

United States General Accounting Office  
Washington, DC 20548

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February 23, 2001

The Honorable Gordon H. Smith  
United States Senate

Subject: Motor Fuels: Gasoline Prices in Oregon

Dear Senator Smith:

As requested, we are providing information on (1) factors affecting retail gasoline prices in Oregon, including transportation costs, taxes, costs of full service, and other supply and demand conditions, and (2) how gasoline price trends in Portland, Oregon, compare with trends in other West Coast cities. This letter supplements the information contained in our letter to you of February 23, 2000,<sup>1</sup> and summarizes the material presented in our briefing to your staff on January 25, 2001.

As you know, Oregon's gasoline prices, along with those of California and Washington State, are currently among the highest in the United States. In response to rising crude oil costs in 1999, gasoline prices rose nationwide and have remained relatively high compared with prices in the preceding 5 years. Furthermore, Oregon, Washington and California prices remained above the national average, due in part to higher gasoline taxes, special fuel restrictions (in California), and a generally tight supply-and-demand balance in the region. According to the American Automobile Association's daily gasoline price survey for February 14, 2001, the average price for regular unleaded gasoline in Oregon is about \$1.54 per gallon, compared with \$1.66 in California, \$1.54 in Washington, and a national average of \$1.49. These state averages mask a great deal of price variation within states and average prices for particular cities will typically be substantially higher or lower than state average prices.<sup>2</sup>

### **Factors Affecting Gasoline Prices in Oregon**

Among the factors affecting gasoline prices in Oregon are higher-than-average costs associated with transporting gasoline from refiners to consumers, higher-than-average state gasoline taxes, and a prohibition on self-service gasoline stations. In

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<sup>1</sup> *Motor Fuels: Gasoline Price Spikes in Oregon in 1999* (GAO/RCED-00-100R, Feb. 23, 2000).

<sup>2</sup> For example, in the same survey, out of 15 cities in California, Oregon, and Washington, the average retail price of unleaded regular gasoline varied from a low of about \$1.43 per gallon in Spokane, Washington, to a high of \$1.84 in San Francisco, California. Source: American Automobile Association, *Daily Fuel Gauge Report* (Feb. 14, 2001).

addition, specific local supply and demand conditions at any given time can affect prices of gasoline in Oregon compared with other states.

Gasoline transportation costs are higher in Oregon than in California or in Washington because (1) Oregon has no refining capacity and (2) a greater proportion of its gasoline demand comes from rural driving. Without the capacity to refine its own gasoline, Oregon must acquire gas from refineries in northern Washington, and—to a lesser extent—in California. The bulk of Oregon's gasoline has typically come through a pipeline connection between refineries in Washington and the cities of Portland and Eugene, while the remainder comes largely by tanker or barge from Washington or northern California or is trucked in from other locations. 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. The pipeline tariff between the refineries in Washington and Portland adds slightly more than one cent to the cost of a gallon of gasoline. 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. This means that gasoline must be trucked from areas served by the pipeline to rural consumers, increasing transportation costs further.<sup>3</sup>

Oregon has the highest state gasoline tax among the West Coast states. For example, Oregon's state gasoline tax in 2000 was 24 cents per gallon—the eighth highest in the country and about 4 cents per gallon more than the national average. In contrast, California's gasoline tax was 18 cents per gallon and Washington's was 23 cents per gallon.<sup>4</sup>

Oregon also differs from California and Washington in that it does not allow self-service lanes at gasoline stations. Industry sources have told us that the prohibition on self-service gasoline stations may add as much as 5 cents to the cost of a gallon of gasoline in Oregon.

Finally, local supply and demand conditions have an impact on Oregon's gasoline prices. For example, an explosion in the Olympic Pipeline between refineries in Anacortez and Cherry Point in Washington caused an immediate reduction in the supply of gasoline to Portland and Eugene. Specifically, the volume of gasoline arriving in Portland through the pipeline was cut by almost half. 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

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<sup>3</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>4</sup> While not included above, state excise taxes or other local charges may apply in each of the states and these would also be expected to have an upward impact on gasoline prices. For example, California's state sales tax of 7.25 percent at current gasoline prices would add about 12 cents to the price of a gallon of gasoline.

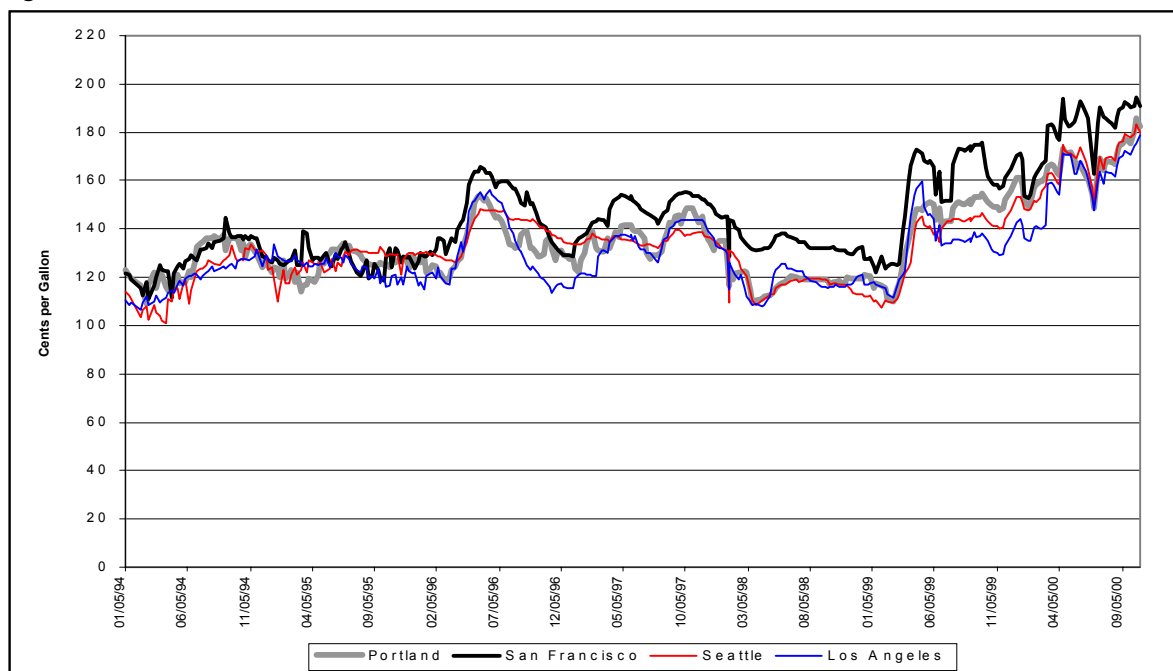
compared to Seattle and Los Angeles. This supply disruption also coincided with a period of unplanned refinery outages in northern California that added to the region's supply shortfall and made it more costly for Oregon to replace the gasoline supply lost when the pipeline was damaged. The pipeline remained closed for repairs and safety inspections until late January 2001.<sup>5</sup>

### Analysis of Gasoline Price Trends in Key West Coast Cities

Our comparison of gasoline prices in Portland Oregon to prices in Los Angeles, San Francisco and Seattle found that average prices in the four cities differ. These price differences were fairly stable over time and were due in part to differences in transportation costs, taxes, and other local regulations and conditions. Moreover, we found that the markets for gasoline in the four cities are closely linked and are essentially part of a single market for gasoline on the West Coast.

Figure 1 shows a comparison between retail prices of regular unleaded gasoline in Portland with those in Los Angeles, San Francisco, and Seattle for the period January 5, 1994 through October 18, 2000.<sup>6</sup>

**Figure 1: Retail Gasoline Prices in Selected West Coast Cities**



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

<sup>5</sup> Although the damaged section of the pipeline has now been repaired and is being returned to service, heightened security precautions have led to another section being closed for checking and possible repairs. As a result, the capacity of the pipeline is still well below pre-explosion levels.

<sup>6</sup> The data come from survey results published weekly in the *Oil & Gas Journal*. We chose the period from January 5, 1994, through October 18, 2000, in order to cover sufficient periods of time prior to and after the pipeline disruption of June 10, 1999.

Figure 1 shows prices in the four cities, while differing at any moment in time, generally follow similar patterns with respect to increases and decreases in price. Over 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, all four cities responded similarly to rapid price changes due to supply disruptions or other causes. Retail prices in all four cities follow similar patterns with respect to major periods of price increases and decreases. In addition to examining the 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 quickly leads to price increases in the other cities. The following example demonstrates how this process might work. An increase in gasoline prices in San Francisco caused by a supply disruption, creates an incentive for gasoline dealers in the entire West Coast region to bring more gasoline into the San Francisco market in order to earn more money per gallon sold. This supply increase in San Francisco, which causes the price there to fall, simultaneously reduces the supply in the rest of the region, causing prices in the other cities to rise. We found that prices fully adjust to the change within about 5 to 6 weeks.<sup>7</sup> It is this process that causes average price differences between cities to be stable over time. The one notable exception occurred in the period between June 1999 and April 2000, when prices in Portland rose and stayed higher for an extended period of time than did prices in Los Angeles and—to a lesser degree—in Seattle.<sup>8</sup> As mentioned above, this period coincided with the Olympic Pipeline explosion of June 10 in Washington and the continued unscheduled refinery shutdowns in northern California that had begun earlier in the spring of 1999. These higher price differences persisted for almost 10 months.

## Scope and Methodology

To prepare the information in this report, we reviewed and analyzed data on gasoline prices in four major West Coast cities from January 5, 1994, through October 18, 2000, as well as information on factors affecting prices in Oregon during this period. We examined data from the Energy Information Administration and the Federal Highway Administration, and interviewed oil industry officials, representatives of a pipeline company, and an expert in academia. We also used retail gasoline price data from the *Oil & Gas Journal* and from the American Automobile Association.

While we did not attempt to fully assess the reliability of the data used in this report, we discussed the source of the data with officials from the *Oil & Gas Journal* and the American Automobile Association, who told us they believe that their average prices

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<sup>7</sup> A similar process of supply adjustments would occur for an initial drop in price.

<sup>8</sup> Gasoline prices in San Francisco also rose relative to Los Angeles, Portland, and Seattle due to the refinery outages. These higher relative prices began around April 1999 and continued into the summer of 2000.

are accurate. Moreover, they said that their data are widely used by academic and industry analysts and are the best available. We also examined the data series to check for obvious discrepancies and found none. Our analysis focused on observable factors that affect gasoline prices and we did not attempt to address issues of the competitiveness of gasoline markets, which may also affect prices in the four cities.<sup>9</sup> We conducted our work from November 2000 through January 2001 in accordance with generally accepted government auditing standards.

We provided a draft of this report to the Energy Information Administration's Petroleum Division for review and comment. We discussed the report with officials from that division, who advised us that they agree with the overall findings of this report. Specifically, they agree that the apparently high gasoline prices in Oregon are largely a function of conditions in the entire West Coast gasoline market, and are also influenced by state-specific factors such as relatively high gasoline tax rates, a ban on self-service, and dependence on other states for supply. However, without further information, they were unable to evaluate the statistical methodology we used to compare retail prices in the four cities or the data sources we used. For purposes of brevity and clarity, we did not discuss our methodology in this report, but we used standard statistical methods to evaluate relative prices between the cities. Further, as mentioned in the previous paragraph, we took steps to evaluate the reliability of the data used. The officials also provided specific comments, which we incorporated where appropriate.

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<sup>9</sup> We discuss these and other factors that influence local prices of gasoline in the report, *Motor Fuels: California Gasoline Price Behavior* (GAO/RCED-00-121, Feb. 23, 2000).

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Unless you publicly announce its contents earlier, we plan no further distribution of this letter until 14 days after the date of this letter. At that time, we will send copies of this letter to interested Members of Congress and make copies available to others upon request. The letter will also be available on GAO's home page at <http://www.gao.gov>.

If you have any questions about this report or need additional information, please call me at (202) 512-6877. Major contributors to this report include Daniel Haas and Frank Rusco.

Sincerely yours,

A handwritten signature in black ink that reads "Jim Wells". The signature is written in a cursive, flowing style.

Jim Wells  
Director, Natural Resources  
and Environment