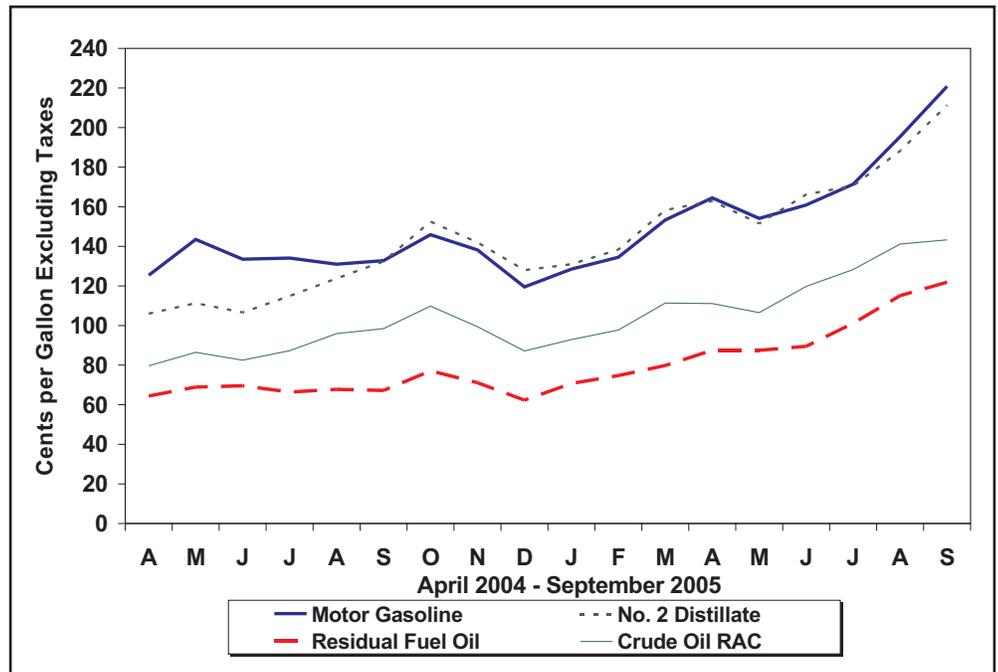


# Highlights

International crude oil prices remained volatile during September. Inclement weather in the Gulf of Mexico continued to dominate oil price trends throughout world markets. The impact of Hurricane Katrina on oil production, refining, and transportation infrastructure in the region was exacerbated the arrival of Hurricane Rita in late-September. The effect of the two storms caused prices for many key crude oil streams to fluctuate significantly. Following Hurricane Katrina, the International Energy Agency (IEA) announced a plan on September 2 to release two million barrels per day of oil products for an initial period of 30 days to help stabilize markets. The Agency further noted that "Although the initial impact of the storm was regional, the implications for the oil market are global." Following a meeting in Vienna, Austria on September 19-20, the Organization of Petroleum Exporting Countries (OPEC) announced that it would use its spare production capacity only when market prices and global economic stability warranted the increase. Further, if the group deemed the increase necessary, the step-up in production would only be in effect for three months, starting 1 October 2005. At the time of the meeting, prices for key streams had dropped from the record-setting highs seen at the end of August as markets were better able to assess the impact from Hurricane Katrina. Additionally, reports of recent moderation in demand from China and India also influenced prices. However, crude oil prices throughout world markets jumped again as the threat of Hurricane Rita began to emerge in the latter part of the month. Although prices for most non-U.S. benchmark streams dropped following a downgrade in the storm's strength, many of those prices remained within historically high ranges at the end of September.

In the United States, crude oil and refined product prices opened September at historic highs throughout regional markets in the aftermath of Hurricane Katrina. As of September 1, ten refineries in Louisiana (eight), Mississippi (one), and Alabama (one) were completely shut down, while many more refineries in those states and in states as far away as Illinois, Indiana, and Ohio were running at reduced capacity. The reduction or shut down of operations were the results of electrical power outages and storm-related damage in the Gulf Coast states, and the disruption in the supply of crude oil in other states. The loss of electricity also affected the movement of crude oil at the Louisiana Offshore Oil Port (LOOP), and several crude oil and refined products pipelines serving markets on the East Coast and the Midwest. However, by the end of the second week of the month only five refineries remained completely offline and pipeline operations had been substantially restored. In response to the refined products supply

**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					
	September 2005		August 2005		September 2004		September 2005		August 2005		September 2004	
	Price	Volume	Price	Volume	Price	Volume	Price	Volume	Price	Volume	Price	Volume
<b>Motor Gasoline</b> .....	242.1	59.4	207.9	62.7	145.0	57.3	220.8	316.2	195.4	345.7	132.8	317.1
<b>Conventional</b> .....	238.2	34.1	203.3	36.2	141.2	33.8	217.2	211.4	192.1	233.1	129.5	213.4
Regular .....	236.2	28.9	201.4	30.5	138.7	27.4	215.7	183.8	190.6	201.1	128.1	182.3
Midgrade .....	245.1	3.0	209.0	3.3	147.7	3.6	221.2	11.1	198.9	13.0	133.8	11.0
Premium .....	255.1	2.2	219.0	2.5	156.7	2.9	230.4	16.5	203.7	19.0	140.6	20.1
<b>Oxygenated</b> .....	238.5	1.8	210.4	1.8	147.4	1.7	219.9	8.7	200.9	8.7	135.9	8.9
Regular .....	236.2	1.5	209.3	1.5	145.3	1.4	218.8	7.1	200.2	7.1	134.6	7.2
Midgrade .....	248.8	0.2	212.6	0.2	154.0	0.2	221.0	1.0	202.4	1.1	135.9	1.0
Premium .....	255.0	0.1	220.2	0.1	164.5	0.1	231.7	0.6	208.5	0.5	149.0	0.7
<b>Reformulated</b> .....	248.1	23.6	214.5	24.7	150.8	21.8	228.9	96.1	202.4	103.9	140.0	94.9
Regular .....	244.6	18.3	211.1	19.1	146.7	16.2	226.4	79.3	200.1	86.2	137.4	75.1
Midgrade .....	255.6	2.6	222.2	2.7	157.8	2.5	236.0	3.8	208.7	4.2	145.2	5.1
Premium .....	263.9	2.7	229.9	2.9	166.3	3.2	242.1	13.0	215.5	13.5	151.6	14.6
<b>Aviation Gasoline</b> .....	280.7	0.1	238.6	0.1	187.8	0.1	267.4	0.6	230.5	0.7	165.8	0.6
<b>Kerosene-Type Jet Fuel</b> .....	210.2	44.6	185.3	48.0	133.4	45.9	206.6	16.2	185.1	15.0	132.6	13.1
<b>Propane (Consumer Grade)</b> .....	130.8	1.9	110.1	2.3	85.9	2.6	107.8	30.1	93.2	26.9	80.4	37.3
<b>Kerosene</b> .....	NA	NA	203.2	0.0	W	W	218.7	1.2	194.2	1.6	140.9	1.5
<b>No. 1 Distillate</b> .....	227.5	0.2	201.6	0.2	147.3	0.1	220.7	0.9	195.3	0.6	145.8	0.7
<b>No. 2 Distillate</b> .....	217.4	19.7	193.7	19.9	134.7	20.0	211.3	144.5	188.2	153.3	132.3	139.8
No. 2 Fuel Oil .....	207.6	2.1	186.1	2.0	129.9	2.1	198.2	17.0	177.8	19.6	127.0	15.3
No. 2 Diesel Fuel .....	218.5	17.6	194.5	17.9	135.3	17.9	213.0	127.5	189.7	133.7	133.0	124.5
Low Sulfur .....	222.5	12.3	197.1	12.2	137.8	12.2	214.2	111.8	190.5	117.5	133.8	107.8
High Sulfur .....	209.3	5.3	188.9	5.7	130.0	5.7	204.1	15.7	184.0	16.2	127.8	16.7
<b>No. 4 Fuel<sup>a</sup></b> .....	182.1	0.1	W	W	110.1	0.1	169.1	0.0	152.0	0.0	111.5	NA
<b>Residual Fuel Oil</b> .....	125.2	10.4	110.6	10.7	77.5	8.9	121.9	3.5	115.1	3.4	67.9	4.4
Sulfur Content not > 1 % .....	138.4	4.3	129.2	3.9	90.3	3.1	140.2	1.8	133.1	2.0	76.5	1.9
Sulfur Content > 1 % .....	115.8	6.1	100.0	6.8	70.7	5.8	103.6	1.7	90.7	1.4	61.8	2.6

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."

disruption, the Environmental Protection Agency (EPA) initially implemented a temporary waiver of clean air standards covering volatility and sulfur content of fuels in certain parts of the country through September 15. The agency later extended the waiver through October 5. Further, the EPA announced waivers for reformulated gasoline (RFG) in the Houston and Dallas/Ft. Worth, Texas areas on September 21. The EPA also extended an earlier RFG waiver for Richmond, VA until September 30. While prices had begun to moderate toward the middle of the month, the threat of Hurricane Rita to the Gulf Coast halted the decline. By September 23, most crude oil and natural gas production in the region were shut down again in prepara-

tion for the storm. Hurricane Rita made landfall on September 24, as a Category 3 storm on the Texas-Louisiana border. Several refineries in Texas sustained storm-related damage from Hurricane Rita, adding to existing refinery outages caused by Hurricane Katrina. At the close of September, seven refineries in Louisiana and Texas with a total processing capacity of 1,715,700 barrels per day were not operating, and several crude oil and refined products pipelines were not operational or were running at reduced levels. Further, numerous natural gas pipeline operating companies declared force majeure due to storm-related damage, many of which were still in ef-

fect at the close of the month. According to the Minerals Management Service (MMS), the cumulative shut-in oil production for the period between August 26 and September 30 amounted to 7.5 percent of yearly production of oil in the Gulf of Mexico. A look back at average spot market prices for various products at New York Harbor reflects September events. The September 2005 monthly average price for regular gasoline was \$2.130 per gallon compared with \$1.937 in August, a difference of 19.3 cents. The average price for September 2004 was \$1.261 per gallon, a difference of 86.9 cents (68.9 percent.) For No. 2 fuel oil, the September 2005 price was \$1.966 per gallon compared with \$1.804 per gallon in August, reflecting a 16.2-cent increase. Compared with the year-ago price, \$1.257 per gallon, the price increased 70.9 cents (56.4 percent.) The West Texas Intermediate (WTI) crude oil price averaged \$65.58 per barrel in September 2005, compared with \$64.99 per barrel last month and \$45.94 per barrel in September 2004.

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

## Crude Oil

While it retreated from its all-time high set in late August, the daily spot price for WTI crude oil at Cushing, Oklahoma remained volatile during September. Opening at \$68.63 per barrel, the price immediately moved to its monthly high of \$62.90 per barrel driven by storm-related disruption to production and refining operations in the Gulf Coast region. The price began a fitful decline after that, hitting the month's low of \$62.91 per barrel on September 16. However, the price surged immediately afterward due to fears concerning Hurricane Rita. In the aftermath of the storm, the price remained disquieted through the end of the month. Closing September at \$66.21 per barrel, the price was \$2.42 below its opening level.

- September monthly average crude oil prices increased modestly from August levels. The average domestic crude oil first purchase price rose 81.0 cents (1.4 percent) to \$59.60 per barrel.
- The average free-on-board (f.o.b.) cost of imported crude oil increased \$1.09 (1.9 percent), to \$58.32 per barrel. The average landed cost of foreign crude oil rose 1.0 cent, to \$58.33 per barrel.

- The average refiner acquisition cost for domestic crude oil climbed \$2.27 (3.7 percent), to \$62.84 per barrel. The average cost of imported crude oil to U.S. refiners rose \$14.0 cents (0.2 percent), to \$58.80 per barrel, while the composite refiner acquisition cost for crude oil increased 89.0 cents (1.5 percent), to \$60.18 per barrel.

## Petroleum Products

### *Motor Gasoline*

The daily spot price for regular gasoline at New York Harbor experienced drastic changes during September, principally due to uncertainty about supplies and production of gasoline. After opening at \$3.265 per gallon, the price declined substantially, dropping to \$2.888 per gallon as the market adjusted to the aftermath of Hurricane Katrina. It continued to register significant declines through mid-month and reached its low of \$1.830 per gallon on September 16. However, the price began to register significant increases again as the likelihood of Hurricane Rita striking the Gulf Coast became more apparent. After Rita's landfall on Saturday, September 24, the price rose as high as \$2.293 per gallon during the following week. Easing to \$2.095 per gallon at the month's close, the price had dropped substantially from the levels seen during the first days of September.

- Monthly average gasoline prices rose sharply again in September. The average price for retail sales of motor gasoline by refiners surged 34.2 cents to \$2.421 per gallon, while the average wholesale price climbed 25.4 cents to \$2.208 per gallon. Including data reported by a sample of motor gasoline marketers, the national average price at company-operated retail outlets jumped 35.3 cents to \$2.438 per gallon. The average wholesale price for gasoline rose 25.9 cents to \$2.219 per gallon. The average dealer tank wagon (DTW) price jumped 27.0 cents to \$2.293 per gallon, while the average rack price increased 24.1 cents to \$2.208 per gallon. The average bulk sale price leaped 29.5 cents to \$2.113 per gallon. Reformulated gasoline prices were 9.1 cents more than conventional gasoline prices at retail, and 11.3 cents more at wholesale. Oxygenated gasoline prices were 3.2 cents below conventional gasoline prices at retail, but 1.1 cents higher at wholesale.

- Refiner sales of motor gasoline fell in September. Total sales declined 32.8 million gallons per day (8.0 percent) to an average of 375.6 million gallons per day. Retail sales dropped 3.3 million gallons per day (5.3 percent), while wholesales fell 29.5 million gallons per day (8.5 percent). Rack sales amounted to 69.9 percent of wholesales, while DTW and bulk sales made up 14.8 percent and 15.3 percent, respectively. Reformulated gasoline accounted for 31.9 percent of total motor gasoline sales, while oxygenated gasoline made up 2.8 percent of sales.

### *No. 2 Distillate*

Like prices for crude oil and other refined products in the complex, the daily spot price for No. 2 heating oil at New York Harbor experienced significant fluctuations during September. After opening at \$2.050 per gallon, the price recorded the month's high of \$2.177 per gallon on the first day of the September. Followed the general sharp decline seen in oil product prices during the coming day, the price reached the month's low of \$1.765 per gallon on September 12. Rising appreciably after that point as the threat of Hurricane Rita grew, the price topped \$2.00 per gallon again during the last week of the month. Closing at \$2.051 per gallon, the price was essentially level with its opening point.

- September monthly average prices for No. 2 distillates registered substantial increases from August rates. The national average residential sales price rose 23.5 cents to \$2.416 per gallon. The average wholesale price climbed 23.2 cents to \$2.123 per gallon. The average price for No. 2 diesel fuel at company-operated retail outlets increased 29.6 cents, while the average wholesale price for No. 2 diesel fuel rose 23.6 cents. The margin between low- and high-sulfur diesel fuel prices was 10.7 cents at retail, and 7.6 cents at wholesale.
- Sales of No. 2 distillates by refiners declined in September. Total sales decreased 9.0 million gallons per day (5.2 percent), to 164.2 million gallons per day. Sales of No. 2 fuel oil dropped 2.5 million gallons per day (11.6 percent), while sales of No. 2 diesel fuel fell 6.5 million gallons per day (4.3 percent). Low-sulfur diesel fuel accounted for 85.5 percent of all refiner diesel fuel sales, and 75.6 percent of all refiner No. 2 distillate sales.

### *Residual Fuel Oil*

- Monthly average residual fuel oil prices increased significantly during September. Refiner prices for low-sulfur residual fuel oil rose 9.2 cents to \$1.384 per gallon at retail, and 7.1 cents to \$1.402 per gallon at wholesale. The average refiner retail price for high-sulfur residual fuel oil climbed 15.8 cents to \$1.158 per gallon, while the wholesale price increased 12.9 cents, to \$1.036 per gallon. Including data reported by a sample of residual fuel oil marketers, average prices for low-sulfur residual fuel oil increased 11.8 cents to \$1.375 per gallon at retail, and 10.1 cents to \$1.281 per gallon at wholesale. The retail price for high-sulfur residual fuel oil rose 14.8 cents to \$1.166 per gallon, while the wholesale price increased 10.9 cents to \$1.082 per gallon.
- Overall, refiner sales of residual fuel oil increased modestly in August. Total sales rose 300,000 gallons per day (2.2 percent). Low-sulfur residual fuel oil sales remained flat, while high-sulfur residual fuel oil sales climbed 500,000 gallons per day (6.5 percent).

### *Other Products*

- Prices for the remaining surveyed products increased substantially during September. Refiner prices for propane jumped 20.7 cents per gallon at retail, and 14.6 cents per gallon at wholesale. Including data from a sample of propane marketers, the average residential propane price climbed 17.6 cents per gallon, while the average retail price rose 17.0 cents per gallon. The average wholesale propane price increased 13.7 cents per gallon. Prices for kerosene-type jet fuel, aviation gasoline, and No. 1 distillate rose at both the retail and wholesale levels. The wholesale price for kerosene also registered a large increase for September.
- Refiner sales of these products were mixed during September. Sales of propane and kerosene-type jet fuel fell at retail, but rose at wholesale. Aviation gasoline sales declined at both levels, while sales of No. 1 distillate increased at both retail and wholesale. Sales of kerosene and No. 4 distillate declined at the wholesale level.