

Highlights

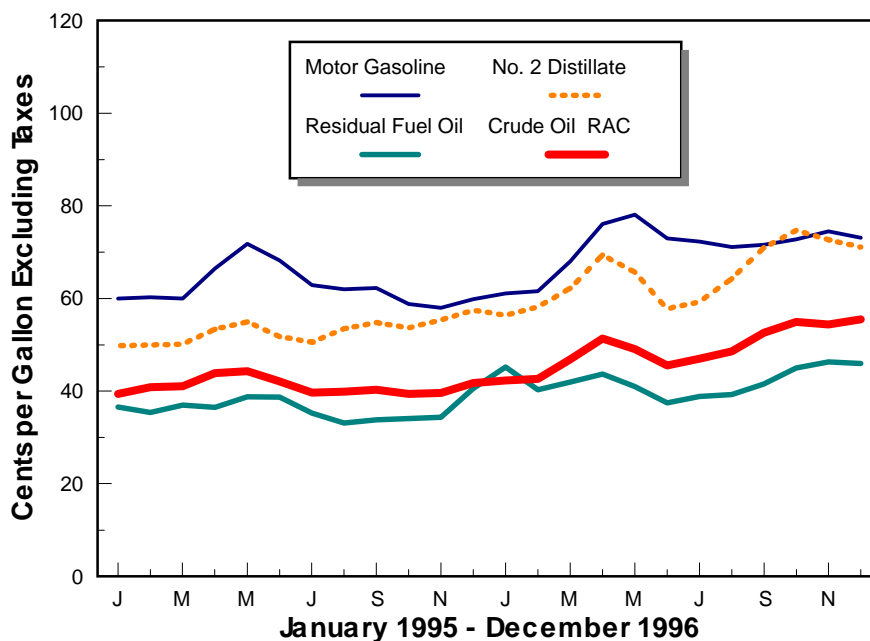
Year in Review

With prices reaching post-Gulf War highs and inventories falling to below average levels in many regions, 1996 proved to be a remarkable year in international crude oil markets. Major influences included the effects of a harsh and unusually long winter across North America and Europe that reverberated through global crude oil and finished products markets well after the end of the season. The ongoing strong demand for heating fuels fed demand for crude oil at a time of trim inventories for both products. Aggravating the situation, global wellhead production rates of crude oil remained essentially static and resulted in a period of significant price increases that lasted through the end of April. Market prices eased in the United States and abroad as global

production rose and U.S. President Clinton approved a 12-million-barrel sale of crude oil from the Strategic Petroleum Reserve (SPR). Later in the year, an active hurricane season in the Atlantic Basin periodically put pressure on prices due to concerns over disruptions to production and transportation of product during a time when stocks in many Western nations were significantly lower than the previous year's levels.

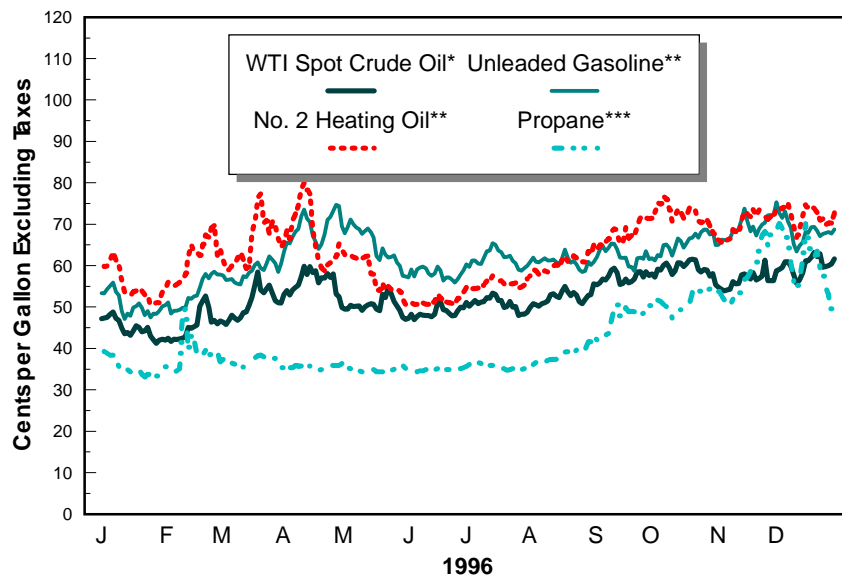
Politics also played a primary role in affecting market activity and prices in 1996. Negotiations for United Nations Resolution 986 (the so-called U.N./Iraq "oil-for-food" deal) dominated market news throughout the year. The on-and-off nature of the talks generated

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."

Figure HL 2. U.S. Spot Prices of Crude Oil and Petroleum Products



* West Texas Intermediate at Cushing, Oklahoma.
 ** New York Harbor
 *** Mt. Belvieu, Texas
 Source: Reuter Information Services, New York, New York.

a chronic note of uncertainty in world markets. When talks were first announced in January, the possible influx of additional crude oil into the marketplace had a dampened prices. However, the negotiations failed to bring an accord until late in the year, and Iraqi crude did not begin to flow into international markets until the middle of December. During the intervening months, global demand for crude oil frequently outstripped production. Consequently, prices experienced notable increases in level, particularly during the first and fourth quarters of the year. Growing demand from Asia lent further pressure to the volatile balance between global supply and demand. Compounding the effects stemming from the oil-for-food negotiations, skirmishes between the U.S. and Iraq and between Iraqi troops and Kurdish factions during late summer and early autumn contributed to surging, record-setting prices across the world during the final quarter of the year.

In the United States, 1996 price trends for crude oil and finished products were characterized by extreme volatility stemming from heavy demand and trim stock levels. A variety of factors prompted the remarkable price increases for various products. As

refiners increasingly employed a system of producing and keeping only enough product to adequately meet anticipated needs (the “just-in-time” style of stocks management), a number of events during 1996 wreaked havoc with this practice. Among the strategies needed for successful implementation of the just-in-time policy is to have refinery utilization remain within a certain range of operations based on historical demand trends and other conditions. Ensuing events--including severe weather and refinery outages--hampered this program during much of 1996.

From the start of the 1995/96 winter season, cold temperatures dominated weather patterns throughout the country. Early in January, a

record-breaking snowstorm struck the East Coast, foreshadowing a severe and unusually long winter season across the United States. Temperatures across the nation remained substantially below year-ago levels, and by the end of the first quarter of 1996, demand for distillate products was so strong that production and imports could not keep ahead of demand. By March, monthly average stock levels of distillate products were down more than 22 percent from the previous year's levels. Prices in spot markets began to skyrocket in response to the heavy demand for--and scarcity of--these products. Compounding the high rate of demand for distillate product was the severe spike in prices for natural gas during January and February (due principally to depressed stockpiles of that product in addition to strong demand). Crude oil prices also reflected market conditions, and rose in accord with finished product prices.

By the beginning of April, with markets across the country still coping with the effects of winter, California Air Resources Board (CARB) Phase II reformulated gasoline became required at the rack level in that State. Rising prices were expected as this unique

gasoline was introduced in the marketplace, but the situation was severely aggravated by unexpected refinery outages at various facilities. Prices in the Los Angeles spot market experienced an extraordinary rise during April, finally spiking to more than \$1.00 per gallon close to the end of the month. As concern over spiraling product prices mounted across the country, President Clinton authorized the release of 12 million gallons of crude oil from the SPR facility at Weeks Island, Louisiana in an effort to quell market turbulence.

During the second and third quarters, markets returned to more normal activity. By the middle of July, the price for the regular grade of CARB reformulated gasoline fell dramatically, losing 14 cents per gallon in slightly more than one week's time. The drop was attributed to increased availability of the product and a return of refining facilities from maintenance. However, U.S. stocks of the major products remained at deficits to 1995 levels with the exception of gasoline, which posted very small increases in June, August, and September. At the close of summer, the potential for steep price increases loomed, with relatively thin distillate products stocks acting as a bellwether. By September, finished product prices increased significantly in many regional spot markets. Prices for distillates led the way, amid fears about the adequacy of supplies to meet demand.

In the closing months of the year, concern over supplies of crude oil and finished products and strong demand became the leading factors behind price increases for all major products. Problems at various U.S. refining facilities throughout the final quarter of the year cast a shadow over markets as producers were attempting to boost stock levels of products that had been mired at long-term lows throughout the year. Exacerbating the situation were a number of events outside U.S. spot markets. Storms, particularly in the Gulf of Mexico, delayed production and transportation of crude oil to U.S. refiners periodically during the fourth quarter, while fighting between Iraqi and Kurdish forces and the failure to reach a settlement in the U.N./Iraq oil-for-food deal until December 9 all had noticeable influence on prices. The effects of early snaps of cold weather in both the United States and western Europe in November also rippled through markets, sparking fears that the 1996/97 winter season would be a repeat of the record-setting 1995/96 season. A relatively short-lived strike by French refinery workers in early December kindled apprehension about possible effects on U.S. supplies, which had been posting some

growth at the time. In the U.S., propane prices skyrocketed in November and December as a plentiful harvest season led to high demand and stock depletions that caused prices to rise well over \$1.00 per gallon at Conway, Kansas by the middle of December. All of these factors coalesced by the end of the year and caused the spot market prices for crude oil and gasoline in many regions to exceed the spring-time levels, while prices for distillate heating oil came within close proximity of the extraordinary prices seen during the previous spring.

1996 market and sales activity for crude oil and the principal petroleum products are summarized in the following sections.

Crude Oil

During 1996, the course of the daily spot price for West Texas Intermediate (WTI) crude oil at Cushing, Oklahoma was quite dynamic, due principally to strong demand and trim stockpiles. The price had a range of more than \$9.00 between its high and low points, and was approximately 2.5 times wider than 1995's range of prices. Opening the year in a typical fashion, the price reached the year's low of \$17.33 per barrel on January 29. Moving upward after that point--sometimes in a very dramatic manner--the price established long-term highs during late winter and spring. The price eased during late spring and the better part of summer, as stocks began to be replenished and approached the minimum average range. Notably, however, the price never fell below the \$20-per-barrel range after the first week of June. By the close of August, the price began to rise again due to a number of fundamental and political factors that affected prices until the end of the year. On December 19, the price reached a post-Gulf War high of \$26.55 per barrel. The price retreated slightly after that point, closing the year at \$25.90 per barrel, \$6.07 higher than where it began 1996.

- Crude oil prices showed substantial increases from 1995 average levels in all categories of sales. The average domestic crude oil first purchase price rose \$3.84 per barrel (26.3 percent), to \$18.46 per barrel.
- The average free-on-board (f.o.b.) cost of imported crude oil increased \$3.59 (22.9 percent), to \$19.28 per barrel. The average landed cost of foreign

crude oil climbed \$3.49 (20.8 percent), to \$20.27 per barrel.

- The average refiner acquisition cost of domestic crude oil increased \$3.44 (19.8 percent), to \$20.77 per barrel. The average cost of imported crude oil to U.S. refiners climbed \$3.50 (20.4 percent), to \$20.64 per barrel. The composite refiner acquisition cost of crude oil in the United States rose \$3.48 (20.2 percent), to \$20.71 per barrel.

Petroleum Products

Motor Gasoline

The daily spot price for unleaded regular gasoline at New York Harbor took a very active and volatile path through 1996, ranging more than 28 cents per gallon between its high and low points. Beginning the year in an unremarkable manner, the price hit the year's low of 47.1 cents per gallon on January 12. In response to continued reports of trim stocks and refinery problems, the price experienced a period of sharp growth starting in April. During this phase, the price rose to the mid 70-cents-per-gallon range before retreating to less vigorous levels by the end of May. Continuing on a variable course through summer and early autumn, the price began to rise again amid a variety of factors including refinery outages and falling stockpiles. The year's high of 75.4 cents per gallon was reached on December 2 immediately after the Thanksgiving holiday weekend. The price closed the year at 68.8 cents per gallon, 15.4 cents higher than where it began 1996.

- Reflecting the dynamic market conditions seen during 1996, average prices for gasoline showed considerable growth from 1995 levels. The average refiner motor gasoline retail price rose 8.2 cents to 84.7 cents per gallon, while the average wholesale price increased 8.7 cents to 71.3 cents per gallon. Including data reported by the sample of motor gasoline marketers, the national average retail price grew 8.1 cents, to 84.7 cents per gallon at company-operated retail outlets. The average wholesale price rose 8.5 cents, to 71.5 cents per gallon. The average dealer tank wagon (DTW) price for motor gasoline increased 8.1 cents, to 78.3 cents per gallon. The average rack price showed the largest change, rising 9.1 cents to 69.1 cents per gallon. The average bulk sales price grew 8.6 cents

to 62.5 cents per gallon. The average margin between reformulated and conventional gasoline prices was 4.2 cents at the retail level and 7.3 at wholesale. The difference between conventional and oxygenated gasoline prices at retail was 5.8 cents and 7.1 cents at wholesale.

- Data regarding refiner sales of finished motor gasoline reflect the growing demand for product during 1996. Total sales gained 6.4 million gallons (1.9 percent), rising to an average of 351.1 million gallons per day. Retail sales rose 1.6 million gallons per day (2.9 percent), while wholesale grew 4.8 million gallons per day (1.7 percent). Rack sales comprised 60.2 percent of refiner wholesale gasoline volumes, while DTW and bulk sales made up 26.4 percent and 13.4 percent, respectively. Reformulated gasoline (RFG) accounted for 29.1 percent of total motor gasoline sales, while oxygenated gasoline reflected 3.1 percent of sales.

No. 2 Distillate

Following a volatile course during 1996, the daily spot price for No. 2 heating oil at New York Harbor reflected high demand and stocks that remained at below-average levels throughout the year. The price opened the year at 60.1 cents per gallon and dropped quickly to the annual low of 47.1 cents per gallon on January 12. As winter temperatures persisted into early spring and stocks of distillates continued to post significant reductions, the price for heating oil soared. The year's high of 80.0 cents per gallon was reached on April 11, but the price fell sharply shortly after that as demand began to ease. After retreating to the 50-cents-per-gallon range through most of the summer, the price began to rise again in late August amid renewed concerns about the adequacy of supplies for the coming 1996/97 heating season. A variety of fundamental factors spurred the price back to the 70 cents-per-gallon range during the final 2 months of the year. The price closed the year at 72.7 cents per gallon, 12.6 cents higher than its starting level.

- Average 1996 prices for No. 2 distillate show dramatic gains from previous year's levels. The national average residential price rose 12.2 cents to 98.9 cents per gallon. The average wholesale price jumped 12.4 to 66.0 cents per gallon. The average price at company-operated retail outlets for No. 2 diesel fuel rose 11.8 cents to 78.8 cents per gallon. At wholesale, the price gained 12.4 cents, rising to 66.0 cents per gallon. The margins between low-

and high-sulfur diesel fuel prices were slightly wider in 1996. Low-sulfur diesel fuel averaged 3.5 cents per gallon more than high-sulfur diesel at retail and 3.4 cents higher at wholesale.

- Total refiner sales of No. 2 distillate flourished in 1996, rising 10.0 million gallons (7.6 percent) to 141.8 million gallons per day. No. 2 fuel oil sales rose 1.9 million gallons per day (5.5 percent) while sales of No. 2 diesel fuel increased 8.1 million gallons per day (8.3 percent). Low-sulfur diesel fuel comprised 78.2 percent of all diesel fuel sales and 58.3 percent of all refiner No. 2 distillate sales.

Residual Fuel Oil

- Average residual fuel oil prices show significant increases from 1995 levels. Refiner prices for low-sulfur residual fuel rose 9.0 cents to 52.6 cents per gallon for retail sales and 7.3 cents to 45.6 cents per gallon for wholesale. Refiner high-sulfur residual fuel prices increased 5.6 cents to 43.3 cents per gallon at the retail level and 5.1 cents to 38.9 cents per gallon at wholesale. Including data reported by the sample of residual fuel oil marketers, the average low-sulfur price rose 9.6 cents per gallon at retail and 7.8 cents per gallon at wholesale. The average price for high-sulfur residual fuel climbed 5.4 cents and 5.3 cents for retail and wholesale sales, respectively.
- Total refiner sales of residual fuel oil increased 6.0 percent during 1996, with sales averaging 26.7 million gallons per day. Low-sulfur residual fuel sales fell 1.2 million gallons per day (11.3 percent), while high-sulfur grew 2.6 million gallons per day (17.8 percent).

Other Products

- Prices for products included in this section rose by considerable amounts in 1996. Refiner propane prices increased 11.3 cents per gallon at retail and 11.7 cents at wholesale. Including the sample of propane marketers, the average residential propane price rose 12.6 cents to 99.1 cents per gallon, while the average end-user price grew 12.0 cents. The average wholesale price gained 11.7 cents, rising to 47.1 cents per gallon. Refiner prices for kerosene-type jet fuel posted substantial increases, rising 11.1 cents to 65.1 cents per gallon at retail and 10.7 cents to 64.6 cents per gallon at wholesale. Prices for aviation gasoline, kerosene, No. 1 distillate, and No. 4 fuel also reflected large increases at both levels.
- Refiner sales of these products were mixed during 1996. Sales of propane dropped 100,000 gallons per day at retail but rose 2.3 million gallons per day at wholesale. Kerosene-type jet fuel sales increased 3 million gallons and 1.6 million gallons per day for retail and wholesale, respectively. Aviation gasoline and kerosene sales fell at retail but rose at wholesale. No. 1 distillate sales increased in both categories, while No. 4 distillate showed decreased at both levels.