



## Testimony

Before the Subcommittee on Consumer Affairs, Foreign  
Commerce and Tourism, United States Senate

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# MOTOR FUELS

## Gasoline Prices in the West Coast Market

Statement of Jim Wells, Director,  
Natural Resources and Environment



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Mr. Chairman and Members of the Subcommittee:

I am pleased to participate in the Subcommittee's hearing on the causes of high retail gasoline prices in California, Oregon, and Washington. As you know, prices in West Coast states are frequently among the highest in the nation and these states tend to experience longer periods of high prices compared with other areas in the United States. As of March 27, 2001, the retail prices of gasoline in West Coast states were higher than the national average—the average national price for a gallon of unleaded regular gasoline was \$1.43, compared with \$1.72 in California, \$1.57 in Oregon, and \$1.56 in Washington. Furthermore, according to the Energy Information Administration, gasoline prices are expected to rise this summer and price volatility remains a concern.

Over the last 3 years, GAO has issued several reports on gasoline prices and gasoline price behavior in two West Coast states—California and Oregon.<sup>1</sup> Our analyses focused on observable factors that affect gasoline prices and did not address issues concerning the competitiveness of gasoline markets, which may also affect prices in these states. In addition, we issued a report in response to a mandate in Public Law 104-58 to determine the effects of lifting the ban on Alaskan crude oil exports on crude oil prices and production, refiners, consumers, and the oil shipping industry on the U.S. West Coast.<sup>2</sup> My testimony, which is based on these reports and related work, specifically discusses factors affecting gasoline prices in California, Oregon, and, more generally, the West Coast. In summary, I will make the following points:

The West Coast gasoline market is characterized by a tight balance between supply and demand, and is isolated from other U.S. gasoline markets. For example, in order to meet consumer demand, refineries in California operated at about 97 percent of capacity in 1999 compared with about 93 percent nationally. In addition to the overall tight balance between supply and demand, the West Coast market is isolated

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<sup>1</sup> Motor Fuels: Gasoline Prices in Oregon (*GAO-01-433R, February 23, 2001*), *Motor Fuels: Gasoline Price Spikes in Oregon in 1999* (GAO/RCED-00-100R, Feb. 23, 2000) and *Motor Fuels: California Gasoline Price Behavior* (GAO/RCED-00-121, Apr. 28, 2000).

<sup>2</sup> *Alaskan North Slope Oil: Limited Effects of Lifting Export Ban on Oil and Shipping Industries and Consumers* (GAO/RCED-99-191, Jul. 1, 1999).

from out-of-state sources of gasoline so that supply shortages cannot easily be replaced. Both these situations cause rapid price increases in reaction to supply disruptions.

Our comparisons of gasoline prices in cities in California, Oregon, and Washington found that individual markets in the three states are closely linked and are essentially part of a single market for gasoline on the West Coast. Gasoline prices for cities in these states, while differing at any given moment in time, generally followed similar patterns with respect to price increases and decreases. As a result, any event that caused a significant price change in one state could affect the gasoline prices in other West Coast states.

While California, Oregon, and Washington are essentially part of the same West Coast market, each state has attributes that tend to increase its respective gasoline prices. For example, California uses a “boutique” gasoline designed to reduce the harmful exhaust emissions that cause smog. In contrast, Oregon depends completely on out-of-state supplies for its gasoline, much of which comes through a single pipeline from the state of Washington. These attributes, among others, lead to higher gasoline prices in these states. Moreover, within any given state, local market conditions may cause prices to vary considerably.

Our analysis found that lifting the export ban on Alaska North Slope (ANS) crude oil caused the West Coast price of this oil to rise but it did not significantly affect the price of gasoline.

### **West Coast Market Is Tight and Isolated**

The West Coast gasoline market is characterized by an especially tight balance between supply and demand, and is isolated from other U.S. gasoline markets. In general, California’s gasoline demand dominates the West Coast market. Based on 1997 data, the last year data on international gasoline consumption were available to us, California is

the third largest gasoline consumer in the world—behind only the rest of the United States and Japan—and its consumption is being met almost entirely by supply from refinery production within the state. In addition to making California’s boutique CARB gasoline, some of California’s refineries produce conventional and other reformulated gasoline to supply to western markets, such as Oregon, Arizona, and Nevada.<sup>3</sup> To meet this high demand for gasoline, California’s refineries produce at almost full capacity. For example, in 1999, California’s refineries operated at about 97 percent of capacity compared with a national average of about 93 percent. Because the existing refineries in California have virtually no spare capacity, unanticipated refinery outages, such as those caused by mechanical problems, can cause supply disruptions and rapid price increases not only within the state but also in other western states that it supplies. California refineries experienced unanticipated outages every year from 1995 through 1999.

When unanticipated refinery outages occur, other out-of market sources have to supply gasoline to make up for the lost production. However, the West Coast market is isolated from other major refining centers because it has few, if any, pipelines that can bring gasoline to the West Coast states. Therefore, tankers and other means must be used. The process is slow and costly compared with pipelines. Gasoline shipped into California (and other West Coast states) by tanker from such places as the U.S. Gulf Coast, the U.S. Virgin Islands, Europe, and Asia, can take between 11 and 40 days and add 3 to 12 cents per gallon to the retail price. In addition, the uniqueness of California’s CARB gasoline further isolates the state’s gasoline market, because only a few refineries outside California can produce CARB gasoline. Moreover, these few refineries are not designed to make CARB gasoline routinely and the refining operations have to be reconfigured to produce it. This reconfiguration process, some oil industry officials told us, can take up to a week and adds to the cost of production.

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<sup>3</sup> CARB stands for California Air Resources Board, the state agency that administers California’s emissions-reducing gasoline program. CARB gasoline is designed to reduce harmful exhaust emissions that cause smog.

## **West Coast States Are Essentially Part of a Single Market**

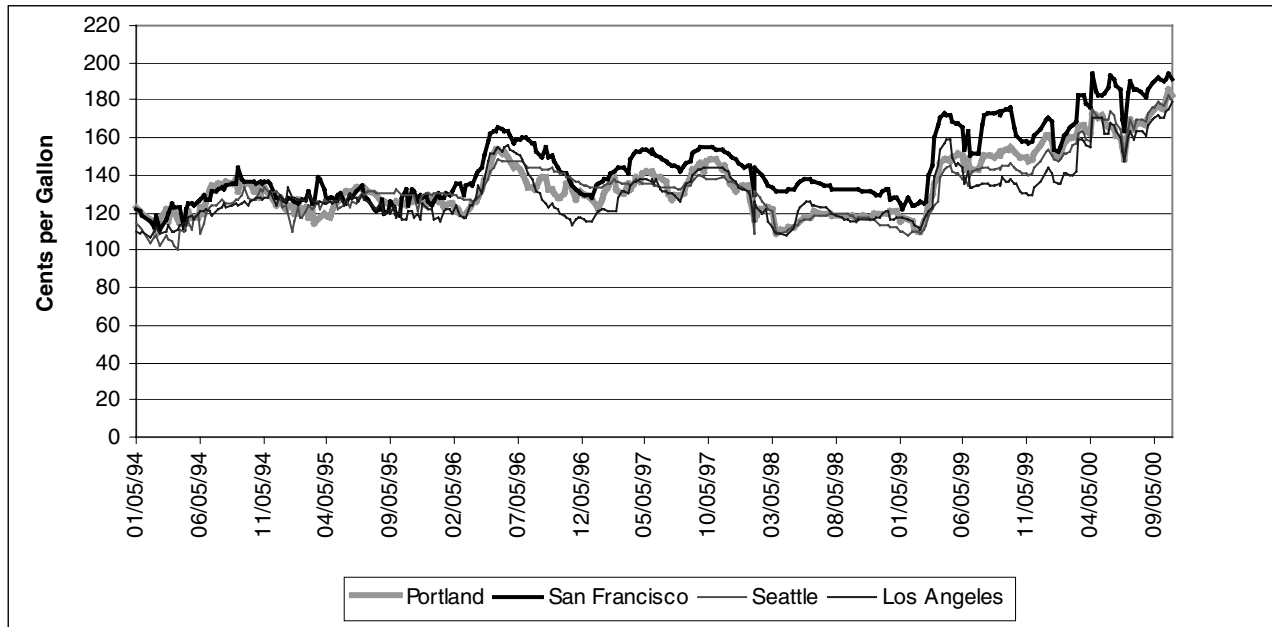
Our comparisons of gasoline prices in cities in California, Oregon, and Washington found that individual markets in the three states are closely linked and that they are essentially part of a single gasoline market on the West Coast. When we compared gasoline prices in Portland, with prices in Los Angeles, San Francisco, and Seattle, we found that although average prices in the four cities differed, they generally moved in the same direction simultaneously and hence, the price differences remained fairly stable over time. Variations in price levels could be attributed in part to differences in transportation costs, taxes, and other local regulations and conditions.

Figure 1 shows a comparison between retail prices of regular unleaded gasoline in Portland and those in Los Angeles, San Francisco, and Seattle for January 5, 1994, through October 18, 2000.<sup>4</sup>

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<sup>4</sup> The data come from survey results published weekly in the *Oil & Gas Journal*. We chose this time frame in order to cover sufficient periods of time before and after the Olympic pipeline disruption of June 10, 1999.

Figure 1: Retail Gasoline Prices in Selected West Coast Cities



Source: GAO's analysis of *Oil & Gas Journal* data.

Gasoline prices in the four cities, while differing at any given moment in time, generally followed similar price fluctuation patterns. For the entire period, retail regular gasoline prices in Portland averaged about 4 cents higher than in Los Angeles, about 1.4 cents higher than in Seattle, and about 10 cents lower than in San Francisco.

Despite these average price differences, the gasoline markets in all four cities responded similarly to rapid price fluctuations caused by supply disruptions or other factors. In addition to examining price trends, we conducted a statistical analysis of retail gasoline prices in the four cities and found that an increase in price in one city was quickly followed by price increases in the other cities. We found that prices fully adjust to the change within about 5 to 6 weeks.<sup>5</sup>

<sup>5</sup> A similar process of supply adjustments would occur for an initial drop in price.

## State-Specific Attributes Affect Gasoline Prices

While California, Oregon, and Washington are essentially part of the same West Coast market, each state has specific attributes that tend to increase its respective gasoline prices. Moreover, within any given state, local market conditions may cause prices to vary considerably, as illustrated by our analyses of California and Oregon markets.

For California, we identified the following specific attribute:

**CARB gasoline requirements.** In 1996, California introduced reformulated gasoline standards that were more stringent than the federal standards and different from those of any other state. The additional refining cost for CARB gasoline has contributed to the higher retail price of gasoline in California relative to the rest of the United States. Also, California's gasoline market has become more sensitive to supply disruptions because, as mentioned above, outside sources of CARB gasoline are not readily available to make up for disrupted supplies in a timely and cost-effective manner.

For Oregon, we identified the following specific attributes:

**Higher transportation costs for gasoline.** Oregon depends completely on out-of-state supplies for its gasoline because it has no refineries and, thus, must acquire gasoline via pipeline from refineries located in northern Washington, and—to a lesser extent—in California via tanker and/or truck. As a result, transportation costs tend to be higher in Oregon than in areas closer to the refining centers of northern California, southern California, or northern Washington. Furthermore, of the West Coast states, Oregon has the highest proportion of miles driven in rural areas—about 53 percent—compared with 19 percent for California and 32 percent for Washington. To meet

rural demand in areas that are generally not served by pipelines, gasoline must be trucked in from the nearest pipeline, increasing transportation costs further.<sup>6</sup>

**A gasoline tax higher than the national average.** At 24 cents per gallon, in 2000, Oregon had the highest state gasoline tax among the West Coast states and the eighth highest in the country.<sup>7</sup> The average state tax on gasoline at the retail level in the United States is about 20 cents per gallon.

**No self-service lanes at gasoline stations.** According to industry sources, Oregon's prohibition on self-service gasoline stations may add as much as 5 cents to the cost of a gallon of gasoline.

Finally, local supply and demand conditions affect both California's and Oregon's gasoline prices. For example, our analysis of California gasoline prices showed that when CARB gasoline was introduced in 1996, the difference in gasoline prices between San Francisco and Los Angeles changed. Both wholesale and retail gasoline prices increased more in San Francisco than in Los Angeles—wholesale prices increased by about 2 cents a gallon and retail prices increased about 11 cents. There was no consensus among experts and industry officials as to why prices increased more in San Francisco. One explanation offered was that higher refining costs are easier to pass on to consumers in San Francisco because of its local supply and demand conditions. Another was that the new fuel requirements might have tightened the gasoline supply and demand balance more in the northern part of the state than in the southern part.

Similarly, local conditions have affected Oregon gasoline prices. For example, in June 1999, an explosion in the pipeline connecting Washington refineries with Oregon consumers caused an immediate reduction in the supply of gasoline to Portland and

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<sup>6</sup> Of the three principal means of shipping gasoline—pipeline, tanker or barge, and trucking—per gallon costs are typically lowest for pipelines and highest for trucking.

<sup>7</sup> While not included above, state excise taxes and/or other local charges may apply and these would also be expected to have an upward impact on gasoline prices. For example, in addition to California's state gasoline tax of 18 cents per gallon, the state's sales tax of 7.25 percent would, at current gasoline prices, also add about 12 cents to the price of a gallon of gasoline.



Eugene. To compensate for this shortfall, additional gasoline had to be shipped in by barge or tanker from Washington and California or by truck from other locations. As a result, transportation costs for gasoline coming to Portland increased and prices rose compared with Seattle and Los Angeles. This supply disruption coincided with a period of unanticipated refinery outages in northern California, which exacerbated the region's supply shortfall, making it more costly for Oregon to replace the gasoline supply lost by the damaged pipeline.

### **Lifting Export Ban Increased Crude Oil Prices, but Had No Observable Effect on Gasoline Prices**

We found that lifting the export ban on ANS crude oil in 1995 increased the price of crude oil on the West Coast.<sup>8</sup> However, our analysis found no evidence that lifting the export ban caused increases in the prices of three petroleum products used by consumers—gasoline, diesel, and jet fuel.

Lifting the export ban raised the relative prices of Alaskan North Slope (ANS) and comparable California crude oils between \$0.98 and \$1.30 higher per barrel than they would have been had the ban not been lifted. The higher ANS price provided North Slope producers an incentive to produce more oil and therefore should lead to greater total oil production in Alaska than would have occurred had the export ban remained in place. Lifting the ban also increased the efficiency of the West Coast crude oil market by lowering the total shipping costs associated with transporting ANS to its final destination. The magnitude of reduced shipping costs was at least \$65 million in the first 2-1/2 years after the removal of the export ban. These impacts measured by GAO were consistent with predictions of prior studies by the Department of Energy and private sector analysts.<sup>9</sup>

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<sup>8</sup> See *Alaskan Crude Oil Exports* (GAO/T-RCED-90-59, Apr. 5, 1990)

<sup>9</sup> *Exporting Alaskan North Slope Crude Oil: Benefits and Costs*, U.S. Department of Energy (June 1994), and Samuel Van Vactor, "Time to End the Alaskan Oil Export Ban," *Policy Analysis* 227 (May 18, 1995).

Aside from higher crude oil costs for refiners buying ANS oil, we observed no increases in consumer prices on the West Coast during the period that we analyzed. According to GAO's statistical and economic analyses, the prices of gasoline, diesel, and jet fuel on the West Coast did not significantly change as a result of lifting the export ban. Moreover, the consumer groups and industry experts GAO contacted were unaware of any adverse effects on consumers from lifting the ban. GAO's findings were consistent with the expectations of some industry analysts. Several industry analysts believed that consumer prices would be unaffected because these prices were determined by the costs of foreign imported crude oil and final products and imported products were already selling at their world prices on the West Coast, rather than the artificially low ANS price.

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Mr. Chairman, this concludes my prepared remarks. We would be pleased to answer any questions you or any Member of the Subcommittee may have.

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