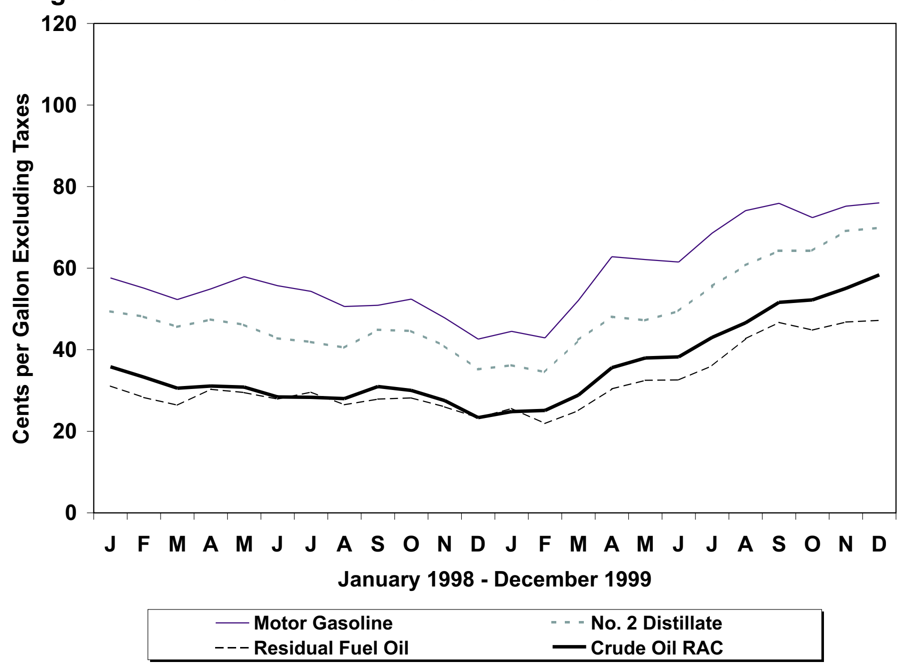
Highlights
1999 Year in Review

International crude oil prices experienced notable increases during 1999, as fundamental market conditions changed significantly over the year. Throughout the first two months of the year, prices languished as several factors including abundant stocks of both crude oil and finished products, slow demand, and warm winter temperatures in the Northern Hemisphere dominated market trends. Lackluster demand for all petroleum products in key markets helped sustain glutted inventories and prevented any meaningful recovery for prices. Consequently, refining margins shrank to unprofitable levels and led to reduced refinery runs. The cutback in runs decreased draws on crude oil stocks, which in turn affected prices. Plentiful wellhead production, particularly in Organization of Petroleum Exporting Countries (OPEC) nations, exacerbated the effects of saturated stockpiles on prices despite efforts during 1998 to reduce output. However, by March the downward trend halted principally due to news of another production cut agreement among members of OPEC (subsequently known as the Hague Pact). The agreement called for a 1.7 million barrels-per-day reduction in output, effective April 1 and slated to last one year. Iraq was not included in the accord. In addition, non-OPEC exporters Mexico, Norway, Oman, and Russia pledged production cuts totaling nearly 400,000 barrels per day. Declines in finished product stocks in European and North American markets provided additional momentum to rising prices. By the end of the first quarter of the year, the average price for a basket of world crude oil streams had risen approximately four dollars per barrel from its opening level.

Prices continued to flourish during April as the OPEC-sponsored production cut agreement went into effect. While the significant increases seen during March did not take place in April, prices remained within a higher overall range. Notably, the considerable price increases that occurred in March and April were not based on explicit fundamental factors, but were in response to the concerted effort by producers to address the continuing glut of crude oil in world markets. Data show that abundant crude oil stocks remained throughout world markets and no exceptional increase in demand during the first quarter of the year was evident. Prices eased during May as the effects from the production cuts began to dissipate and pressure from other elements began to color market trends. Substantial finished product inventories stemming from slower-than-expected consumer demand and ro-

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."

bust refinery output began to exert greater influence on crude oil prices as refining margins began to be constricted. More specifically, crude oil prices in key regional markets began to keep pace, or sometimes exceed, some finished product prices. Pressure also emerged from the political arena when the U.N. Security Council passed the sixth installment of the "oil-for-food" program with Iraq. Resolution 1242 permitted Iraq to produce and export up to $5.26 billion of crude oil and other petroleum products during a 180-day period beginning May 25. In addition, while information concerning upstream operations signaled improved rates of compliance to the reduced quotas set in the OPEC production agreements, evidence emerged that Nigeria appreciably exceeded its quota during May. However, the effects of these events were short-lived and prices resumed their ascent in June. To address thin profit margins and abundant stocks of finished commodities, production runs were cut at some European refining facilities. Simultaneously, run cuts and breakdowns at a number of refineries in the United States slowed production of finished products. Along with rising consumer demand for gasoline in the U.S., these factors helped steer crude oil prices back onto a rising path.

At the start of the second half of the year, the effort to reduce crude oil output continued to affect prices. By July participants in the production cuts agreement moved closer to targeted values. With declines in finished product stocks, particularly gasoline, crude oil prices continued on an upward path. More robust prices for finished products improved refining margins, which in turn led to increased refinery runs that bolstered demand for crude oil. Additionally, signs of recovery in some Asian economies lifted hopes that demand for petroleum products would begin to return to pre-October 1997 patterns. Declining stock levels for all petroleum products, comparatively lower refinery utilization rates than typical for this time of year in key markets, and producer restraint continued to lead crude oil prices higher through the rest of the summer. In September, prices for many key streams reached their highest levels since early 1997. Spot market prices for West Texas Intermediate and Brent streams had more than doubled the values seen in February. Reduced crude oil production and exports from major suppliers remained the central factor behind the substantial growth in prices. With this evidence supporting the effort to reduce output in order to cultivate higher prices, OPEC resolved to continue the revised quotas for another six months during its quarterly meeting at the end of September. Maintenance on oil production facilities in the North Sea continued to hold output in check and provided further support for prices.

However in a sudden change of pace, prices dipped sharply during the first half of October. The substantial declines were driven primarily by technical factors associated with investments in commodities markets that trickled down through cash markets. Preliminary reports suggesting higher wellhead output rates for participants in the OPEC-sponsored production cut agreements in recent months appeared to spark the drop in prices. With the possibility of more product reaching the market, the opportunity to make appreciable gains on holdings appeared less likely to investors. Additionally, a call early in the month for sales from the U.S. Strategic Petroleum Reserve exacerbated the effects of the production output reports. Other factors including reports of rising crude oil stocks in the United States, decreasing demand due to declining refining margins in both the U.S. and Europe, and predictions that output from OPEC and other sources would increase during the final quarter of 1999 furthered the downturn in prices. In particular, the U.N. Security Council passed resolution 1266, granting Iraq permission to sell an additional $3 billion of crude oil to make up for the shortfall of revenue allowed under resolutions 1210 and 1153. Yet that deviation from the general upward trend seen for most of the year was short-lived and prices rose considerably during November. Several participants expressed interest in extending the OPEC production cuts past the end of the agreement slated for March 2000. Added impetus came from disruption to the U.N. "oil-for-food" program. The Iraqi government rejected a short-term extension of phase VI of the program, objecting on the belief that the decree was designed to help keep other Gulf War sanctions in place. Iraq halted oil exports on November 24. Further, civil unrest in Nigeria disrupted oil production and exports during the first half of the month. Additionally, threats of a strike by Venezuelan oil workers along with inclement weather in the Caribbean that interfered with production and transportation facilities in the region added pressure on prices in international markets. Political matters and fundamental market conditions continued to animate prices in December. Early in the month, the stalemate between the United Nations and Iraq continued to pressure prices, but by December 10 the Security Council approved a new 180-day term to begin on December 12. Further, the Council passed another resolution that lifted the monetary cap included in previous phases of the program.

Finally, the production cuts agreements continued to play a primary role in market dynamics. More comments by representatives of several participating nations checked discussion of raising output before the established expiration date and heightened the effect on prices of information indicating crude oil stocks in major markets continued to decline in December.

In the United States, crude oil and finished product prices increased substantially over the year. Following the general decline in 1998, elements critical to a more solid foundation for market prices began to coalesce during 1999. Besides rising world crude prices, falling product stock levels and growing demand for refined products proved to be the principle variables in this context. Other influential factors ran the gamut from weather-related problems to difficulties with refinery and delivery systems to international political concerns. Additionally, spells of thin refining profit margins here and abroad (caused by faster increases in crude oil prices compared with finished product prices) which led to reduced refinery runs affected market prices.

At the beginning of the year, weekly reports showing a marked decline in crude oil stocks combined with inclement winter weather lifted product prices during the first half of January. Tensions with Iraq during the same period also supported rising prices. However, during the latter half of January and continuing well into February, crude oil and finished products' prices fell throughout the country as stock levels rose. High refinery use during the initial part of January concurrent with a spate of winter storms that reduced demand for gasoline directly contributed to the increase in stocks. Additionally, a period of unseasonably warm temperatures in February stifled demand and helped soften prices. By mid-February, prices for heating fuels hit record-setting lows across the country. Because of sagging prices, copious product stockpiles, and comparatively slack demand for finished products, numerous refineries were put into turnaround or lowered production runs. Talk of more cutbacks in refinery runs and promised crude oil production cuts from major international producers at the end of the month set the stage for the surge in prices that occurred in March. While news of the latest OPEC production cuts agreement underpinned crude oil prices here and abroad, refinery problems in California caused finished product prices to rise sharply in that market. The situation also affected prices in markets across the country. As the monetary incentive to supply this market grew, producers diverted product normally bound for other regions. In Northeastern markets, distillate prices picked up as forecasts for colder temperatures and inclement winter weather materialized. Further, supply data showed an overall decline in distillate stocks.

After the virtually unimpeded growth seen during seen during March, prices entered a less dynamic phase during the second quarter of the year. During this period, crude oil prices provided the foundation for other products' prices to remain at some of their highest monthly average levels in more than a year. Generally, commitment to cutting crude oil output by major producer nations underpinned the market during this period. Notably, a comparison of spot market prices for West Texas Intermediate crude at Cushing, Oklahoma and No. 2 heating oil at New York Harbor in April showed only a fine difference between the two, and illustrates the effect of abundant stocks and comparatively slack demand on prices. In May, all prices declined throughout the month chiefly due to rising inventories. Nevertheless, by June price trends shifted again. Prices were lifted by many factors including declining wellhead production, unscheduled refinery maintenance, reduced refinery runs, and steady decreases in gasoline stocks. A large month-to-month increase in demand for gasoline in addition to these issues also bolstered prices. June data show that stocks of finished gasoline registered the first year-on-year decline since September 1997. Refinery problems and supply difficulties, particularly on the West Coast, continued to be the driving forces behind price increases between July and September. Gasoline prices generally experienced the largest increases for finished products as demand during the height of the summer driving season climbed and stocks dropped steadily. Additionally, refining margins reached their highest level in two years during the first week of August and continued to be ample in most regions through September.

Concern over OPEC's actual wellhead production rate during the initial days of October caused all of the major products to undergo significant losses. Gasoline prices sustained the largest declines, since weekly stocks reports showed an increase in inventories in addition to the pressure from higher international crude oil production rates. By mid-month, prices regained some lost ground as problems at various refineries and product transportation systems cropped up across the country. A fire in a distillate line on the Plantation pipeline system disrupted product throughput for the rest of the month. The Olympic pipeline in the Pacific Northwest continued to encounter problems following repairs to sections damaged in a fatal explosion and shipments were reduced by 20 percent. By November the early-October declines were forgotten amid soaring prices for all products. Contributing factors ran the gamut from hurricanes to continuing problems with refineries and pipelines to international political concerns that affected oil production and exports. Flourishing demand for refined products, which underpinned prices during the preceding several months, continued to support the upward trend in prices during November. In the closing month of the year, prices did not encounter the large increases sustained in November, but remained within the highest range since the winter of 1996/97. The temporary cessation of Iraqi crude oil exports provided some support for prices at the beginning of the month. Yet declining stocks continued to act as a primary determinant behind price increases as it had throughout the year. At the close of 1999, the contrast between year-on-year spot market prices at New York Harbor was striking. The monthly average price for West Texas Intermediate crude oil at Cushing, Oklahoma was $11.35 per barrel in December 1998 and $26.28 in December 1999. The same disparity is reflected in the prices for products: 30.7 cents per gallon versus 70.3 cents per gallon for regular gasoline, and 31.3 cents per gallon compared with 67.1 cents per gallon for No. 2 heating oil.

Crude Oil

Animated by lower production rates from major international crude oil exporters and shrinking stockpiles throughout international markets, the daily spot price for West Texas Intermediate (WTI) crude oil at Cushing, Oklahoma rose significantly during 1999. After opening the year at $12.42 per barrel, the price continued to be pressured by high stock levels of all major petroleum products and warm winter temperatures during the first few months of the year. The price hit the year's low of $11.38 per barrel on February 16. Spurred by more seasonal temperatures and information that a new OPEC-sponsored production cut agreement was in the offing, the price rose solidly throughout March. Despite some comparatively short-lived periods of decline, the price continued to increase firmly during the rest of the year due largely to decreases in crude oil and finished product stocks. It reached its high of $28.03 per barrel on November 22 as disruptions to the U.N.-sponsored "oil-for-food" program led to a temporary halt to crude oil exports from Iraq. Easing slightly during the final weeks of year, the price closed at $25.76 per barrel, slightly more than double the level at which it began 1999.

- Yearly average crude oil prices for 1999 rose significantly from 1998 levels in all categories of sales. The average domestic crude oil first purchase price increased $4.68 (43.0 percent), to $15.56 per barrel.

- The average free-on-board (f.o.b.) cost of imported crude oil shows the largest change, rising $5.71 (53.1 percent), to $16.47 per barrel. The average landed cost of foreign crude oil increased $5.39 (45.5 percent), to $17.23 per barrel.

- The average refiner acquisition cost of domestic crude oil rose $4.72 (35.8 percent), to $17.90 per barrel. The average cost of imported crude oil to U.S. refiners climbed $5.22 (43.4 percent), to $17.26 per barrel. The composite refiner acquisition cost of crude oil in the United States increased $4.99 (39.9 percent), to $17.51 per barrel.

Petroleum Products

Motor Gasoline

Fostered by pivotal changes in fundamental market conditions during the year, the daily spot price for regular gasoline at New York Harbor increased considerably during 1999. Opening the year at 35.2 cents per gallon, the price ebbed during the coming weeks as bearish influences including robust stock levels and slow demand dominated the market. After reaching the low of 29.0 cents per gallon on February 16, the price began to rebound as developments including unexpected refinery problems and cutbacks in runs due to poor margins occurred. During the spring and summer months, concerns about stock levels and production rates, in addition to stronger demand, supported a significant price rise. After experiencing a sharp drop at the beginning of October, the price rebounded during the final quarter as periodic reports indicating considerable declines in stock levels appeared along with problems at several refineries. The year's high of 75.8 cents per gallon–the highest price in more than two years— was reached on November 24. Closing the year at 65.3 cents per gallon, the price was 30.1 cents higher than where it began 1999.

- 1999 average gasoline prices rose considerably from 1998 levels. The average price for retail sales of motor gasoline by refiners increased 10.8 cents to 78.1 cents per gallon, while the average wholesale price rose 11.9 cents to 64.5 cents per gallon. Including data reported by a sample of motor gasoline marketers, the national average price at company-operated retail outlets climbed 10.1 cents, to 76.5 cents per gallon. The average wholesale price increased 11.5 cents, to 64.5 cents per gallon. The average dealer tank wagon (DTW) price for motor gasoline increased 12.2 cents, to 72.7 cents per gallon. The average rack price rose 11.8 cents to 62.1 cents per gallon. The average bulk sales price increased 9.4 cents to 54.9 cents per gallon. The average difference between reformulated and conventional gasoline prices was 7.8 cents at retail and 9.2 cents at wholesale. The variation between conventional and oxygenated gasoline prices was 6.6 cents at retail and 8.5 cents at wholesale.

- While trends for refiner sales of finished motor gasoline were mixed across the various categories, overall, sales rose in 1999. Total sales rose 5.2 million gallons per day (1.4 percent), to an average of 368.9 million gallons per day. Retail sales declined 1.3 million gallons per day (2.1 percent), while wholesale increased 6.5 million gallons per day (2.2 percent). Rack sales formed 63.4 percent of refiner wholesale gasoline volumes, while DTW and bulk sales made up 23.5 percent and 13.1 percent, respectively. Reformulated gasoline (RFG) accounted for 31.8 percent of total motor gasoline sales, while oxygenated gasoline made up 3.0 percent of sales.

No. 2 Distillate

The daily spot price for No. 2 heating oil at New York Harbor followed a very dynamic path during 1999. After beginning the year at 34.6 cents per gallon, the price fell to a record-setting low of 28.4 cents per gallon on February 16 as the effects of mild winter temperatures and brimming stocks took their toll. But the price rose as colder temperatures arrived in the Northeast in March, and followed the overall upward pattern seen for other products during the spring and summer months. By the final quarter of the year, as the winter heating season began again, the price became more volatile. After a steep drop at the beginning of October, the price climbed significantly during the remainder of the year. The increase was driven mostly by declining stock levels and to a smaller extent, lower refinery production rates. The high for the year, 70.7 cents per gallon, was reached on December 28. Closing the year at 69.8 cents per gallon, the price was 35.2 cents higher that where it began 1999.

- Yearly average prices for No. 2 distillate rose across the board in 1999. The national average residential price increased 2.4 cents to 87.6 cents per gallon. The average wholesale price rose 8.8 cents to 53.8 cents per gallon. The national average price at company-operated retail outlets for No. 2 diesel fuel jumped 9.2 cents to 68.5 cents per gallon, while the average wholesale price climbed 9.8 cents, to 55.2 cents per gallon. The difference between low- and high-sulfur diesel fuel prices averaged 4.3 and 3.8 cents per at retail and wholesale, respectively.

- Refiner sales of No. 2 distillate were mixed in 1999. Total sales inched up 400,000 gallons (0.3 percent) to 143.9 million gallons per day. No. 2 fuel oil sales fell 3.2 million gallons per day (10.5 percent) while sales of No. 2 diesel fuel increased 3.6 million gallons per day (3.2 percent). Low-sulfur diesel constituted 82.5 percent of all diesel fuel sales and 66.9 percent of all refiner No. 2 distillate sales.

Residual Fuel Oil

- 1999 average residual fuel oil prices rose solidly in all categories of sales. Refiner prices for low-sulfur residual fuel increased 5.1 cents to 40.5 cents per gallon for retail sales and 8.3 cents to 38.2 cents per gallon for wholesale. Refiner high-sulfur residual fuel prices climbed 7.5 cents, to 36.2 cents per gallon at retail and 6.0 cents to 32.9 cents per gallon at wholesale. Including data reported by the sample of residual fuel oil marketers, the average low-sulfur price rose 5.0 cents per gallon at retail and 7.7 cents per gallon at wholesale. The average price for high-sulfur residual fuel increased 7.4 cents and 6.2 cents for retail and wholesale sales, respectively.

- 1999 refiner sales volumes declined to varying degrees across categories. Total refiner sales of residual fuel oil fell 4.4 million gallons per day (14.8 percent), with sales averaging 25.4 million gallons per day. Low-sulfur residual fuel oil sales declined 400,000 gallons per day (4.2 percent), while high-sulfur residual fuel oil fell 3.9 million gallons per day (19.4 percent).

Other Products

- Average prices for products included in this section generally rose in 1999. Refiner propane prices increased 5.3 cents per gallon at retail and 5.4 cents at wholesale. Including the sample of propane marketers, the average residential propane price fell 0.3 cent to 88.5 cents per gallon, while the average end-user price rose 0.7 cent. The average wholesale price increased 5.7 cents to 35.4 cents per gallon. Refiner prices for kerosene-type jet fuel, No. 1 distillate, No. 4 distillate, and aviation gasoline rose markedly at both levels.

- Refiner sales of these products were varied during 1999. Propane sales increased at both retail and wholesale. Sales of kerosene-type jet fuel, aviation gasoline, kerosene, and No. 1 distillate decreased at retail but rose at wholesale. Sales of No. 4 distillate remained flat at retail but rose at wholesale.