



Fairbanks North Star Borough *Office of the Mayor*

809 Pioneer Road • PO Box 71267 • Fairbanks, Alaska 99707-1267

907/459-1300

Fax 907/459-1102

Email-Mayor@co.fairbanks.ak.us

MEMORANDUM

TO: Jim Whitaker
Fairbanks North Star Borough Mayor

FROM: Kathryn Dodge, Ph.D.
Economic Development Coordinator

DATE: March 4, 2005

SUBJECT: Report to the Fairbanks North Star Borough Economic Development Commission

During 2004, retail gasoline prices were significantly higher in Fairbanks than in Anchorage, with the price spread peaking at \$ 0.24 per gallon in November.¹ This significant price difference puzzled many Fairbanks consumers and led the Fairbanks North Star Borough (FNSB) Economic Development Commission to direct the FNSB Mayor's staff to research and report their findings on this price spread. Using 2004 Oil Price Information Service (OPIS) data and price model, this paper will explore the reasons for this Anchorage – Fairbanks retail price spread and present proposals for possible action. We will begin by describing the categories used by OPIS to track the gasoline industry and interpret the Anchorage – Fairbanks market data.

¹ Oil Price Information Services 2004 data

Gasoline Pricing Elements: The OPIS Model

Retail & Net

Retail gasoline price reflects the price paid by consumers. The OPIS model uses five elements to calculate and track the retail gasoline market: taxes, distribution, net, retail margin, and wholesale (rack) costs.

As reflected in Chart 1, the price spread between retail gasoline in Anchorage and Fairbanks was fairly stable during the first quarter of 2004. This price spread began to widen from \$0.047 per gallon in March and continued to widen through the year, peaking at \$0.24 per gallon in November. Let us now look at the other categories that make up retail, beginning with net.

Net is retail minus \$0.184 per gallon Federal, \$0.08 per gallon State, no Local taxes and \$0.015 per gallon distribution, and represents the proceeds to the retailer/distributor. Since these elements are constants in the OPIS model, net exactly follows retail. Net contains two categories, retail margin and rack, which we will now discuss.

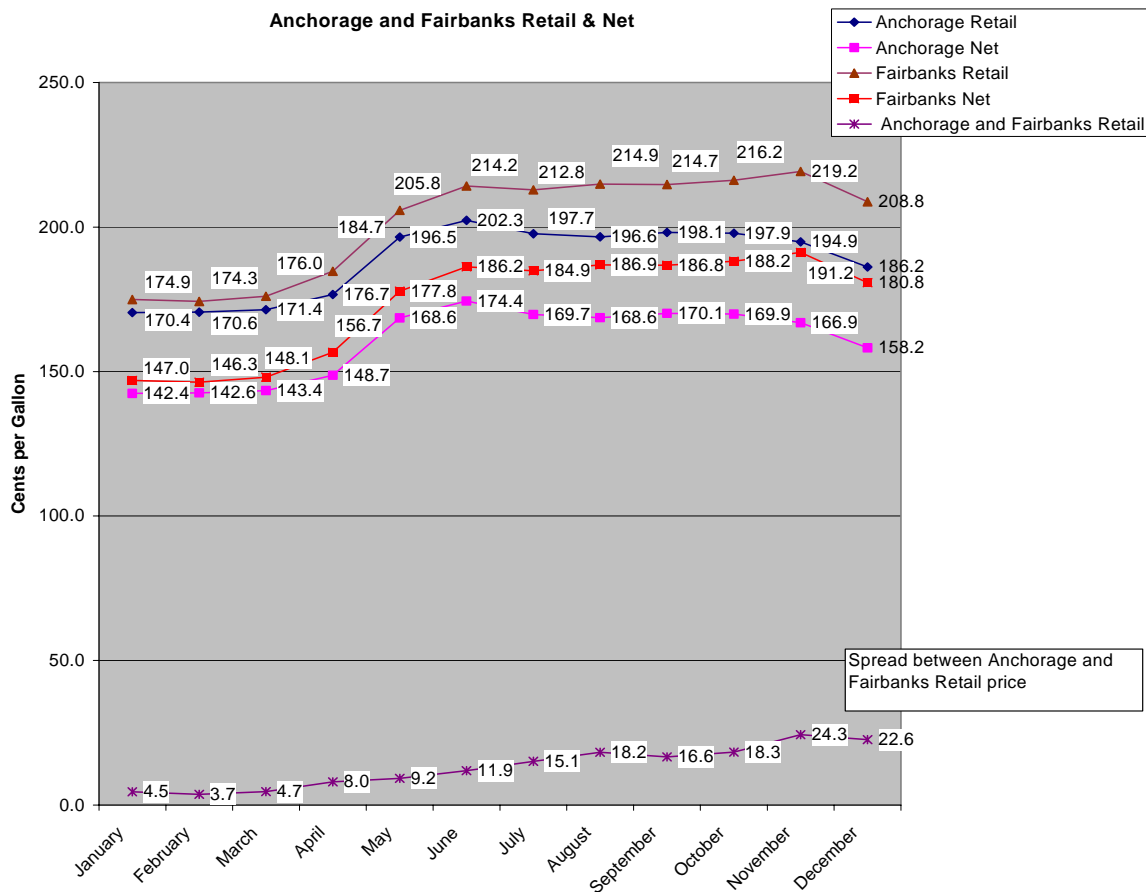


Chart 1: Anchorage and Fairbanks Retail & Net (2004 OPIS data)

Margin

Retail margin is the difference between net and rack (wholesale). It represents the net proceeds to the retailer/distributor after costs are paid. Looking at Chart 2, we continue to see a price spread between Anchorage and Fairbanks beginning in April and continuing through November, with a slight narrowing in December.

However, while we again see this divergent pattern, we also see something new. In May, both Anchorage and Fairbanks retail margins dipped, with Anchorage reporting a negative margin of \$0.036 per gallon. In June, Fairbanks retail margins bounced back to a normal range, where they remained through most of the year. Conversely, while the Anchorage retail margin bounced back slightly, it remained negative through the balance of the year. During this period, OPIS also reported that the Anchorage market was one of the least profitable markets in the nation². In contrast, Fairbanks retail margins averaged \$0.115 per gallon. This compares with a national retailer's target of approximately \$0.10 per gallon³ and a 2004 national average of \$0.118 per gallon.⁴

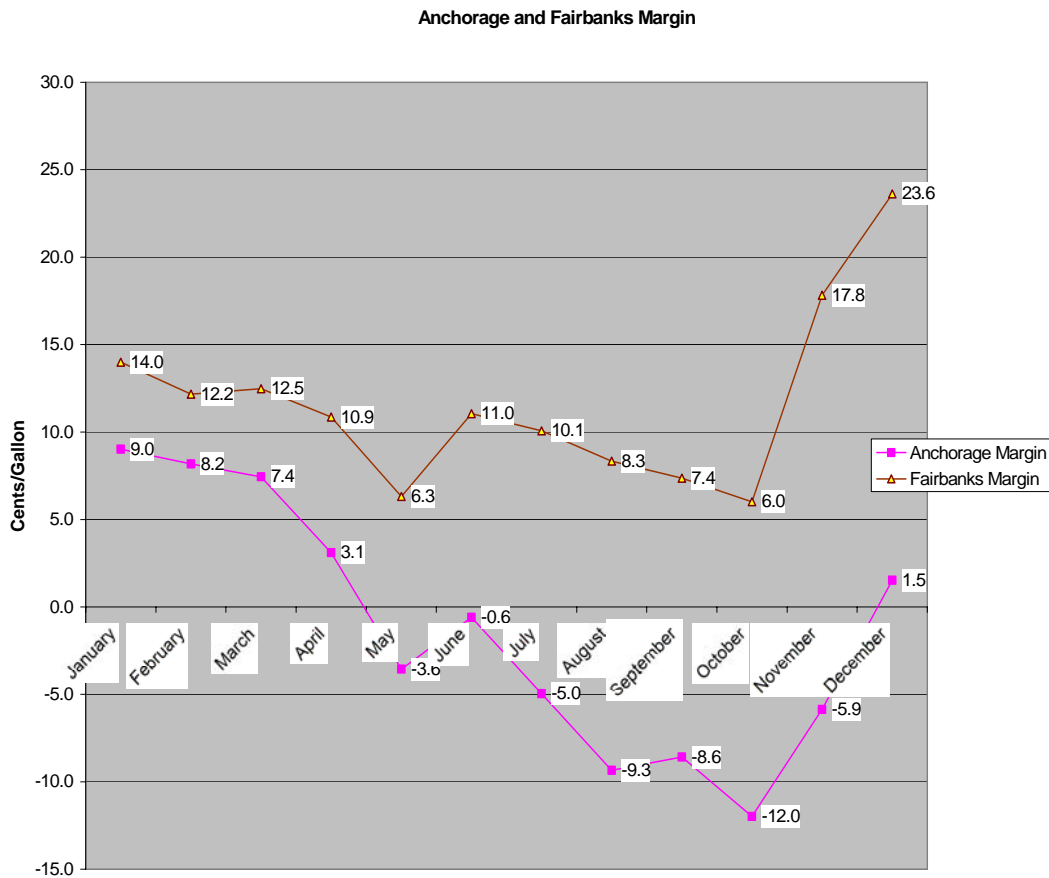


Chart 2: Anchorage and Fairbanks Margins (2004 OPIS data)

² Retail Fuel Watch October 4, 2004; January 4, 2004; Retail Margins Take it On the Chin,” OPIS, July 22, 2004

³ Personal communications with OPIS Retail market expert.

⁴ OPIS 2004 data

Rack

Actual wholesale prices are negotiated by refiners and retailers and are often reduced for particular customers by volume discounts, rebates and other negotiated price savings. Because the posted rack price that is provided by OPIS does not reflect these reductions in wholesale price, the posted rack price may (and probably does) overstate distributor purchase payments and, correspondingly, understate profit margins. Although these practices are generally acknowledged,⁵ actual wholesale transactions are proprietary. For this reason, we were unable to develop information to estimate the degree to which these special arrangements might have turned the retail margins in Fairbanks, Anchorage or Seattle.

To understand this important category of the gasoline price model, we need to put it into a larger context. Because Seattle is the closest large domestic source of gasoline, therefore the market that Alaska would import from, should we need to, it is a useful and commonly used benchmark for Alaskan rack prices.

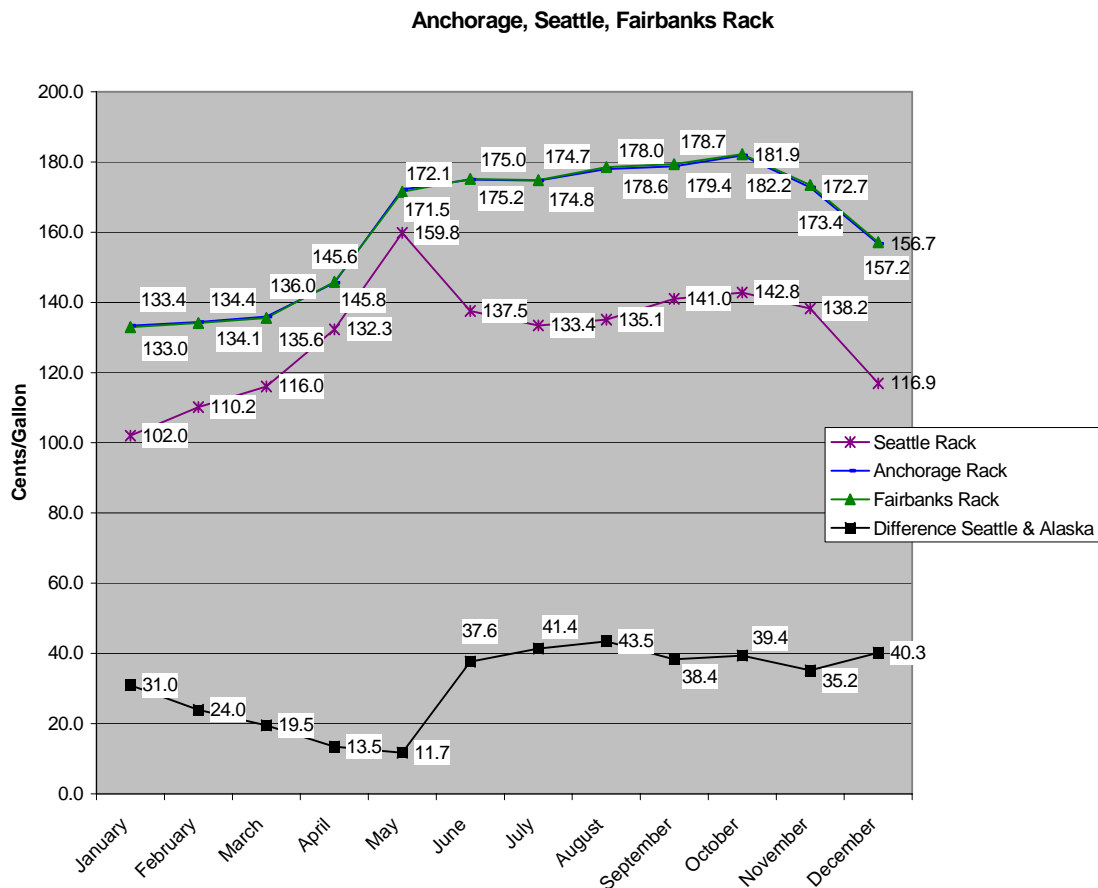


Chart 3: Anchorage, Seattle, Fairbanks Rack (OPIS 2004 data)

⁵ *Gas Prices: How are they really set?* US Senate Permanent Subcommittee on Investigations, 2002

Chart 3 reveals that throughout 2004, Anchorage and Fairbanks rack prices were remarkably similar. We also see a new pattern emerging: the Seattle and Anchorage/Fairbanks rack price spread began narrowing in January, peaking at a rack spread of \$0.117 per gallon in May. In June, the spread then widened significantly, averaging a price spread of \$0.394 per gallon for the balance of the year. However, because the rack price spread was \$0.31 per gallon in January, without more historical data, we cannot draw conclusions about the rack price spread.

The Alaska Department of Revenue reports a tanker cost of \$1.60 per barrel to ship crude oil from Valdez to West Coast markets.⁶ On this basis, the gasoline transportation cost between Seattle and Valdez would be approximately \$0.04 per gallon. Therefore, it appears that transportation costs do not explain the disparity between Washington and Alaska wholesale refinery prices shown in Chart 3. So what does all this have to do with the Anchorage – Fairbanks gasoline price difference? The Seattle/Alaska rack price spread illustrates Alaska’s isolation from the domestic market, which leads us to a description of the pertinent characteristics of the Anchorage – Fairbanks markets.

Anchorage & Fairbanks Gasoline Market

While there are four refineries operating in Alaska, only the largest two refine gasoline: Flint Hills in Fairbanks and Tesoro in Kenai.⁷ The Department of Justice and Federal Trade Commission use two accepted measures of a market’s competitiveness: the HHI (Herfindahl-Hirschman Index)⁸ and Four- Firm Ratio.⁹ These measures describe the Alaskan gasoline refining industry as both highly concentrated and a tight oligopoly, respectively.¹⁰

In April 2004, Flint Hills purchased Williams Petroleum refinery and their retail outlets were purchased by Holiday Stationstores. Like their predecessor, Flint Hills purchases Alaska North Slope (ANS) royalty oil from the state of Alaska. Under their contract with the State, Flint Hills is required to keep its wholesale price (rack) within one cent/gallon of Anchorage rack price, on an annual average basis. OPIS data confirms that Flint Hills has met this contractual agreement: the rack prices are indiscernible from each other (see Chart 3). The presumed intent of this contractual agreement was to ensure that Fairbanks consumers paid retail gasoline prices that were commensurate with Anchorage retail prices. However, in the months to follow the Flint Hills purchase the retail price gap between Anchorage and Fairbanks actually increased.

⁶ Alaska Department of Revenue, *Fall 2004 Revenue Sources Book*, P. 31.

⁷ The Fairbanks refinery purchases Alaskan royalty oil from the Trans Alaska Pipeline and the Kenai refinery uses a mix of Cook Inlet, ANSC,⁷ and other non-Alaskan sources to produce their fuel products.

⁸ The HHI is obtained by “summing the squares of the market shares of each firm in the market.” DOJ/FTC consider markets with an HHI of less than 1000 to be “unconcentrated,” between 1000 and 1800 to be “moderately concentrated,” and greater than 1800 to be “highly concentrated.” Alaska is reported to have an HHI ratio of 2600, therefore falling in the “highly concentrated” range. (*Gas Prices: How are they really set?* US Senate Permanent Subcommittee on Investigations, 2002, Pp. 98, 141).

⁹ It “is obtained by calculating the total market share of the 4 leading firms in the market” (ibid P. 141). A market with a 4-firm ratio of more than 60 percent is considered a “tight oligopoly.” The Energy Information Administration reported that Alaska had a ratio of about 96. (ibid).

¹⁰ *Gas Prices: How are they really set?* US Senate Permanent Subcommittee on Investigations, 2002.

The Alaskan market is a relatively small domestic market. Of this market, Anchorage consumes approximately 60 percent¹¹ and Fairbanks consumes about ten percent of the gasoline consumed in the state.¹² In 2001, Anchorage was reported to have about 100 gas stations,¹³ compared to approximately 25 stations in the Fairbanks North Star Borough. Both Anchorage and Fairbanks have hypermarket retailers,¹⁴ like Sam's and Fred Meyer, which have been seen to increase price competition in national and international retail markets.

In summary, we now know that the Alaskan market is a small isolated domestic market. Further, that the Anchorage market is significantly larger than the Fairbanks market, and that new hypermarket competitors have entered both markets: competitors known to drive prices down. Finally, we have observed that in April Anchorage and Fairbanks retail prices and retail margins diverged. What can we conclude from this information?

Conclusions

We do not have enough data to draw long-term conclusions about this market. OPIS rack price data represents the wholesale price to the public, not the negotiated price to retailer/distributors. Therefore, the reported margins probably do not accurately report proceeds to the retailer/distributor with long-term contracts. Thus, the explanatory power of net margin data derived from this posted rack data is limited or compromised. Moreover, time series data for the Alaska market is limited for Anchorage and Fairbanks. With this in mind, we have developed the following conclusions from the data that is available.

Anchorage is a significantly larger consumer of gasoline, therefore their retailers probably benefit from greater volume discounts and rebates from "posted" rack price than the smaller volume Fairbanks retailers. The inability of these smaller firms to obtain larger volume discounts means that they would not have like savings to pass along to their customers.

Further, hypermarkets, like Sam's and Costco, are transforming the domestic retail market to a market where gasoline is just one more commodity to be sold at a large retail store. This means that the hypermarkets remain profitable with lower profit margins. However, both Anchorage and Fairbanks have hypermarkets. So, why have Anchorage consumers seemed to derive more benefit from their presence? We do not have an answer for this question, what we do know is that in 2004 and 2005 OPIS reported that Anchorage was one of the least profitable retail markets in the nation.

Finally, even Anchorage, the largest Alaskan market, is a small isolated market in the bigger regional scheme of things. In the end, the price difference between Anchorage and Fairbanks most probably reflects greater competition in Anchorage, perhaps as a

¹¹ Alaska Attorney General report, 2001

¹² *ibid*

¹³ *ibid*

¹⁴ Defined by the Energy Information Administration as "a supermarket, other traditional retail store, or discounter (such as Wal-Mart or Costo...) with a motor gasoline outlet in the parking lot." *Gas Prices: How are they really set?* US Senate Permanent Subcommittee on Investigations, 2002, P. 60.

result of a new entrant in the retail market cutting prices to develop market share and customer loyalty.¹⁵ It is difficult to determine the role the refiners play in this equation due to the proprietary nature of the relationship between rack, retail pricing, and contract terms. So, what can we do?

Possible Actions

We propose the following possible courses of actions for your consideration. We have one principle recommendation: If you wish to understand this market situation more fully, we recommend purchasing at least 10 years of Anchorage and Fairbanks data. Further, we recommend gathering daily price data in a consistent and rigorous manner for a few months. Both of these actions will allow us to better observe long and short-term trends. At this time, our observations and conclusions are based on limited data that just hint at patterns, and additional data is paramount for a deeper and more accurate understanding. Now, on to possible courses of action:

- 1) Set up an ad hoc sub-committee to gather more price information for the Anchorage – Fairbanks markets and further explore industry dynamics.
- 2) Due to the complexity of this topic, and limited staff time, hire a consultant to develop a price model and conduct an econometric analysis of the market.

Actions that the commission might request be explored by sub-committee or consultant:

- 3) Encourage a local group establish a gasoline cooperative.

Immediate Actions Resulting from Report

On February 22 2005, this report was presented to the Fairbanks North Star Borough Economic Development Commission. After reviewing and discussing the report, the Commission determined that it was important to continue to monitor the Fairbanks, Anchorage, and Seattle gasoline markets. Therefore, the Commission directed the FNSB Economic Development Division to track this data and report it to the FNSB Economic Development Commission at their monthly meetings.

Acknowledgements

I would like to express my gratitude to Matt O’Keefe, for his assistance in analyzing and drafting this report and to independent petroleum analyst Richard Fineberg, who provided background information and analysis for this report as an occasional consultant.

¹⁵ Suggested by various industry experts interviewed as background for this report.