

You may be interested.

PIRINC has prepared the enclosed report entitled, *Gasoline Price Developments: Once Again California Leads the Way.*

From late February to early April, nationwide gasoline prices rose by about 21¢/gallon. Some significant upward movement would have been expected since the basic feedstock for gasoline, crude oil, moved up in price over the same period by about 11¢/gallon. Historically, changes in crude oil prices are reflected in short order in the price of gasoline at the pump. But the large difference between the two figures indicates other factors are at work, especially supply problems in California. On the West Coast, gasoline prices have moved up by an average of about 41¢/gallon, with the increase for reformulated gasoline approaching 50¢. Sharp spikes in California gasoline prices have happened before. The state is a relatively isolated market, in large part because of the special, more costly reformulated gasoline required for most of the market. Few refiners outside the state produce it, leaving the market vulnerable to disruptions in local supply.

The situation is beginning to moderate with some improvement in local supplies and the arrival of imports from elsewhere drawn to California by the initial run-up in prices. Market forces are working to rebalance supply and demand. But in California, given the "boutique" quality of its requirements, market forces have to work a little harder.

If you have any questions or comments, please call John Lichtblau, Larry Goldstein or Ron Gold.

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Petroleum Industry Research Foundation, Inc.

3 Park Avenue • 26th Floor • New York, NY 10016-5989
Tel.: (212) 686-6470 • Fax: (212) 686-6558

Gasoline Price Developments: Once Again California Leads The Way

Since late February, nationwide gasoline retail prices have moved up by about 21¢/gallon. Some significant upward movement would have been expected since the basic feedstock for gasoline, crude oil, moved up over the same period by about 11¢/gallon. Historically, changes in crude oil prices, both up and down, are reflected in short order in the price of gasoline at the pump. But the large difference between the two figures indicates other factors are at work, especially supply problems in California. On the West Coast, gasoline prices have moved up by an average of about 41¢/gallon, with the increase for reformulated gasoline approaching 50¢. The average change for the West Coast masks higher costs for independent operators than for integrated companies.

Sharp spikes in California gasoline prices have happened before. The state, which by itself accounts for about 12% of total U.S. consumption, is a relatively isolated market, with limited product supply options beyond its own borders. In large part, this condition is a result of the special, more costly, reformulated gasoline required for all of the market.¹ Few refiners outside the state could make so-called CARB (California Air Resources Board) reformulated on short notice even with a strong price incentive to do so. Refineries within the state typically run at high utilization rates, leaving the market vulnerable to even small local disruptions in supply. In addition to sharply higher refining costs required to suddenly make CARB gasoline, out-of-state domestic refiners are required to employ domestic, Jones Act tankers when shipping product in U.S. coastal waters. There is both a limited (short-term) availability and a higher operating cost associated with employing these vessels. Recent charters from the Gulf Coast to California suggest shipping rates ranging from 10 to 15¢/gallon.

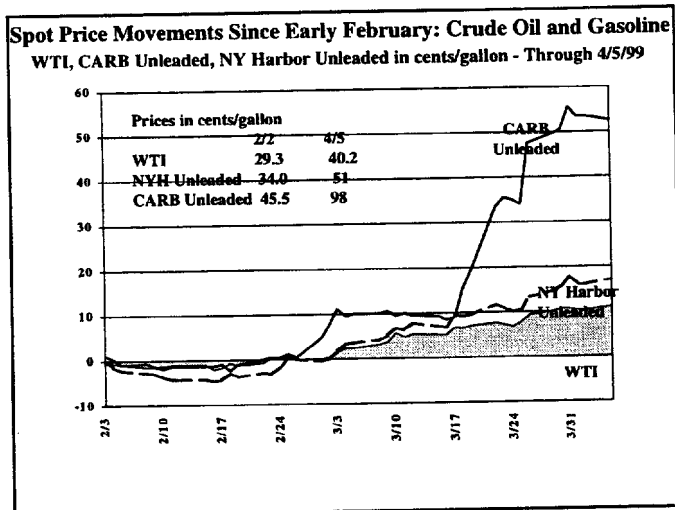
The California supply disruptions have had some effects on prices elsewhere as other refiners adjust runs to make modest supplies of CARB reformulated available in response to the strong price incentives. But California's market isolation means the lion's share of any adjustment must come through changes in local prices and demand. There is a cautionary lesson in these developments. In late March, California decided to phase out MTBE from its gasoline pool, introducing yet another distinction between its fuel and what is being produced elsewhere. Unless done carefully, the state could find itself still more vulnerable than it is now to supply disruption.

Recent Movements in Spot Prices for Crude Oil and Gasoline

For much of 1998 and through February of this year, gasoline prices essentially followed a downward path, more-or-less in line with declining crude oil prices. In real terms, prices in February were at record low levels. Of course, crude oil prices have moved up since then following the March agreement by OPEC and other key exporters to reduce production but the question remains just why the gasoline price increases were so much larger. To begin to answer the question, the chart below shows the trends since early February in spot prices for CARB

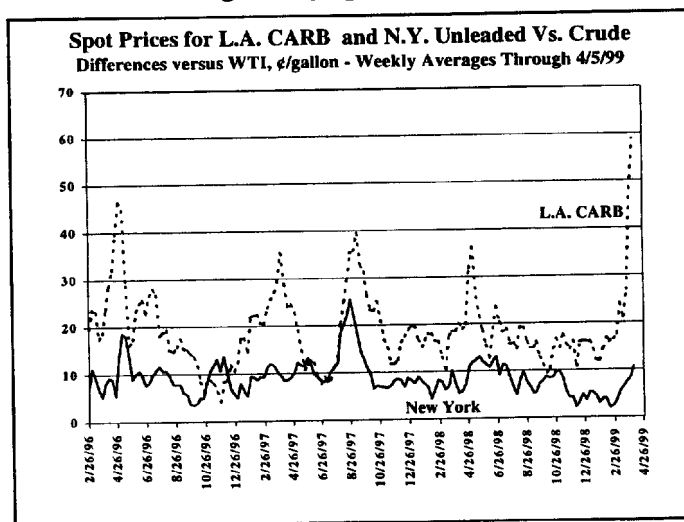
¹ For example, sulfur in CARB gasoline is typically 30 ppm while in the rest of the country it is at least 10 times higher.

Unleaded, New York Unleaded and West Texas Intermediate. By April 5, the price of WTI had moved up from 29.3 to 40.2¢/gallon, a change of about 11¢. The price for New York Barge Unleaded moved up over the same period by 17¢ or 6¢/gallon beyond the increase for WTI. But the price of CARB unleaded was up nearly 53¢, far beyond what was happening in the main East Coast market. The complete shutdown of the TOSCO refinery on February 23, followed in March by problems at the EXXON, ARCO, and most recently Chevron, refineries in California reduced product availability in the State. At its peak, the loss of California gasoline supply exceeded 15% of normal requirements. The ARCO and Exxon refineries are now back up and running. But the TOSCO and Chevron units are not back and may not be back to normal operations for some time. The flattening of the increase since the end of March suggests the worst of the local disruption has passed and that prices should start moderating. This would be consistent with the partial return of domestic supplies and with the impending arrival of imports from the US Gulf Coast and Virgin Islands, as well as foreign supplies from as far away as South Korea, all drawn to California by the initial run-up in prices.



A Longer-Term Perspective

The appearance of wide differences between East and West Coast spot prices has happened before, particularly around this time of year. Late winter through early spring is the time of refinery turnarounds on the West Coast and the changeover from higher winter RVP (and higher volume) specifications to lower summer RVP specifications (and lower volume) makes this a period of particular market vulnerability. The next chart shows spot prices for CARB and New York Unleaded versus WTI beginning in February 1996. In the spring of 1996, California began the introduction of phase 2 CARB gasoline and, virtually at the same time, refineries in California experienced serious production problems. The CARB spot price spiked far above the crude and New York prices until normal supply/demand conditions were restored. The spring of 1997 and 1998 also saw price spikes, but on a much smaller scale. In August 1997, both New York and California spot prices rose relative to crude. At that time, when demand was relatively high, refinery problems on the Gulf

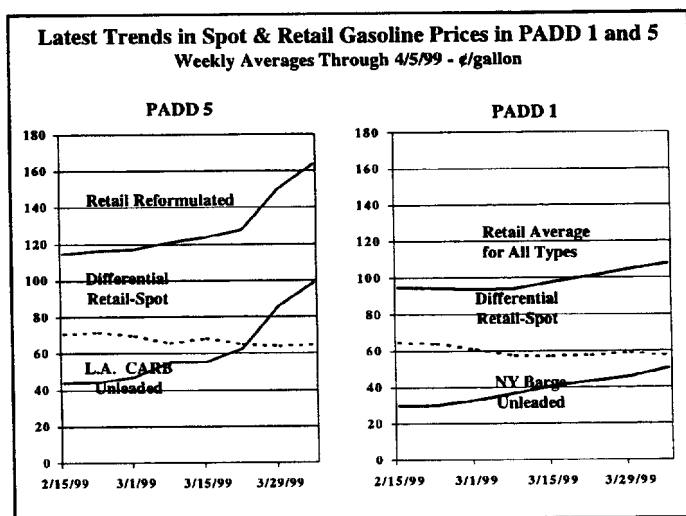


and East Coasts, as well as in Europe and Venezuela, limited overall supply availability, causing temporary upward price movements throughout the country.

The previous section noted that the New York spot price for gasoline had moved up by more than the price of crude since February. The chart above shows that the differential versus the crude price was very low relative to same month in recent history. The differential as of early April was back in line with more typical levels.

Spot versus Retail Prices

The movements of spot prices impact prices at the pump. The next chart focuses on the relationship between spot and retail prices on the two coasts since February. The left panel shows the retail price of reformulated gasoline in PADD 5, the West Coast, the spot price for CARB unleaded, and the difference between the two. By and large, the retail and spot prices show similar movements but there is a narrowing of the differential, suggesting the full amount of the increases in spot prices were not fully passed on to consumers. The right panel shows conditions in PADD 1, the East Coast. PADD 1 movements in spot and retail prices have been far more moderate and much closer to the increase in crude oil prices. The 13¢/gal increase in PADD I retail prices, shown in the chart, is only 2¢ higher than the increase in crude oil prices.



Since retail prices have lagged spot prices on the way up, especially on the West Coast, retail prices may also lag on the way down. Independent operators, who have experienced much sharper cost increases than the integrated companies, will probably be slower to react to falling costs as well.

While prices on the West Coast will moderate, and differences versus the rest of the country narrow, they are likely to remain unusually high for a period of time. The TOSCO and Chevron facilities are still out so some shortfall in local supply will continue. Nonetheless, the new supplies being brought in as a result of the earlier jump in prices are already easing the situation, illustrating once again that if left alone, market forces do work to rebalance supply and demand. In California, however, given the “boutique” quality of its requirements, market forces have to work a little harder.