# **2008 ALASKA GASOLINE PRICING INVESTIGATION**

# Attorney General's Report



January 2009

# ATTORNEY GENERAL'S REPORT

I. Introduction	3
II. Executive Summary	5
III. Discussion	9
A. Applicable Laws	9
1. Antitrust Laws	9
2. Price Gauging Laws	10
3. Unfair Trade Practice Laws	11
B. Gasoline Production and Distribution in the U.S. and Alaska	12
C. Gasoline Markets in Alaska	14
1. Market Characteristics	14
2. Alaska Market Size	14
3. Alaska's Refineries	15
4. Gasoline Wholesalers	18
a. Railbelt Areas	18
b. Barge-Serviced Areas	18
5. Retailer Distributors	19
6. Out of State Supply Alternatives for the Railbelt	21
D. Performance of Alaska's Gasoline Markets	22
1. Alaska Retail Gasoline Relative to Lower – 48	22
2. Gasoline Prices Relative to Crude Oil	23
3. Alaska Rack (Wholesale) Prices	26
4. Retail Margins	27
E. Economics of Pricing in Alaska	27
1. Competitive Markets & Prices	27
2. Oligopoly Markets & Prices	28
3. Alaska's Gasoline Prices Reflect Oligopoly Prices	29
IV. Conclusion	30

# 2008 ALASKA GASOLINE PRICING INVESTIGATION

# I. Introduction

The high cost of fuel in Alaska has been a topic of debate for decades. Most Alaskans are accustomed to the fact that the cost of living here is higher than the rest of the country. Alaska's geographic isolation results in higher transportation costs for many goods, and our smaller population does not always lend itself to economies of scale or the same degree of competition enjoyed in other areas of the country. In 1976, the cost to live in Anchorage was 42% higher than the national average.<sup>1</sup> Today, that difference is only about 10%. As the population of Alaska grows and the availability of good and services (and competition for them) increases, prices tend to lower, at least in the more populated areas of the state. But when it comes to fuel and gasoline in particular, consumers in Alaska question why our prices are higher here than just about anywhere else in the country, especially since we have refineries and a supply of oil right here.

Gasoline prices reached record highs in every state across the country, including Alaska in the summer of 2008. These higher fuel prices were driven by the unprecedented rise in the price of crude oil. Oil prices increased from \$85 per barrel in early February to a record high near \$145 a barrel in July. This increase of \$60 per barrel over a 5-month period has never occurred before. Regular-grade gasoline sold at its peak for \$4.45 a gallon in Anchorage (\$4.18 exclusive of taxes) and hit nearly \$8.00 a gallon in some rural areas of Western Alaska.

After rising to record levels in mid-summer, crude oil prices plummeted by more than \$110 per barrel over a 6-month period, dropping to less than \$30 per barrel at one point in December before recovering somewhat to the low \$40 per barrel range. This drop also was unprecedented in the history of crude oil markets.

Anchorage gasoline prices rose in the first half of 2008 along with prices in the rest of the nation as crude prices marched upward. This rise did not occur, however, as quickly in Anchorage as it did in the lower-48. During parts of February and March Anchorage gasoline prices were lower than Seattle prices. When crude oil prices peaked in July, Anchorage consumers were paying \$0.33 more per gallon of gasoline (tax adjusted) than consumers in the Pacific Northwest ("PNW"). When crude oil prices began to plummet during the fall of 2008, this average price difference, or "spread," between Anchorage and Seattle reached \$1.06 per

1

U.S. Department of Labor, Bureau of Labor Statistics, "Urban Intermediate Budget for a 4-Persons Family." (Revised 2/28/96)

gallon as gasoline prices in the rest of the country fell more quickly than they did in Alaska. Prices in Seattle, however are more diverse that Anchorage. The spread between the high and low sellers in Seattle can be close to \$0.40 a gallon. On February 9, 2009, some stations in Seattle were selling gasoline at \$2.39 a gallon – higher than most stations in Anchorage. By contrast, the difference between the high and low sellers in Anchorage is only \$0.10 a gallon.

The Anchorage-Seattle spread has narrowed over the past two months as oil prices have stopped falling. In late January, the spread between Anchorage and Seattle was \$0.65 per gallon, a decline of more than \$0.40 per gallon. On February 9, 2009, the spread was less than \$0.60 a gallon. Figure 1 below shows the spread between Anchorage and Seattle retail gasoline prices, along with the price of ANS crude oil from January 2008 through January 2009.



Source: AAA; Energy Information Administration; OPIS; State of Alaska Revenue Department.

Figure 2 shows that Alaska gasoline prices historically have lagged behind price changes in the rest of the U.S. This is consistent with the pricing relationship between Alaska and Seattle that occurred during 2008 and early 2009. The difference between the most recent experience and earlier years is that the spread between Alaska and Lower-48 prices has never been as large as it was in the fall of 2008. At the same time, volatility in crude oil prices, which factor heavily into gasoline prices, has never been close to the volatility experienced over the past year.



Source: AAA; Energy Information Administration; OPIS; Platts; State of Alaska Revenue Department. Source: AAA; Energy Information Administration; OPIS; State of Alaska Revenue Department.

The spread between Alaska and PNW gasoline prices during the second half of 2008 presents a frustrating dilemma, and one that concerns state officials. In August 2008, Governor Palin directed the Attorney General to investigate the price of gasoline in Alaska to determine whether the prices set by refiners, distributors, and retailers are the result of any illegal activity. This report summarizes the findings of the Attorney General. The last investigation of gasoline pricing in Alaska was completed in 2002. It was conducted over a several-year period and included the review of hundreds of thousands of documents. The results of that investigation found no illegal activity.<sup>2</sup>

<sup>2</sup> 

In the last 30 years, several states and the federal government have conducted gasoline pricing investigations. In 2008, Washington State completed a comprehensive gasoline price investigation. See http://www.atg.wa.gov/gasstudyfaq.aspx for a copy of the Washington study.

# II. Executive Summary

Gasoline, like all other commodities, is not regulated by the state. Instead, prices are determined by the forces of supply and demand. Competition in the marketplace is ultimately responsible for determining the price of all consumer goods and services, with few exceptions.<sup>3</sup> We do not live in a "cost plus" society. Sellers are not required to price their goods and services based on what it costs to acquire them "plus" a reasonable profit. Instead, sellers can and do price their goods according to the market conditions. If demand is strong and/or supply is limited, prices may exceed cost by 200% or more. Because gasoline is not regulated, the state does not have the authority to tell sellers how to set their prices. Thus, simply having a "high price" is not illegal by itself. Alaska does not impose price controls or "caps" on any product, and there is no "price gouging" law in Alaska. The price of many consumer goods in Alaska is higher than the price you would pay in Seattle or another large metropolitan area. Gasoline is no different.

Prices can be illegal, however, if they are the result of price fixing or other collusive behavior. The laws directed at ensuring that competition remains fair and unrestricted are state and federal antitrust law. Antitrust laws make it illegal to engage in any concerted action that unreasonably restrains trade.<sup>4</sup> It is also illegal to monopolize, attempt to monopolize, or conspire with another to monopolize any part of trade or commerce.<sup>5</sup> The purpose of the antitrust laws is to ensure that competition remains fair and unrestricted, which in turn results in lower prices and better service. Thus, if the sellers of gasoline were colluding with each other to "fix" the price of gasoline, they would be violating the law.

Our investigation did not reveal any evidence that this kind of illegal collusion or price fixing has occurred among the refiners, distributors, or retailers of gasoline in Alaska. Instead, there are economic realities of the Alaska gasoline market that likely explain the price of gasoline in Alaska and the relationship between Alaska gasoline prices and prices in the Lower-48.

First, the market for gasoline in Alaska is structurally different than most other gasoline markets in the U.S. Gasoline demand in Alaska is small, and we do not enjoy the same degree of

<sup>&</sup>lt;sup>3</sup> Those exceptions include regulated utilities, like electricity, sewer and water service, and natural gas.

<sup>&</sup>lt;sup>4</sup> AS 45.50.562; 15 U.S.C.A. § 1.

<sup>&</sup>lt;sup>5</sup> AS 45.50.564; 15 U.S.C.A. § 2.

competition as most markets in the Lower-48. There are few participants in Alaska's gasoline markets at the refining and wholesale distribution level. When few competitors account for the majority of sales, the market is known as an oligopoly. In addition, Alaska is geographically isolated from alternative supply sources outside the state. As a result, potential competition from the Pacific Northwest -- which might otherwise be expected to keep prices in parity with Lower-48 prices -- is limited, particularly during short-term price disruptions such as occurred in 2008. Based on this market structure alone, it is unrealistic to expect that gasoline prices in Alaska should be the same as prices in other parts of the country. The level of competition and available sources of supply in the Lower-48 create supply and demand conditions that are not present here.

Second, the changes in crude oil prices during 2008 were dramatic and unpredictable, making it the most volatile year in crude oil pricing history. After rising \$60 per barrel during the first part of the year, crude oil prices dropped by more than \$100 per barrel in less than six months. These events created market conditions that have never occurred before. The rapid rise and following decline in oil prices, coupled with Alaska's unique oligopolistic market structure appears to account for the unusually high spread between gasoline prices in Alaska and the Lower-48 experienced during the second half of 2008.

This unusually large spread is not, however, inconsistent with historical pricing patterns in Alaska. Alaska's gasoline markets have historically responded more slowly to changes in crude oil prices than larger, more competitively structured markets in the Lower-48. In oligopoly markets there can be a wide range of pricing outcomes depending on the behavior of the individual market participants. Prices can range from a very competitive level to monopolistic. The specific outcome can vary across time and depends on the behavior and goals of the market participants, as well as the potential for competition from non-incumbent sellers to access the market when prices rise above competitive levels. Prices in these types of markets can and do deviate from long-term historical patterns, particularly when input costs change quickly.

Gasoline prices have fallen dramatically in Alaska since the start of this investigation. At the time of writing this report in late January 2009, Anchorage gasoline was selling at about \$2.35 per gallon on average, a drop of more than \$2.00 per gallon since July 2008. In Seattle, gasoline prices have risen over the last month and now average about \$2.10 per gallon. On a tax-adjusted basis this difference is approximately \$0.65 per gallon. While still larger than historical

norms, the spread between Anchorage and Seattle has started to narrow over the past several months, consistent with historical patterns.

In Southeast and Western Alaska, where fuel is supplied by barge, some of the same economic principles apply. There are few competitors, and alternative sources of supply are scarce. In addition, barge markets are characterized by relatively few large deliveries of fuel throughout the year. Unlike markets where supply is replenished every few days, fuel may not be delivered by barge for several weeks or months. Until new deliveries of fuel are made, the price of fuel is not likely to change. If a supply of higher-priced fuel is delivered in summer, lower priced fuel may be months away. When you add the dynamics of the barge market to other factors that affect supply and demand in Southeast and Western Alaska (for example, low volumes and higher transportation costs), prices tend to be higher.

The Attorney General's investigation spanned five months. Thousands of pages of confidential documents were reviewed, and key personnel were interviewed. The Attorney General also retained the services of Barry Pulliam, Senior Economist with the Los Angelesbased economic consulting firm Econ One Research, Inc., to assist in this investigation. Mr. Pulliam assisted the Attorney General's office in its prior investigation of gasoline prices, concluded in 2002. Mr. Pulliam has extensive experience in the analysis of competitive issues involving gasoline markets, and assisted the Attorneys General in California and Hawaii in several investigations involving gasoline prices. Econ One assisted in the preparation of this report.

The key findings of our investigation are set forth below.

#### **Key Findings**

- · We did not discover evidence of illegal activity.
- The unprecedented increase in crude oil prices, followed by another unprecedented decline (i.e., volatility), resulted in unstable market conditions that added to uncertainty and influenced pricing decisions.
- The structural characteristics of Alaska's petroleum product market, coupled with unusual crude oil price volatility, contributed to the unusual high gasoline prices and higher differential relative to other parts of the country in 2008.
- Higher prices in Alaska relative to other areas flow from higher wholesale (or rack-level) prices. Retailer margins do not account for Alaska's higher prices in 2008.
- The persistent and long-lasting high gasoline prices in southeast and western Alaska are a result of barge delivery economics and related issues, coupled with the items listed above.

# III. Discussion

This part of the report is divided into five sections that address different topics related to gasoline markets and pricing in Alaska. The first section provides an overview of the Alaska and federal laws that apply to the pricing of gasoline. The second section provides an overview of gasoline production and distribution. The third section discusses Alaska gasoline markets and how their unique characteristics influence gasoline prices. The fourth examines gasoline prices in Alaska and how those prices compare to the PNW (the closest source of potential competition for gasoline supply to Alaska) and Hawaii (a state with similar market characteristics as Alaska). The fifth section discusses the economics of gasoline markets and competition in Alaska.

# A. Applicable Laws.

# 1. Antitrust Laws.

There are very few laws anywhere that restrict a seller of goods and services from selling a product at any price. These kinds of price control laws are contrary to the established economic model enjoyed by businesses in the United States – the free market economy. In a free market economy, the laws of supply and demand ultimately control the price that a seller sets for a product. If the price is too high, buyers will look for a cheaper price and the seller will lose market share. A price that is too low may not return the profit to stay in business in the long run. Federal and state antitrust laws were developed to make sure this economic model works by prohibiting unreasonable interference with competition.

The antitrust laws make it illegal for competitors to engage in any conduct that unreasonably restrains competition, like colluding with each other to fix prices, or agreeing to allocate the market among a group of sellers. Attempts to monopolize any part of trade or commerce, and conspiracies to monopolize are also illegal. Predatory pricing, which is the practice of selling a product below cost long enough to drive competitors out of business, is a form of illegal monopolization.

The primary federal statute that makes anticompetitive conduct illegal is the Sherman Act, 15 U.S.C.A. §§ 1 and 2. These laws have been codified in Alaska at AS 45.50.462 and .464, and are essentially identical to the federal law. These laws establish two basic requirements: (1) companies cannot agree to limit competition in ways that hurt consumers, and (2) a single company cannot monopolize an industry through unfair practices. In order to find a violation of these laws, the state must prove that either: (1) two or more competitors entered an agreement that had the effect of unreasonably restraining competition, or (2) that a single

business has engaged in conduct (like predatory pricing) that was intended to monopolize any part of trade or commerce or unreasonably restrain competition.

Antitrust laws are far more complex than the brief summary above. Depending on the conduct, if there are overriding business reasons for any practice, it may not be illegal is if the conduct has anti-competitive effects. For example, some agreements among competitors have beneficial effects that outweigh any restrictions on competition. In some cases, a failing business may sell is assets to a monopolistic rival and not be in violation of merger restrictions. But the basic principle remains the same – conduct that unreasonably restrains competition is illegal.

Other than antitrust laws, there are very few laws that restrict the price of goods or services. Some services, like regulated utility services, are natural monopolies that are subject to regulation by most state's public utility commissions. Because providers of these services are not subject to competition, their prices are established by a commission that reviews the cost of providing the service and then allows the utility to make a reasonable rate of return on invested capital. In Alaska, the Regulatory Commission of Alaska (the "RCA") regulates all public utilities, including electricity, natural gas, telephone, water, and garbage service. Gasoline is not considered a public utility in most markets. And while the State regulates certain aspects of the industry, the price of gasoline is not regulated by the RCA or any other body in Alaska.

The Attorney General's investigation did not uncover any evidence that refiners, distributors, retailers, or other sellers of gasoline have violated the antitrust laws by colluding with each other, or attempting to maintain an illegal monopoly over gasoline sales.

# 2. Price Gouging Laws.

"Price gouging" is often defined as a sharp rise in the price of basic necessities over a short period during a time of natural disaster. About 30 states have price gouging laws in one form or another. Alaska does not have a price gouging law of any kind. Lawmakers and economists continue to debate the wisdom of price gouging laws. Most price gouging laws are "triggered" by a declared state of local or national emergency, such as a natural disaster. Following the devastation of hurricane Katrina, for example, Louisiana's price gouging law went into effect. This law prohibits sellers from increasing the prices of products above the price ordinarily charged for comparable goods and services in the same market area, unless the increase is due to increased costs for reasonable expenses and attendant business risks.<sup>6</sup> This prevents unscrupulous sellers from preying on consumers in their most difficult times of need.

A few states have price gouging laws that are triggered by an "abnormal market disruption" or "market emergencies" that result from a variety of extraordinary circumstances. During these abnormal conditions or market emergencies, sellers are prohibited from setting "unconscionably excessive prices" which is defined differently by different states. In Connecticut, this means a "gross disparity" between the price before and after the disruption, unless the price increase is due to additional costs of the seller.<sup>7</sup> Massachusetts defines "unconscionably high prices" to mean the gross disparity between the current price and the price prior to the emergency, or between the price of a vendor and the price of other competitors in the area where higher prices are not attributable to increased supplier costs.<sup>8</sup>

Simply having a high price for gasoline is not price gouging in Alaska, even if those prices are in excess of prices in other parts of the country.

# 3. Unfair Trade Practice Laws.

Another law that has potential applicability to the pricing of consumer goods is Alaska's Unfair Trade Practice and Consumer Protection Act (the "Act").<sup>9</sup> The Act provides that all unfair or deceptive acts or practices in the conduct of trade or commerce are unlawful. "Unfair" is not specifically defined, but the Act contains a list of 55 acts that are considered unfair. In addition to those listed, *any* unfair act can be illegal. The Alaska Supreme Court has stated that "unfairness" is determined by a variety of factors, including (1) whether the practice, without necessarily having been previously declared unlawful, offends public policy as it has been established by statutes, the common law, or whether, in other words, it is within at least the penumbra of some common-law, statutory, or other concept of unfairness; (2) whether it is immoral, unethical, oppressive, or unscrupulous; and (3) whether it causes substantial injury to consumers (or competitors or other businessmen).<sup>10</sup>

<sup>&</sup>lt;sup>6</sup> LA R.S. 29:732

<sup>&</sup>lt;sup>7</sup> Conn. Gen. Stat. §§ 42-234 and 234a.

<sup>&</sup>lt;sup>8</sup> Mass. Code §§ 940.3.01 and 940.3.18.

<sup>&</sup>lt;sup>9</sup> AS 45.50.471.

<sup>&</sup>lt;sup>10</sup> State v. O'Neill Investigations, Inc., 609 P.2d 520, 535 (Alaska 1980) (citing FTC v. Sperry & Hutchinson Co., 405 U.S. 233, 244-45 n. 5 (1972).

No case has applied this test to the price of gasoline except in connection with a price gouging statute that prohibits excessive prices during an emergency. While it may seem that gasoline prices are "unfair" and perhaps "excessive" or "unconscionable," the Attorney General's investigation did not uncover evidence that Alaska gasoline prices were unconscionable or oppressive in light of the market structure, the unprecedented volatility in crude oil markets and the duration of the price differences between Alaska and elsewhere.

# B. Gasoline Production and Distribution in the U.S and Alaska.

Gasoline, along with other petroleum products, is produced at refineries from crude oil. It is then shipped to bulk storage terminals by pipeline or barge where it is stored temporarily until loaded into trucks at a nearby truck "rack" for distribution to retail gasoline stations. The distribution and marketing of gasoline is depicted graphically in Figure 3.



Wholesale marketers acquire gasoline from refiners at bulk storage terminals. From there, wholesalers load gasoline into trucks at the rack for delivery to the retail stations they supply directly. Wholesalers may also sell gasoline to distributors, known as "jobbers" that operate their own trucks and resell to retail gasoline stations. Wholesale marketers typically purchase gasoline from refiners at a "spot" or "bulk" price. Wholesalers also acquire gasoline from local refiners pursuant to "exchange" agreements under which they receive gasoline at terminals in Alaska in exchange for delivery of an equal volume of gasoline at an agreed upon West Coast terminal in addition to direct purchase agreements.

Wholesale marketers that directly supply retail gasoline stations with their own trucks sell to those stations at their "Dealer Tank Wagon" or "DTW" price. Wholesale marketers that sell to distributors at the truck rack do so at a "rack" price. The rack price is lower than the DTW price the retail dealer pays since, among other factors, the distributor takes delivery into its own trucks and bears the costs associated with further distribution to retail stations. Wholesalers may also offer discounts or rebates off their published rack or DTW prices.

Gasoline is ultimately sold to consumers through retail stations. These stations sell either "branded" or "unbranded" gasoline. The major brands in Alaska are Tesoro, Holiday, Shell and Chevron. The physical composition of gasoline that is sold at branded and unbranded stations is virtually identical, with the exception of the types of additives blended into the gasoline. All gasoline sold to consumers contains additives such as anti-gumming agents designed to help keep engines clean. Branded gasoline contains the proprietary additives marketed by the respective brand (e.g., Chevron includes "Techron" in its gasoline) while unbranded gasoline usually contains a "generic" additive package. Branded gasoline typically sells at a premium to unbranded gasoline at both the wholesale and retail levels.

Retail gasoline stations are usually owned directly by a wholesale marketer or by an independent operator. Stations that are owned by a marketer are operated directly by the company itself (known as "company operated" stations) or they are leased to an independent dealer (known as a "lessee-dealer"). In both cases these stations acquire the branded gasoline they sell directly from the marketer. Stations that are not directly owned by a wholesaler are called "open stations" or "open dealers." Open dealers purchase gasoline directly from wholesale marketers or from jobber-distributors. These dealers often enter into branding agreements to sell the brand of a particular marketer or they sell unbranded gasoline. At the end of its branding agreement an open dealer is free to "re-brand" with another marketer.

# C. Gasoline Markets in Alaska.

# 1. Market Characteristics.

The production and distribution of gasoline in Alaska is similar in many respects to production and distribution in the rest of the country. However, there are factors unique to Alaska that impact our gasoline prices. These are summarized in the following Chart.

# Alaska Gasoline Market Characteristics

- Relatively Small Markets
- Only Two Refiners of Gasoline
- Refineries Are Less Efficient Than In Lower-48
- Relatively Few Wholesalers of Gasoline
- Smaller Station Formats Typically
- Distant From Alternative Supply Sources
- Limited Terminal Capacity
- Limited Delivery Windows In Some Parts of State

# 2. Alaska Market Size.

The State of Alaska is the smallest gasoline consuming state in the U.S. Table 1 shows gasoline sales in Alaska and other western states. Demand for gasoline in Alaska is less than 300 million gallons per year, or just 0.2% of total U.S. gasoline consumption.

Table 1: Motor Gasoline Sales for Selected States   January - December 2007				
U.S. Rank	State	Volumes	As percent of Total U.S	
		(Million Gals.)	(Percent)	
1	California	15,591	11.3%	
16	Washington	2,780	2.0%	
30	Oregon	1,533	1.1%	
43 :	Hawaii	474	0.3%	
50	Alaska	268	0.2%	

Source: EIA, Prime Supplier Sales of Motor Gasoline by State.

In comparison, the state of Washington, which is an alternative supply source for gasoline to Alaska, consumes about 10 times that amount. California is the largest consuming state, accounting for 15.6 billion gallons, or more than 11% of total U.S. demand. Hawaii shares many of the market characteristics and pricing behavior as Alaska, including relatively small market size. It consumes close to 500 million gallons per year, or just 0.3% of U.S. demand.

The greater Anchorage area is Alaska's largest gasoline market. Fairbanks is the state's second largest market. Table 2 summarizes publicly available data for gasoline sales in Anchorage, Fairbanks, Seattle and Honolulu. Anchorage accounts for approximately 150 million gallons per year and nearly 60% of state demand, yet those volumes are just 10% of Seattle's 1.6 billion gallons in sales. Fairbanks is the state's second largest market, accounting for approximately 35 million gallons, or a little more than 10% of state demand.

Table 2: Gasoline Sales for Selected Cities				
Location	Volumes			
	(Million Gals / Yr)			
Anchorage	150			
Fairbanks	35			
Honolulu	240			
Seattle	1,640			

Source: MPSI.

#### **3.** Alaska's Refineries.

There are two refineries in Alaska that produce gasoline -- Tesoro's refinery in Nikiski and Flint Hills' refinery in North Pole. Petro Star also operates refineries in Alaska, but does not produce gasoline. Tesoro accounts for approximately 80% of Alaska's in-state production; Flint Hills accounts for the balance. Table 3 provides summary information about Alaska's gasolineproducing refineries and refineries in other western states. Alaska's two gasoline producing refineries are smaller than most refineries in the U.S. The average capacity of Alaska's refineries is 60 MBD, which is less than half the size of the average refinery size in Washington. The State of Washington is home to 5 refineries; California has 13 gasoline-producing refineries, giving the West Coast a total of 18 gasoline-producing refineries. Hawaii, like Alaska, is home to just two refineries.

Table 3: Number of Gasoline Producing Refineries by State: Alaska, California, Hawaii and Washington 2008					
State	Number of Refineries	Average Capacity			
		(MBD)			
Alaska	2	60			
California	13	149			
Hawaii	2	75			
Washington	5	127			

#### Source: Oil and Gas Journal.

The Flint Hills refinery uses exclusively Alaska North Slope ("ANS") crude from the Trans Alaska Pipeline System ("TAPS") to run its refinery. It produces refined products such as jet fuel and gasoline, then re-injects the remainder of the crude oil back into the pipeline. Flint Hills pays a price to do this. Because re-injecting the "heavy" product back into TAPS lowers the overall quality of the ANS oil stream, Flint Hills pays the TAPS owners a "quality bank differential." This amount varies by year.

Tesoro uses ANS crude for about 50% of its operations which it must ship from Valdez. The other 50% of its crude oil is purchased. Some of this comes from the Cook Inlet, and the remainder is purchased on the world market from Russia, Asia, and other countries. Tesoro is restricted on what kind of crude oil it can buy. Tesoro's Alaska refinery was initially designed to refine Cook Inlet crude oil, which was the primary feedstock for the refinery when it opened in 1975. The refinery can also process ANS, and other oil that has similar characteristics to ANS crude. This requires purchasing oil from countries with crude oils of similar quality to Alaskan crude oils. Like Flint Hills, Tesoro refines gasoline, jet fuel, diesel, and heavy oils. Tesoro is the only refinery in Alaska that can produce low-sulfur diesel that meets current EPA standards.

Unlike Flint Hills, Tesoro cannot inject the heavy end products that result from its refining process into TAPS. Instead, these products must be sold. There is a small market in Alaska for some of these heavy products, but for the most part Tesoro must ship the heavy product to markets outside Alaska.

Alaska's refineries are low-conversion facilities. They have a complexity factor of 3.3, versus an average complexity factor of 10.8 for West Coast facilities. This means that Alaska's refineries do not produce as much high-value product (like gasoline) as typical West Coast or Lower-48 refineries. Gasoline comprises only about 15% of total product demand in Alaska, compared with nearly 45% on the West Coast. Alaska's refineries are geared to produce large volumes of jet fuel. Approximately 60% of the volume of petroleum sales in Alaska is jet fuel. Diesel fuel accounts for almost 20% of Alaska sales. Tesoro also produces relatively large volumes of residual fuel oil. This low-valued product is exported out of state to the West Coast refineries that further process it into light products such as gasoline. Figure 4 provides a comparison of the composition of petroleum product sales in Alaska and the West Coast.



Source: EIA.

# 4. Gasoline Wholesalers.

# a. Railbelt Areas.

Tesoro, Flint Hills, Chevron and Shell are the primary gasoline wholesalers operating in Alaska's railbelt. These four companies sell gasoline to retailers and/or through their own retail stations. Tesoro is the largest wholesaler. It markets gasoline through both channels. Flint Hills, the state's second largest wholesaler, sells gasoline to other wholesalers and to retailers. It

does not own or operate its own stations. Each of these four wholesalers sets a rack price for gasoline.

Alaska's gasoline markets are more "concentrated" at the wholesale distribution level than markets in most of the U.S. The four largest wholesalers in Alaska account for nearly all of sales in Anchorage and Fairbanks. By way of comparison, the four largest wholesalers in Seattle accounted for approximately 70% of sales in 2008.

# b. Barge-Serviced Areas.

Gasoline is supplied by barge in southeast and western Alaska. Not only is this expensive, the markets in southeast and western Alaska are small, with a single supplier in some locations. We estimate that these regions each account for roughly 10% of gasoline demand in Alaska. There are few wholesalers operating in these regions. The primary suppliers include Crowley, Delta Western, Petro Marine and Tesoro.

Wholesalers that deliver by barge purchase gasoline based on wholesale prices (either spot or rack) in Nikiski and the Pacific Northwest (PNW), and transport it to terminals in southeast or western Alaska. Barge delivery schedules, the price paid for the gasoline, and the amount of storage capacity in the area all affect the price of gasoline in these markets. Seasonal weather changes can also effect the scheduling of barge delivered fuel. In some areas of Alaska, gasoline is only brought in once or twice a year. The price is these areas may not change more than one or twice to coincide with barge delivery dates. In other areas, like Juneau, fuel is delivered more often, but not weekly or even monthly.

The markets in southeast and western Alaska are very small compared with Alaska's larger cities. In some locations there are only one or two wholesale suppliers. With few competitors, low volumes and higher costs, prices are naturally higher than they are in larger urban areas of Alaska and other U.S. locations. Fuel delivery schedules can also have a significant impact on gasoline pricing in these markets. The landed cost of the fuel at the terminal includes (1) the wholesale cost of the fuel; (2) the transportation cost; (3) the terminal cost; (4) breathing loss;<sup>11</sup> (5) overhead expenses; and (6) a return on investment. Once the fuel is delivered, this cost often does not change until the fuel is depleted and another barge arrives to replenish the supply or change the cost by averaging additional fuel that is added to existing supply.

<sup>&</sup>lt;sup>11</sup> Breathing loss is evaporation.

Total storage capacity among all the suppliers in Juneau is estimated to be about 8 million gallons. Until this supply is replenished, the landed cost does not change. This may not happen for weeks or even months. In parts of western Alaska, new fuel supplies may not be available for several months. Until a supply of fuel at a lower cost arrives, retailers may not be able to lower their prices.

In some areas of Alaska, buying groups or cooperatives pool their purchases of fuel and ask for companies to bid for delivery. These contracts are typically multi-year, and the pricing terms are specified in the bidding proposals and negotiated by the buyers. Several electric cooperatives in western Alaska purchase fuel in this manner.

We are aware of no place in the Lower-48 that has a barge-delivered fuel market like southeast or western Alaska. The closest supply situation in the U.S. is the distribution system to the Hawaiian Islands of Maui, Kauai, Hawaii and Lanai. Gasoline is delivered by barge to these islands from the two refineries on Oahu. However, these deliveries are typically for larger quantities, cover shorter distances and barges operate in much friendlier environments.

# 5. Retailer Distributors.

Gasoline is sold to consumers through retail outlets. In some cases those retail outlets are owned directly by wholesalers or refiners. Other retail outlets are owned by independent individuals or businesses. Tesoro owns a significant number of stations in the Anchorage-area. Tesoro provides gasoline to these stores as required, and accounts for the sales price as part of the cost to operate each store. Tesoro owns or leases several tanker trucks to make these deliveries.

Holiday is also a large owner of retail stations. It purchases gasoline from either Tesoro or Flint Hills, and delivers the gas to Holiday stations for an additional per-gallon charge consistent with the delivery service provided. The other major marketers of gasoline do not own their own retail stations.

Branded distributors contract with a wholesaler to purchase fuel and sell it under a brand name such as Tesoro to stores that are independently owned. They may also sell gasoline through their own stores. The majority of Tesoro stations, in addition to the Chevron and Shell stations in Alaska are operated by independent dealers or branded distributors.

Unbranded distributors contract with a wholesaler to purchase fuel at the truck rack. They then sell that fuel to independent unbranded stations, or they sell it through their own stations. Safeway, Costco, and Fred Meyers are examples of large independent distributors. They purchase fuel from wholesalers on a delivered basis, paying the wholesaler a per-gallon delivery charge consistent with the cost of the service provided.

Once gasoline is delivered to the retail distributor, the retail price is determined by the distributor in light of current market conditions, including the price competitors set for their gasoline. Retail stations in Alaska are also typically smaller than stations in the Lower-48 states, resulting in higher average per-gallon costs. In areas where the supply of fuel can be replenished weekly, or even daily, the price may change frequently as market conditions change.

Many consumers assume there is collusion among gasoline stations when prices increase and decrease at nearly the identical time. While this seems to suggest competitors are colluding with each other, this kind of "parallel pricing" is common in markets where pricing is transparent. For retail gasoline, prices are the most transparent of just about any consumer product. Prices are displayed for everyone to see, and competitors know almost immediately what price changes are occurring in the market. Public internet sites that track prices have also become more common, and allow competitors to track the pricing behavior of each other easily. In markets with fewer competitors, this becomes even easier, and identical price adjustments that occur nearly instantly are not uncommon. This is not illegal so long as competitors are making independent pricing decisions without communicating with each other.

Hypermarketers - Safeway, Costco, and Fred Meyers - have grown tremendously over the past decade in Alaska. Our investigation indicates that there has been vigorous competition between the in-state refiners for hypermarketer accounts as these outlets have grown over the last several years.

# 6. Out of State Supply Alternatives for the Railbelt.

Alaska's refineries produce enough gasoline to supply the state's needs in the railbelt, so there is no physical need to bring supplies in from sources outside the state. Given the limited number of in-state refiners and wholesalers of gasoline, however, the potential for supply entering the Alaska market from outside the region can provide a check on prices. The nearest alternative supply source to Alaska is the Pacific Northwest, specifically the refineries and terminals in the Seattle area. Wholesalers regularly ship product to western and southeast Alaska and have shipped gasoline to Anchorage terminals from Seattle as recently as the mid-1990s. No one has shipped gasoline into the Anchorage area during the past 10 years.

Short term or "spot" shipments into Anchorage, while theoretically possible, are generally not viewed as economic by existing or potential marketers, even in the face of shortterm prices that are relatively high. There are several reasons for this. First, shipping can be more expensive to obtain on a spot basis. Second, storage is difficult, if not impossible to arrange without long-term commitments. Third, most, if not all gasoline is sold in Alaska on a long-term basis, so there is no "ready market" to sell the gasoline into even if one were to arrange for a shipment. Finally, as discussed above, the overall market for gasoline is relatively small in Alaska. A typical tanker-size shipment of gasoline is 250,000 barrels (10.5 million gallons). This represents approximately 20 days supply for the entire railbelt area. Assuming a would-be marketer had 10% of the Anchorage-area market, a typical shipment of gasoline would account for more than 6 months worth of sales. This is a relatively long inventory turn over period and exposes the marketer to the risk that prices could change dramatically before the product is sold.

Gasoline supply into western and southeast Alaska is typically shipped up from Pacific Northwest refineries, though product can and does originate from Tesoro's Nikiski refinery as well. Shipments to these areas come up on smaller barges, with volumes in the range of 40,000 barrels. The small communities served in these areas means that marketers often will make several stops and that shipments are sporadic. Shipment to these areas is lined up many months in advance of delivery. Short-term or spot shipments to take advantage of periods of high prices are even less feasible for these areas.

# **D.** Performance of Alaska's Gasoline Markets.

#### 1. Alaska Retail Gasoline Relative to Lower-48.

Retail gasoline prices in Alaska have historically been higher than in the rest of the U.S. Adjusted for taxes, Anchorage prices averaged \$0.21 per gallon more than the U.S. average between 2002 and 2007. Anchorage retail prices averaged \$0.13 per gallon over Seattle during the same period. Fairbanks prices typically run higher than Anchorage prices. Between 2002 and 2007 Fairbanks retail prices were \$0.07 per gallon above Anchorage on average.

During 2008 the difference between Anchorage and Seattle prices was \$0.49 per gallon for the year. The spread during the first half of the year was \$0.18 per gallon, which is not much different than the long-run average. The spread during the second half of the year was \$0.76 per gallon, considerably higher than historical norms. The maximum spread between Anchorage and Seattle reached \$1.06 per gallon in November of 2008, at which point it began to narrow. By late January, the spread was \$0.65 a gallon. As of February 9, 2009, the spread had closed to less than \$0.60 per gallon. While this is still above historical levels, it represents a substantial drop in the spread (\$0.41 per gallon) during a relatively short (two-month) period. The spread between Anchorage and Fairbanks remained relatively unchanged during 2008. Figure 5 shows Anchorage, Fairbanks and Seattle retail prices (before taxes) from January 2002 through January 2009. Based on current trends, we expect the spread to continue to narrow.



Source: AAA; Energy Information Administration; OPIS.

Figure 6 compares Anchorage and Seattle retail prices from January 2008 through January 2009 on a daily basis. As seen in these figures, gasoline prices in Anchorage were within historical norms through June. The dramatic growth in the spread between Alaska gasoline prices and prices in most of the rest of the U.S. began during July and peaked in November before starting to fall toward historical levels.



Source: AAA; Energy Information Administration; OPIS.

# 2. Gasoline Prices Relative to Crude Oil.

The growth in the spread between Alaska gasoline prices and prices in the Lower-48 coincided with the unprecedented decline in crude oil prices that began in July. Crude oil prices rose by \$60 per barrel during the first half of the year, before peaking in July, at which point they proceed to drop by more than \$100 per barrel over the course of the year. The volatility seen in crude oil markets during the year is unprecedented.

The margin between Anchorage retail gasoline prices and ANS crude oil typically ranged from \$0.60 to \$0.80 per gallon prior to 2008, though at times the margin reached more than \$1.00 per gallon. Figure 7 shows Anchorage, Fairbanks, and Seattle retail prices (before taxes) compared to ANS crude oil starting in January 2002.



Source: AAA; Energy Information Administration; OPIS; Platts; State of Alaska Revenue Department.

As seen here, the gasoline-crude oil price margin remained in a relatively narrow range until mid-2008. At that point the margin in Alaska increased sharply as crude oil prices fell. The margin between Seattle prices and crude oil also rose during the second half of 2008, though not nearly as much as it did in Alaska. Figure 7 also highlights the fact that while gasoline prices move over time with crude oil prices, they do not move in lock-step and they move with a time lag.

Figure 8 shows the same information contained in Figure 7, but with the addition of Honolulu retail prices. Alaska and Hawaii gasoline markets share many of the same characteristics. Figure 8 shows that the relationship between gasoline and crude oil followed similar patters in Anchorage and Honolulu during 2008, with gasoline-crude oil price margins rising sharply in the second half of the year to record levels in both markets. Neither behaved like Seattle.



Source: AAA; Energy Information Administration; OPIS; Platts; State of Alaska Revenue Department.

Figure 9 shows daily retail gasoline prices in Anchorage, Honolulu and Seattle relative to crude oil from January 2008 forward. This figure shows the rise in the gasoline-crude oil margin in Anchorage and Honolulu during the second half of the year. As seen in the prior figure as



Source: AAA; Energy Information Administration; OPIS; State of Alaska Revenue Department.

well, gasoline-crude oil margins in Anchorage and Honolulu rose sharply during the second half of 2008, before declining toward the end of the year. Anchorage and Honolulu followed similar patterns, which were different from the pattern in Seattle.

# 3. Alaska Rack (Wholesale) Prices.

The rise in Alaska retail gasoline prices relative to the Lower-48 follows the rise in wholesale rack prices set by Alaska's marketers. Figure 10 shows rack prices in Anchorage, Fairbanks and Seattle relative to crude oil prices since January 2002.



Note: Fairbanks prices go through September 2008. Source: OPIS.

Rack prices in Alaska historically have been higher than rack prices in Seattle. Between January 2002 and December 2007 the average gross Anchorage rack price was \$0.16 per gallon over the average Seattle rack price. Fairbanks was \$0.08 per gallon over Anchorage during this same period. These differences approximate the differences seen in retail gasoline prices between these locations.

During the first half of 2008 Anchorage rack prices averaged \$0.23 per gallon over Seattle. The spread grew to \$0.90 per gallon during the second half of the year. Again, the relationship between rack prices in Alaska and Seattle is consistent with the relationship seen in retail prices.

# 4. Retail Margins.

Our review concluded that the margin between retail and gross rack prices was typically lower in Anchorage than in Seattle. Retail margins do not account for the increase in Alaska gasoline prices relative to Lower-48 prices during the second half of 2008.

# E. Economics of Pricing in Alaska.

As discussed above, gasoline prices are not regulated in Alaska (or elsewhere in the United States). Prices are determined in the market and dictated by the fundamental economic laws of supply and demand. In markets with many buyers and sellers, these economic laws work to ensure that the prices charged by sellers are competitive. That is, they will be at a level that covers sellers' costs over time, including a competitive return on investment for efficient sellers. In markets where there are relatively few suppliers and limited supply sources outside the area, prices can rise above sellers' costs, providing them with "supra-competitive" returns or profits.

Sellers in all markets offer their products to consumers in an attempt to earn a profit. The amount of profit that a seller can earn depends on existing competition from other sellers, potential entry into the market from others seeking profitable opportunities and the extent to which consumers have the ability to substitute products for the one in question.

# 1. Competitive Markets and Prices.

Competitive markets are characterized by a large number of sellers offering the same or similar products to consumers that have the ability to choose freely among the products or services offered. The larger the number of sellers, the more likely a market will perform competitively. This is because no single seller has the power to influence prices in the market on its own (i.e., no single seller has market power). Nor does any individual seller take into account its rivals or their decisions. Due to their relatively large numbers it is unwieldy for sellers to coordinate their behavior or agree to volume or price restrictions without being detected, or without some number of sellers "cheating" on the agreed restrictions.

In a competitively structured market, the motivation of sellers to earn profits through expanded sales coupled with the desire of buyers to seek out low-priced sellers in order to minimize their costs leads to prices that are "competitive." In a competitive market, prices will tend over time to equal sellers' costs, including the cost of attracting invested capital to the venture. If prices begin to rise above costs, sellers will see additional opportunities to earn profits and will offer additional product into the market. This in turn serves to drive prices down to the point where they cover sellers' costs. If prices fall to a level that does not cover sellers' costs, some will exit the market or offer less product until the decline in volume serves to increase prices to a level that does cover costs.

# 2. Oligopoly Markets and Prices.

Oligopoly (or concentrated) markets, like Alaska's, are characterized by the presence of relatively few sellers. Oligopoly markets can function competitively even with few sellers (or even just one seller) as long as it is not expensive for potential new sellers to enter the market when prices rise above competitive levels. In this situation, the presence of potential competition serves to cap the price available to existing sellers. If there are high costs associated with entering a market (entry barriers), either because of large up-front investments or regulatory issues, existing sellers may be able to increase prices above competitive levels, at least in the short term, without much concern about attracting new competition.

Where there is little threat of attracting new competitors, an individual seller may be able to exercise market power and impact prices through its own conduct. By offering a smaller volume to the market, a seller may be able to raise prices above costs and competitive levels. In competitive markets, this increase would attract supply from rival firms. In oligopoly markets, however, the few rival firms may not be as aggressive in increasing supply to the market in this situation because each recognizes it can affect the market price and its competitors' sales (and profits) through its own actions. A seller contemplating a price reduction in an attempt to expand its sales recognizes that it will take sales away from its competitors, which may prompt them to cut prices as well in order to keep from losing sales.

The ability of sellers to maintain prices above competitive levels in oligopoly markets is dependent upon their exercise of restraint in light of profitable opportunities for each to expand sales. The more certain a seller is that its competitors will exercise restraint, the more likely it will do so itself. Without the expectation of restraint by its rivals, a seller has little reason to show restraint itself, since it may simply result in increased business for its competitors at its own expense.

The fewer the number of sellers in a market, the easier it is for each to observe the other and develop expectations as to the way in which each will likely react to the other's decisions regarding output and prices. In these markets, each seller will naturally take into account the potential impact of its own actions on market prices, including the potential responses that its actions might elicit from other sellers. This type of "competitive" behavior is often referred to as oligopolistic pricing or "oligopolistic interdependence" because the decisions that each make are "dependent" in part on the expected actions (or reactions) of other sellers. In this environment, it is easier for sellers to develop a "live and let live" attitude toward their rivals that would not be possible to maintain in competitively structured markets with more sellers. As a result, oligopolistic or interdependent behavior can result in prices that are above competitive levels over extended periods of time.

Interdependent behavior on the part of sellers is not generally regarded as a violation of antitrust law as long as firms develop and implement their pricing and output decisions independently. That is, in determining what volumes to produce or what prices to offer firms can incorporate their expectations about a rival firm's likely competitive actions or reactions as long as those expectations are developed independently and without the aid of rivals.

# 3. Alaska's Gasoline Prices Reflect Oligopoly Pricing.

Alaska's gasoline markets can fairly be characterized as oligopolies at the wholesale level. Oligopoly markets can produce a wide range of prices, high or low, without there ever being any illegal behavior or collusion by sellers. Absent collusive behavior, the ability of sellers to maintain high prices and supra-competitive profit levels is dependant on their individual restraint or discipline in the face of profit opportunities. In addition, it is dependant on the existence of some sort of entry barrier that prevents non-incumbent suppliers from entering the market and taking advantage of the higher profit opportunities. As discussed above, these entry barriers exist in parts of Alaska, limiting competition from outside suppliers, particularly during short-term periods or periods such as the second half of 2008 characterized by extreme market volatility and uncertainty.

Gasoline prices in Alaska have been slower to adjust to falling crude oil prices since oil prices began falling in July 2008. The slower reaction in Alaska does not come as a surprise in light of history. This behavior is not limited to Alaska's gasoline markets. Hawaii's gasoline markets, which are structured similarly to Alaska's, also tend to lag price changes in the rest of

the U.S. In addition, academic research indicates that wholesale gasoline prices in markets that are less competitively structured respond more slowly to changes in crude oil prices.<sup>12</sup>

Given the structure of the market in Alaska, prior experience during crude price declines, economic theory and available academic research into gasoline markets, it is not surprising that Alaska's gasoline prices respond more slowly than prices in other markets. This accounts for the large spread between gasoline prices in Alaska and the Lower-48 during the second half of 2008. History suggests that after price declines Alaska gasoline prices continue to fall as prices in other markets start to rise again with the next increase in crude oil prices. Indeed, this is just the type of pricing behavior we have seen over the last two months, with the spread between Anchorage and Seattle narrowing significantly.

The events of 2008 do not fit neatly into any historical pattern. There has never been a market for crude oil at any time to rival the extreme price swings seen in 2008. It is impractical to expect that pricing would follow any kind of historical pattern during the past six months.

Economic theory does not tell us the magnitude of the price difference we should expect in Alaska during a period of price dislocation such as 2008. It does tell us, however, that given the differences in the market conditions in Alaska relative to most Lower-48 markets, large price differences can arise and be sustained absent any illegal behavior. Oligopoly markets are capable of a wide range of outcomes, particularly during periods of extreme volatility and uncertainty.

#### IV. Conclusion.

The Attorney General's office found no evidence of collusion or other illegal antitrust behavior among Alaska's refiners, wholesale marketers or retailers to fix output or prices. Our investigation indicates that the spread between Alaska gasoline prices and prices in the Lower-48 markets that began to widen during July 2008 is likely the result of market-related conditions in Alaska, combined with the unprecedented price volatility and uncertainty that occurred in crude oil markets during the year.

<sup>&</sup>lt;sup>12</sup> Severin Borenstein and Andrea Shepard, "Sticky Prices, Inventories, and Market Power in Wholesale Gasoline Markets," August 2000.