4/2/09

INQUIRY RE: CONSENT DECREE BETW. STATE & CROWLEY

Consent Decree Questions

Questions to Transport Company

1. What are the differences between surcharges applied with fuel delivered in the Yukon-Kuskokwim and other regions such as Bristol Bay and the Norton Sound?
2. What are the factors involved that make the price differences?
3. How many deep water line haul barges are involved in the transport of fuel to the Yukon-Kuskokwim region, and are these same barges used in others? And what are the costs of these barges and what portion of the price of fuel is applied to the cost of these barges? How many are owned by the transport company and how many are contracted?
4. How many shallow draft barges are involved in the transport of fuel to the Yukon-Kuskokwim region, and are these same barges used in others? And what are the costs of these barges and what portion of the price of fuel is applied to the cost of these barges? How many are owned by the transport company and how many are contracted?
5. How many fuel transfers points are involved in the transport of fuel and what costs or surcharges are involved?
6. What moorage or port charges or fees are involved or added the surcharges?
7. How much is the quantity of fuel factor in the price of fuel charged to customers?
8. How does credit or ability to pay or any financing issues, if any factor in the price of fuel?
9. Do any seasonal conditions such as flooding and icing conditions factor in the price and delivery of fuel?
10. Does the size and availability of a port or moorage and equipment factor in the price of fuel and how much?
11. How much does distance factor in the price of fuel?
12. How much does navigation issues in transporting fuel factor in the price of fuel?
13. How much storage capacity has been made available to another competitor as owner of that storage capacity?
14. Has any land been made available and has there been any interest in land for developing additional storage capacity by a competitor?
15. How much competition is there in the market and how has this affected fuel pricing?

Questions to Representative of Impacted Customers

1. What are the levels of income of the people affected by the consent decree?
2. What is the percentage, or how many are low income?
3. What is the percentage of income dedicated to paying for fuel in villages?
4. What could be the impact on households and entire communities in the region as a result of the consent decree?

5. What has happened over the last year with fuel prices as they relate to households and village economies?
6. For those that are utilizing low income energy assistance is there additional fuel surcharges applied for buying fuel?

Jane Pierson

From: Marianna Carpeneti
Sent: Wednesday, April 01, 2009 6:30 PM
To: Jane Pierson
Subject: update
Follow Up Flag: Follow up
Flag Status: Red

Hi Jane,
Here is a list of the folks I have testifying tomorrow. I'm sorry we have gotten any written points or questions; a few people told me they'd be getting some to me but none have as yet appeared. I'll keep you posted.

Testifying
Myron Naneng, AVCP President
Bob Charles, Nuvista Light and Electric (AVCP)
Elaine Brown, NorthStar Gas
Dan Leinberger, Vice-Mayor
Bev Hoffman, City Council
Thor Williams, City Council
? Meera Kohler, AVEC CEO
? Tiffany Zulkosky, Mayor

Marianna Carpeneti
Legislative Aide
Representative Bob Herron
phone: (907) 465-4942
fax: (907) 465-4589

BETHEL TESTIFIERS
Myron Naneng, AVCP President
Bob Charles, Nuvista Light and Electric
Elaine Brown, North Star Gas
Dan Leinberger, Vice Mayor
Bev Hoffmean, City Council
Thor Williams, City Counsil
Meera Kohler, AVEC CEO
Tiffany Zulkosky, Mayor (probably will not be present due to prior engagement)

- Meera carpenetti

DEPARTMENT OF LAW - Ed Sniffen
Ed Sniffen

CROWLEY MARINE - Ray Gillespi
Craig Tornga
Julia Lee, House Counsel

DELTA WESTERN - Pat Carter
Kirk Payne (listen only)

ebrownensg-llc.com
lfoley@cityofbethel.net

Myron Naneng 952-5021
Meera Kohler 565-5531
Bob Charles 306-2503
Elaine Brown 644-9205

Jane Pierson

From: Craig.Tornga@crowley.com
Sent: Thursday, April 02, 2009 8:29 AM
To: Adam Berg
Cc: Jane Pierson
Subject: RE: Your presentation

Adam,

When I send the presentations, I receive back an undeliverable message.
Is there a limitation on the size of e-mails you can receive?

Craig Tornga

-----Original Message-----
From: Adam Berg [mailto:Adam_Berg@legis.state.ak.us]
Sent: Wednesday, April 01, 2009 9:20 AM
To: Tornga, Craig
Cc: Jane Pierson
Subject: RE: Your presentation

Thanks for the response Craig. Good advice I'm sure on Redoubt.
Hopefully it will settle down soon.

Adam

-----Original Message-----
From: Craig.Tornga@crowley.com [mailto:Craig.Tornga@crowley.com]
Sent: Wednesday, April 01, 2009 9:18 AM
To: Adam Berg
Cc: Jane Pierson
Subject: RE: Your presentation

Adam,

I am currently out of the office, but I think I can access the the file and foward it to you this afternoon.

Redoubt has played havoc with my travel. I don't recommend trying to travel right now.

Regards,
Craig Tornga

Sent from my GoodLink synchronized handheld (www.good.com)

-----Original Message-----
From: Adam Berg [mailto:Adam_Berg@legis.state.ak.us]
Sent: Wednesday, April 01, 2009 12:33 PM Eastern Standard Time
To: Tornga, Craig
Cc: Jane Pierson
Subject: Your presentation

Good morning Craig -

Jane from the Judiciary committee asked me whether I had a digital version of the presentation you gave to the House Energy committee when we had our Rural Fuel Pricing hearing.

Do you have that in a format that is e-mailable?

If so, you can send it to
Jane.Pierson@legis.state.ak.us<mailto:Jane.Pierson@legis.state.ak.us>
please?

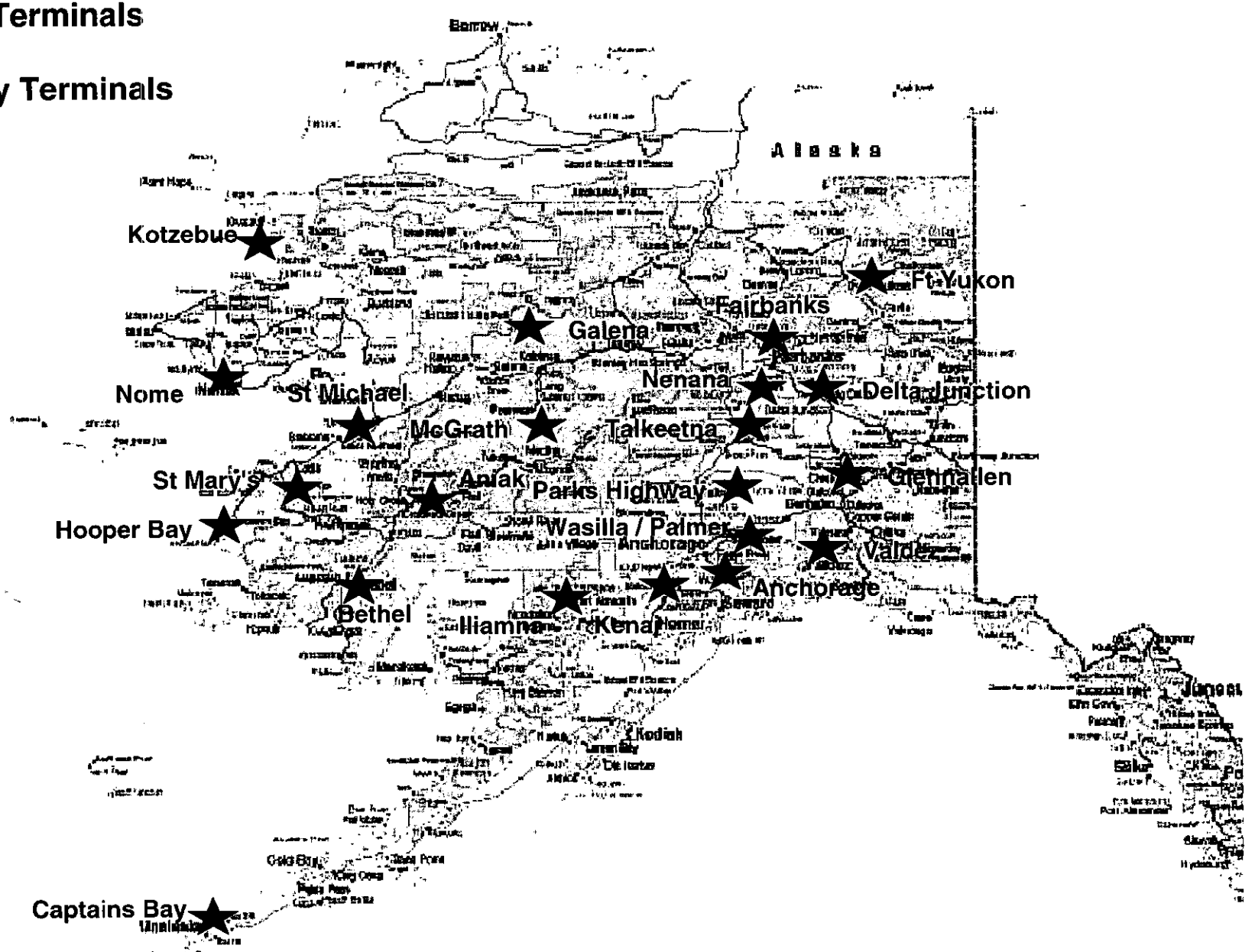
Western Alaska Fuel Distribution

March 12, 2009

Alaska Footprint

★ Marine Terminals

★ Highway Terminals



Alaska Petroleum Distribution

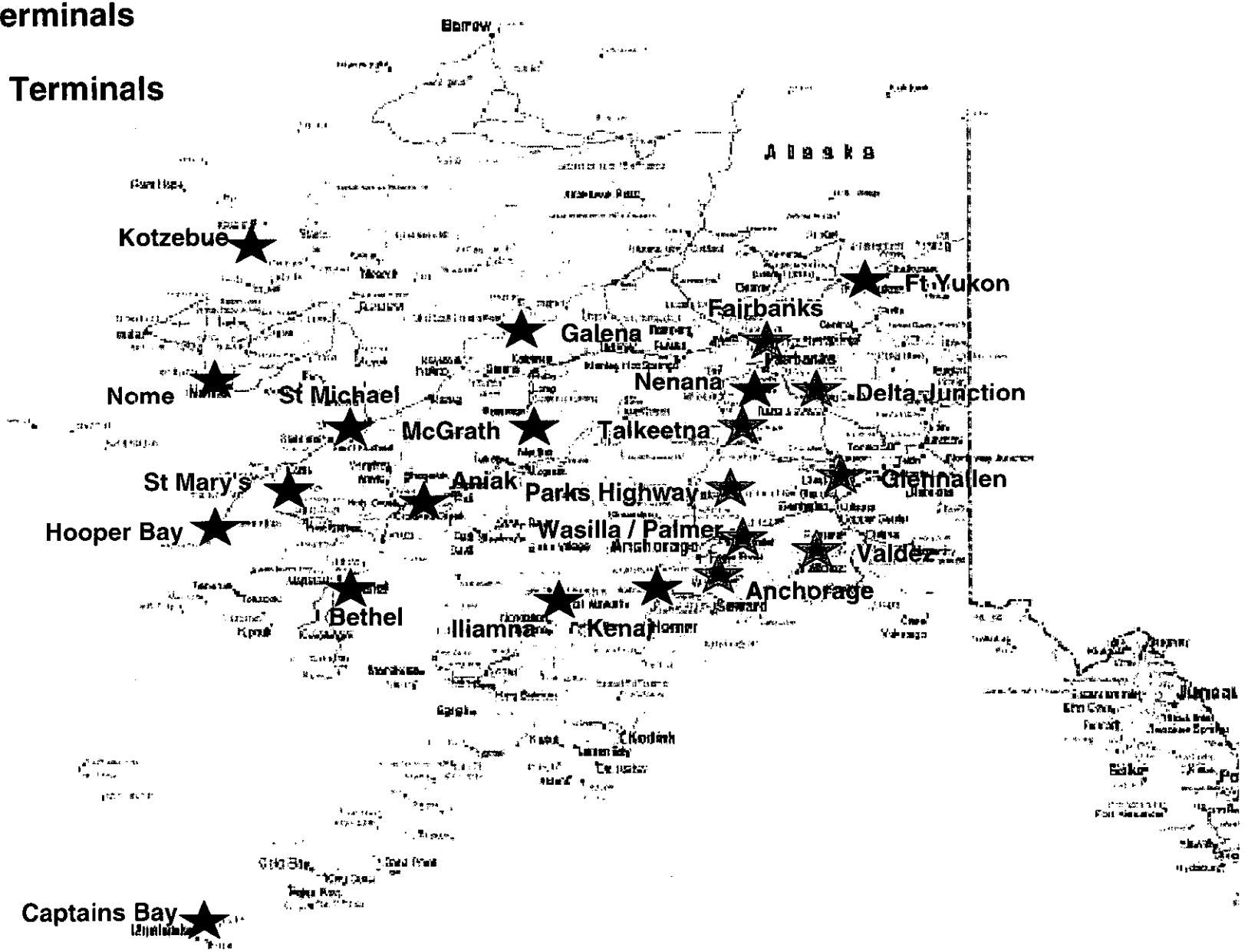
- 21 fuel storage facilities
- Over 30M gallons of fuel storage.
- 100% local hire in all our communities.
- Provide good jobs with long term employment and good benefits in our communities.
- Large fleet of shallow draft vessels to service Western Alaska, both coastal and river.
- Building new equipment specifically to efficiently service the most difficult locations.

Two new AVIK Class tugs under construction.

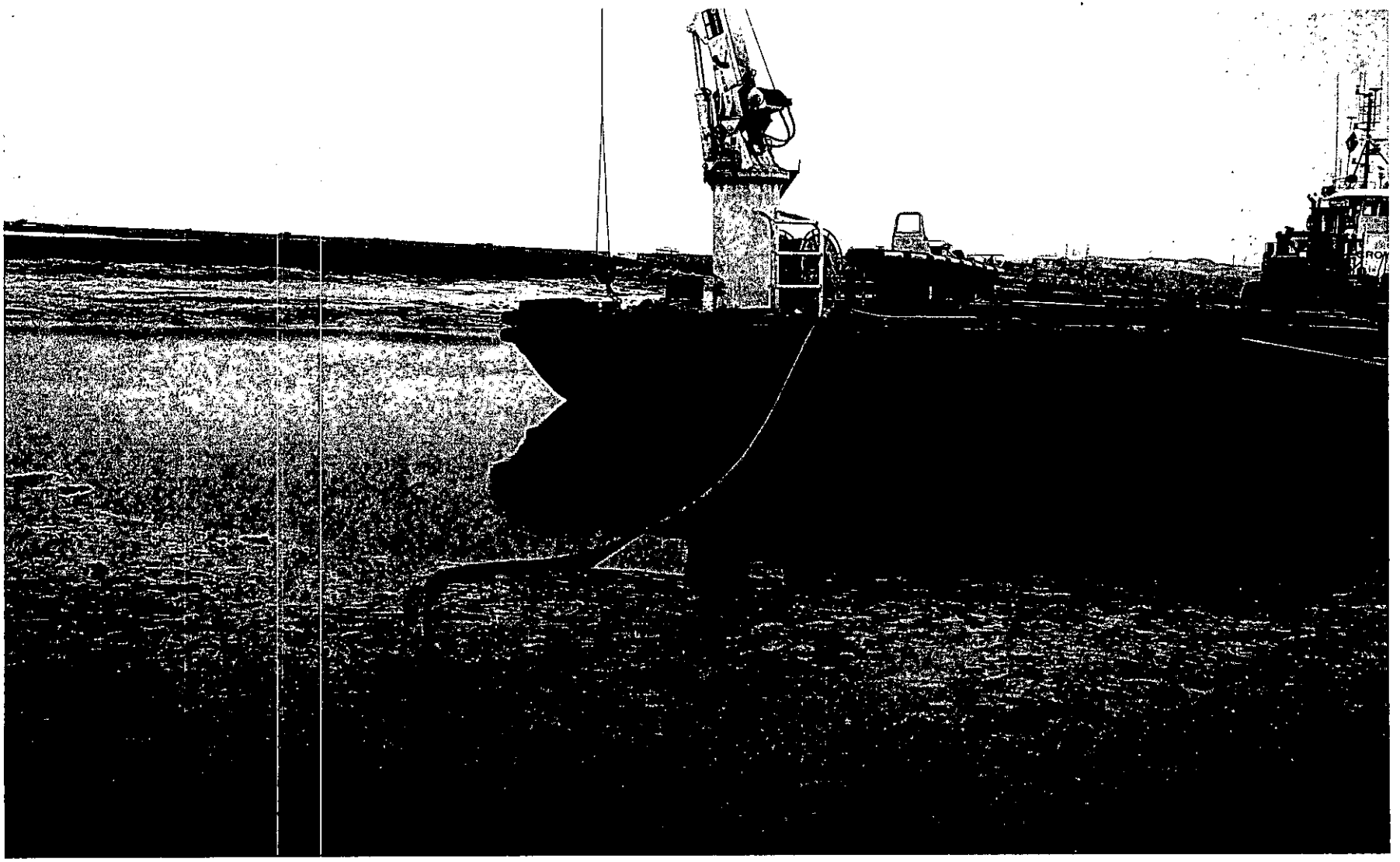
Alaska Footprint

★ Marine Terminals

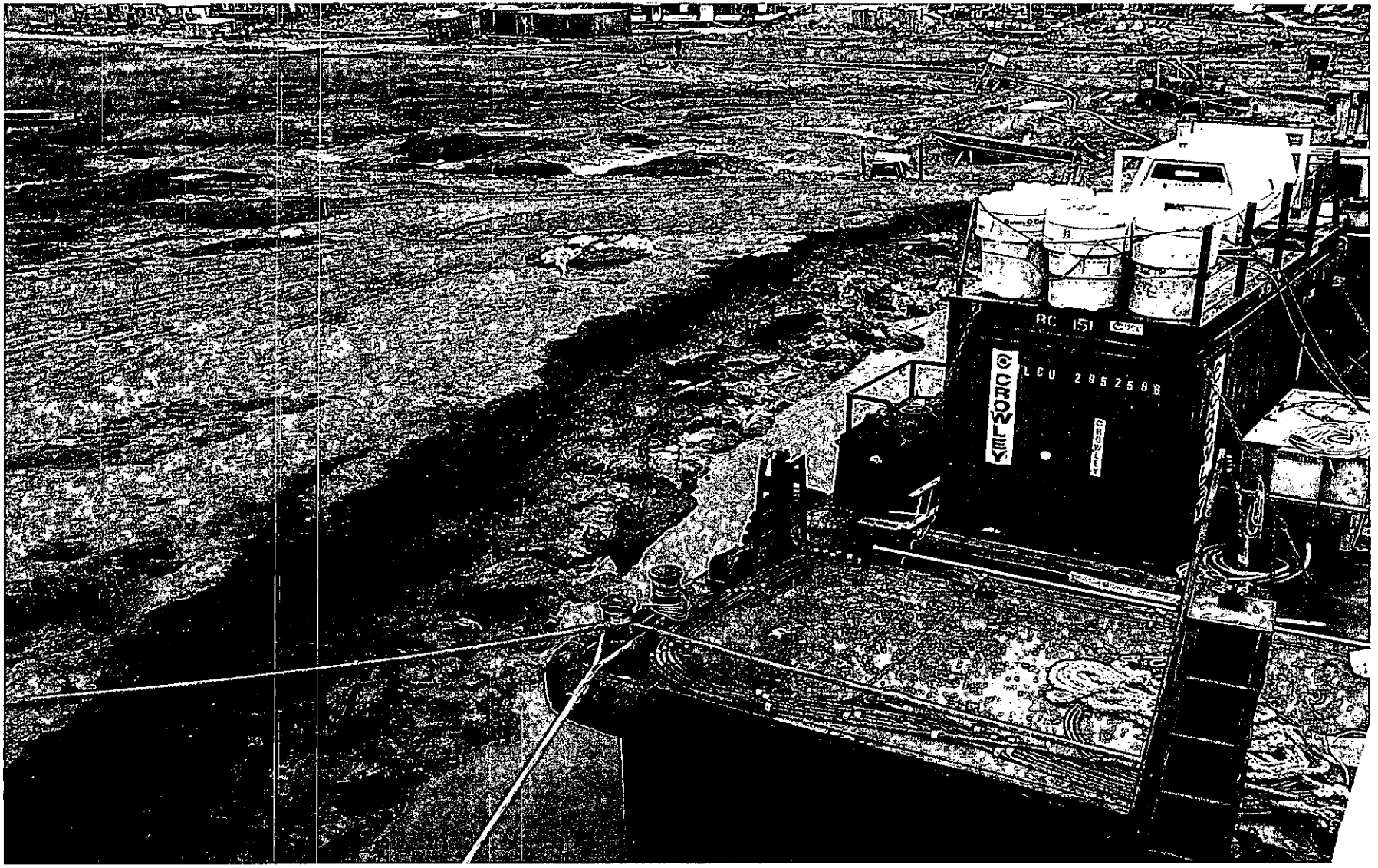
★ Highway Terminals



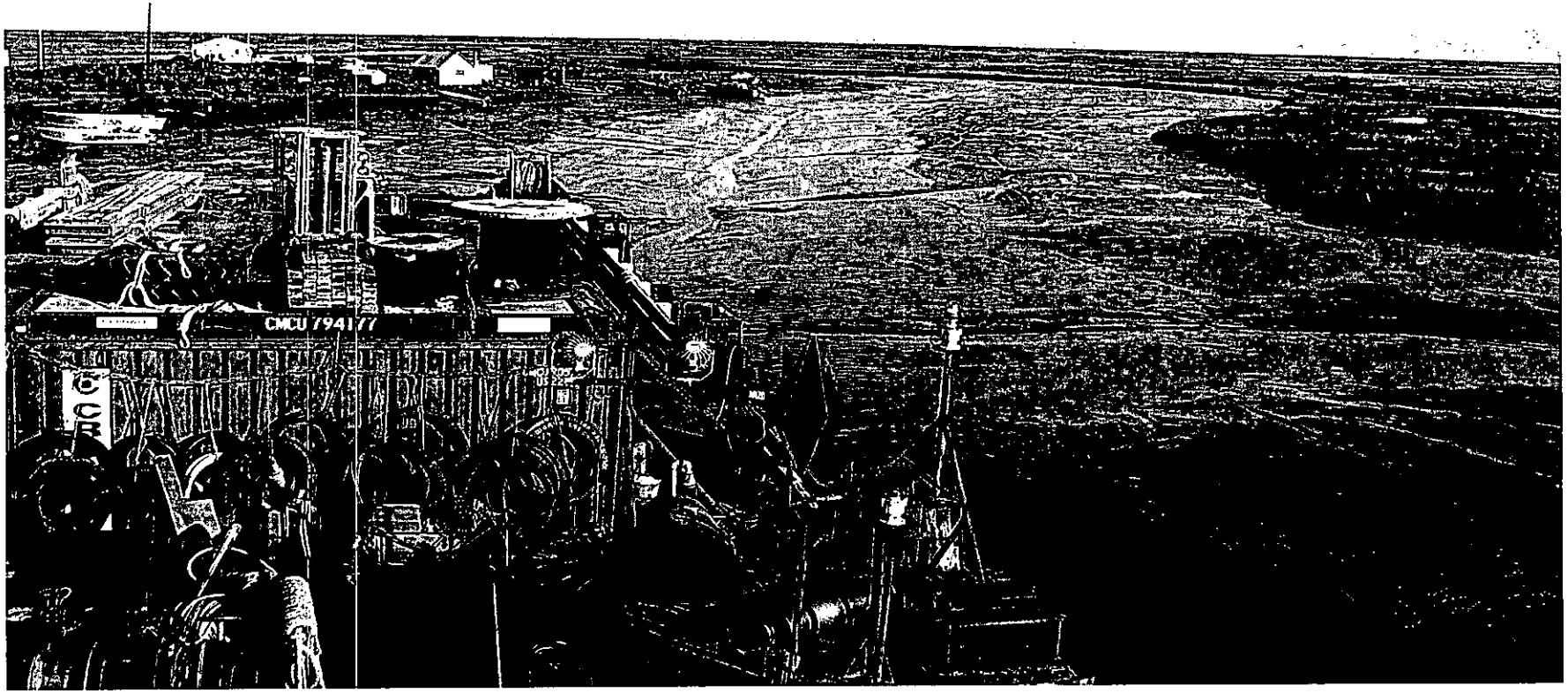
Hose Through the Mud



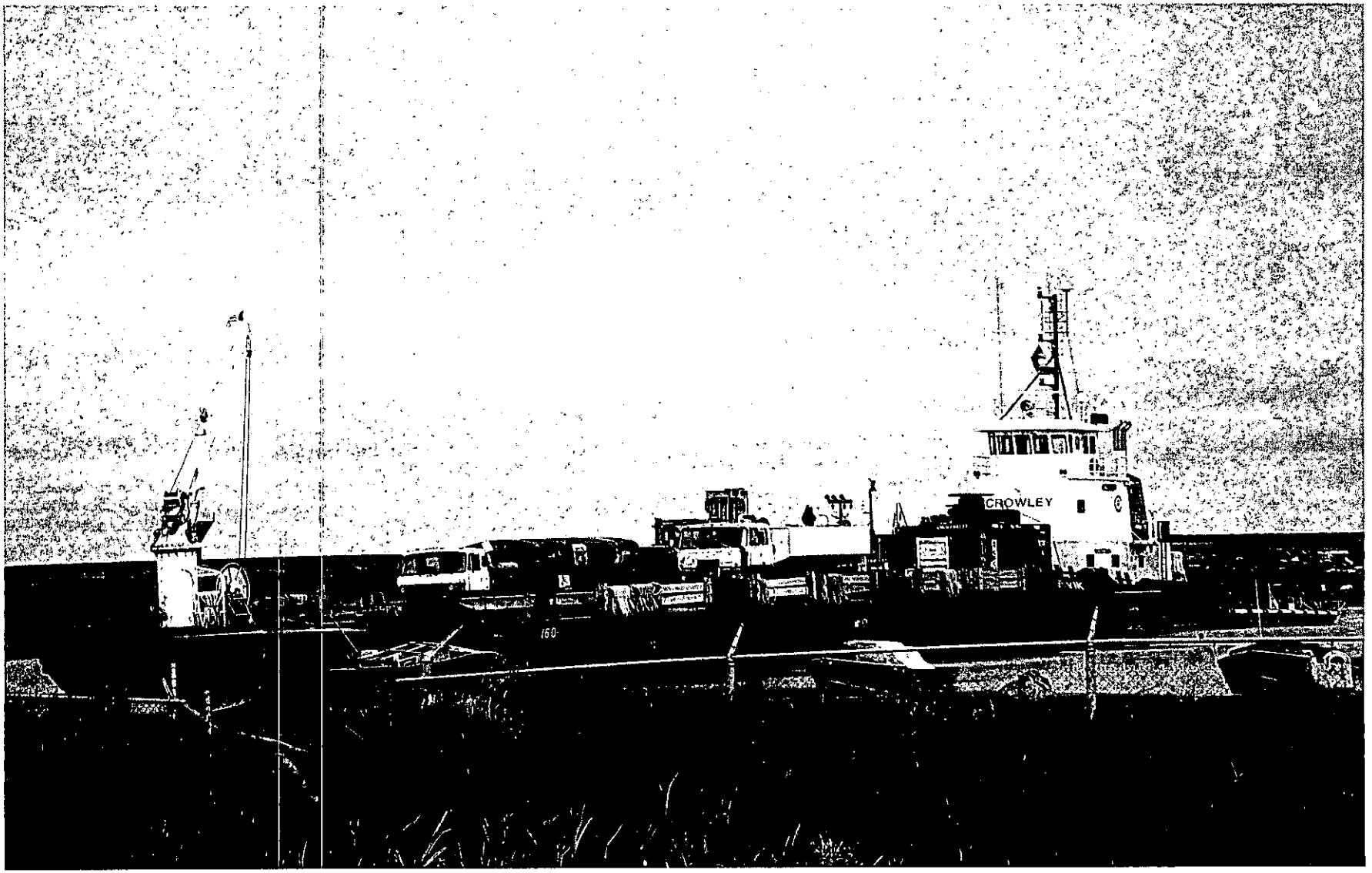
Hooper Bay 2008



Waiting for Water in the Newtok Channel 2007

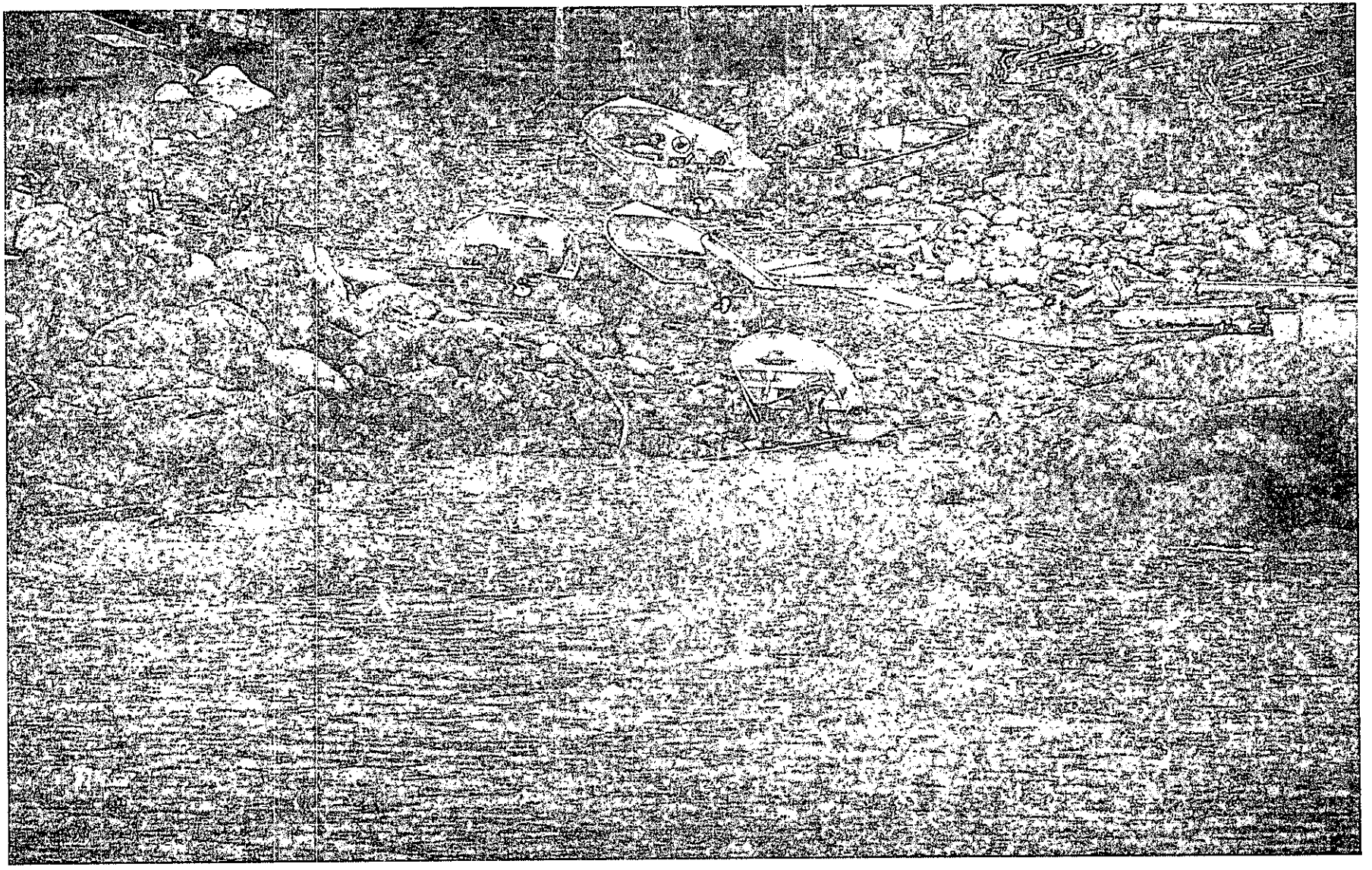


Hose Through the Fence at Newtok

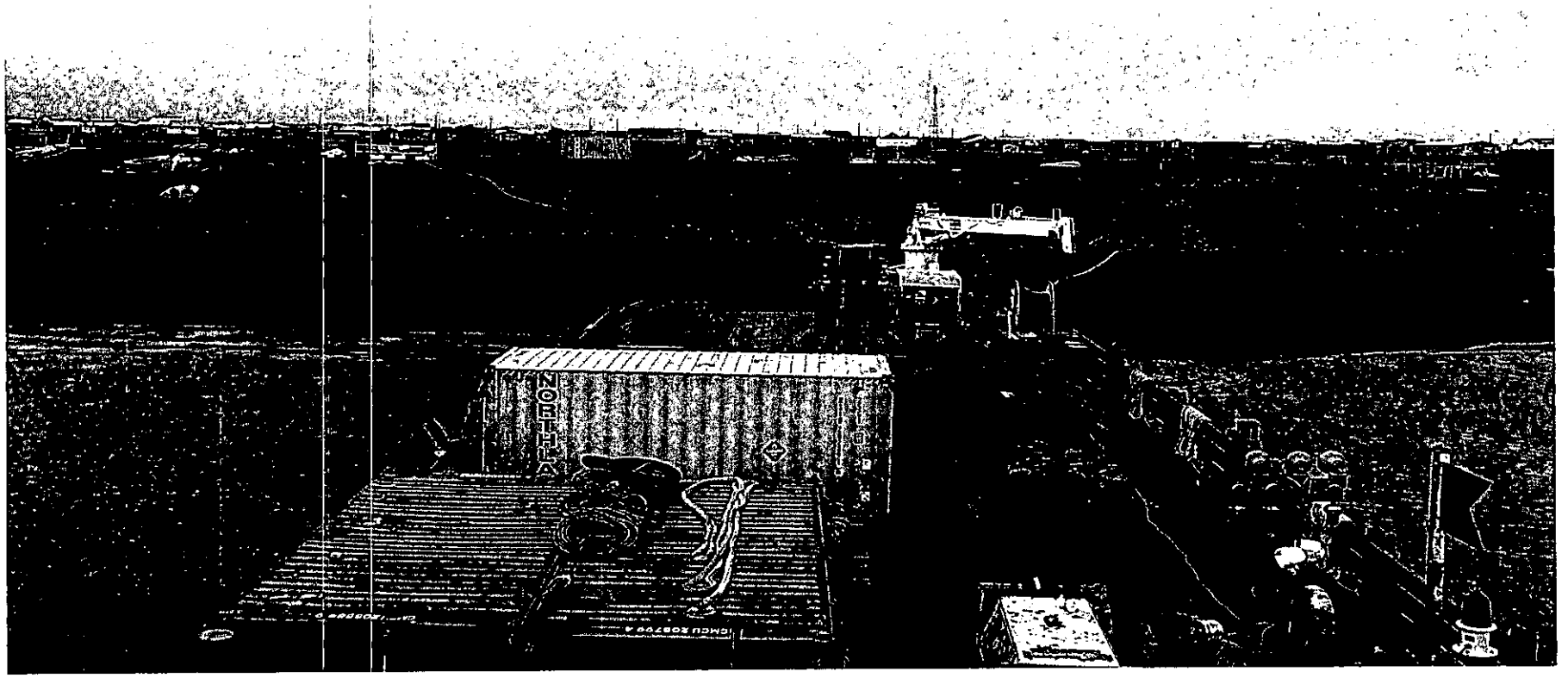


Float Hose Operation at Cape Prince of Wales 2007

Holding the Barge off the Rocks at Little Diomede

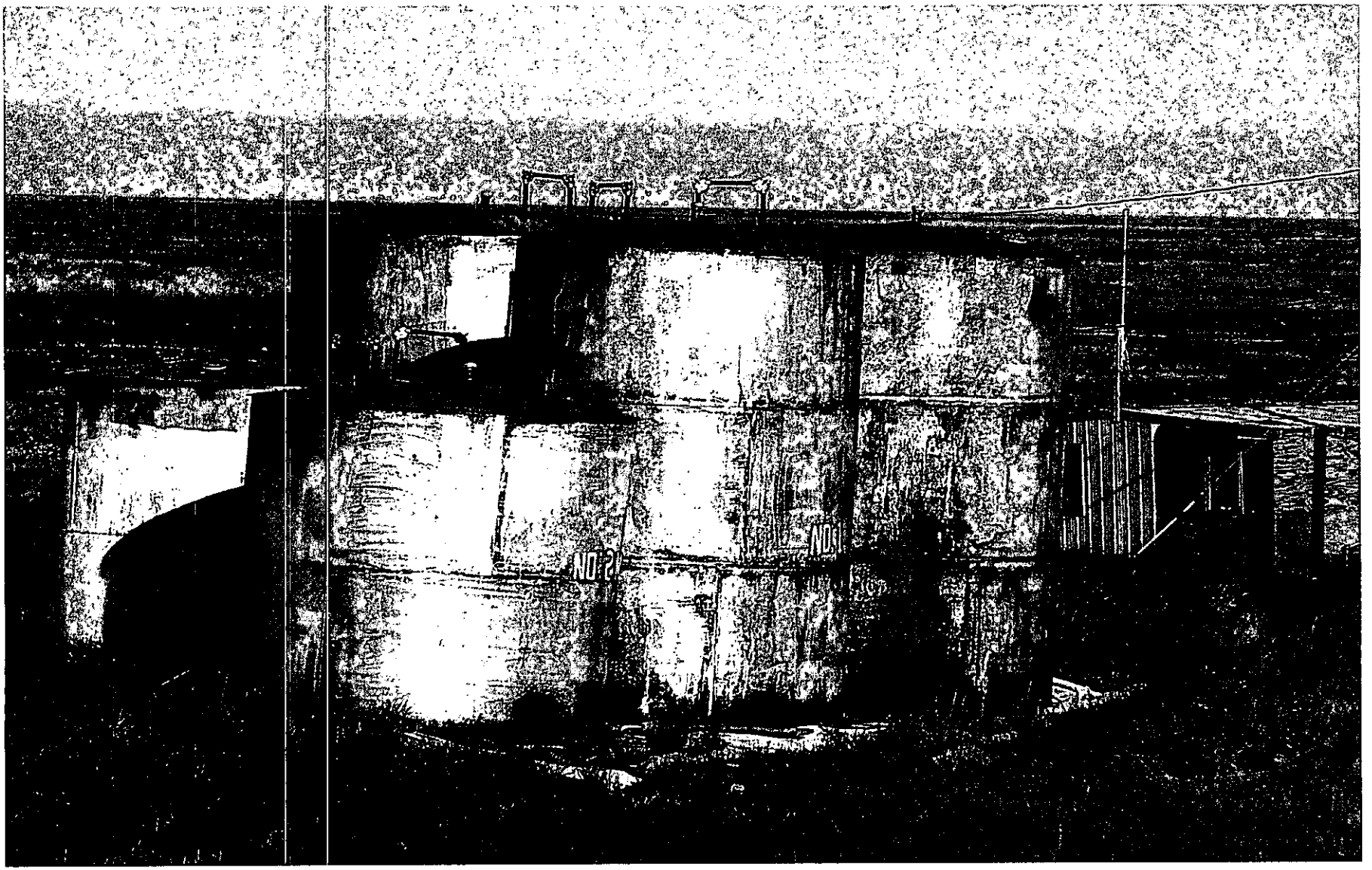


Long Hose Drag at Gamble



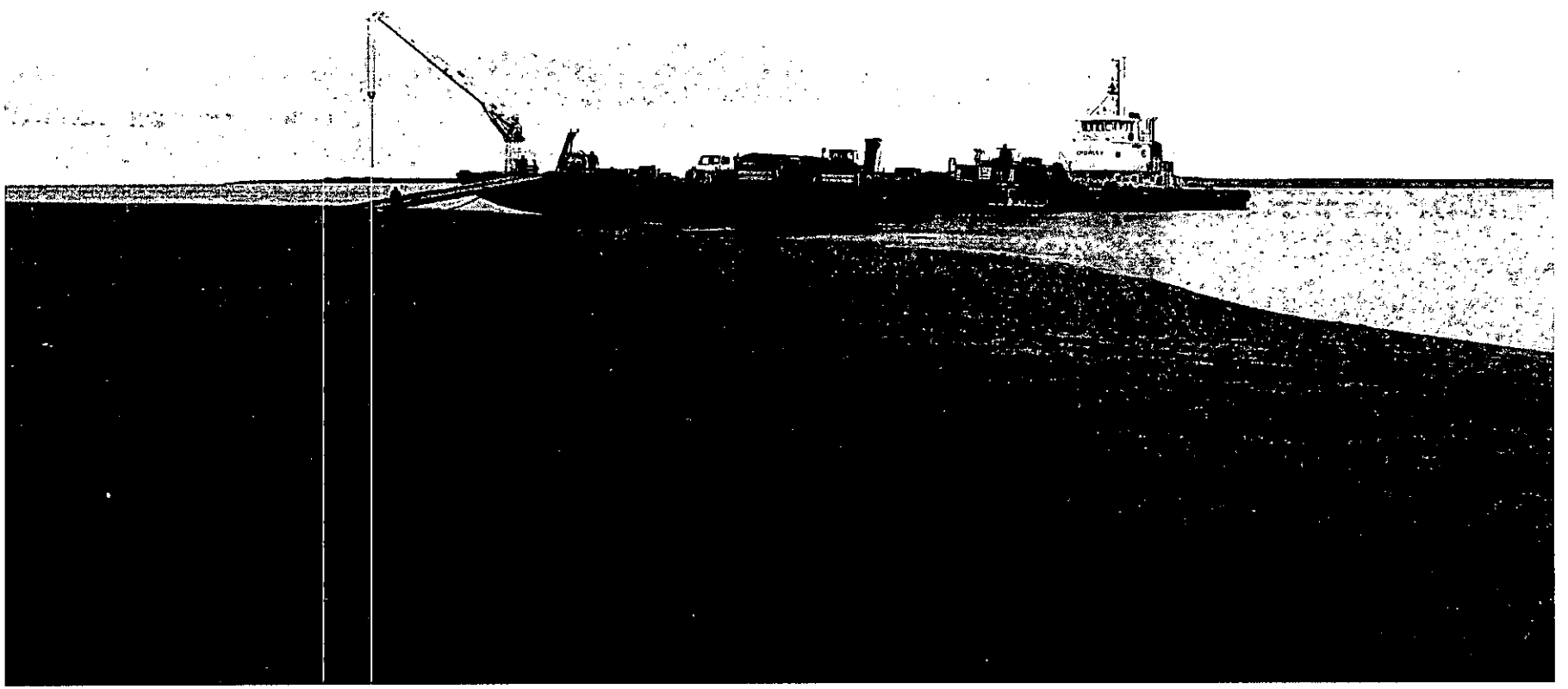
Chevak Lower Tank Farm

Tank Can Only be Filled to the Bullet Hole



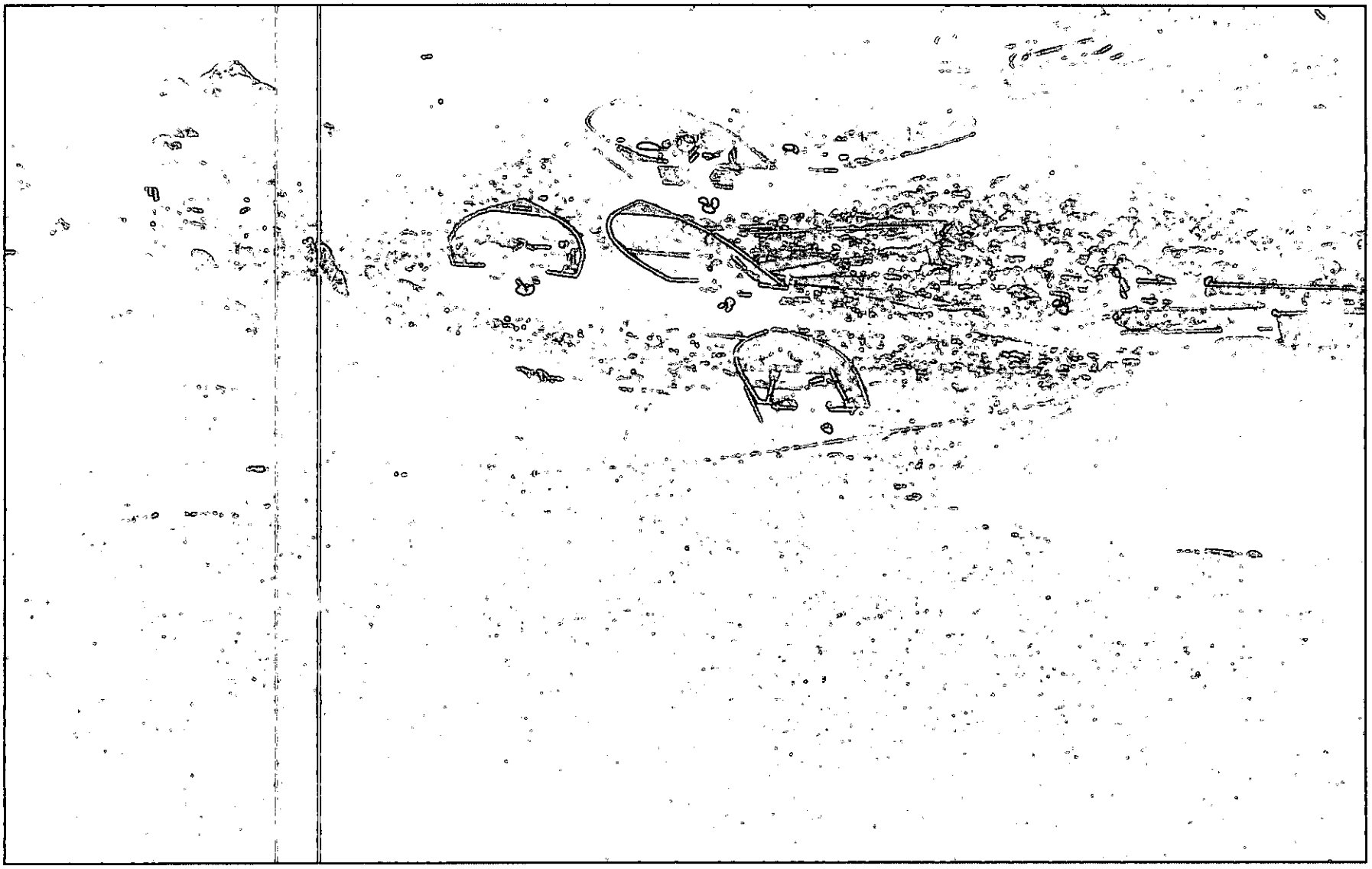
Nightmute Upper and Lower Tank Farm

Beached at Mekoryuk in 2008



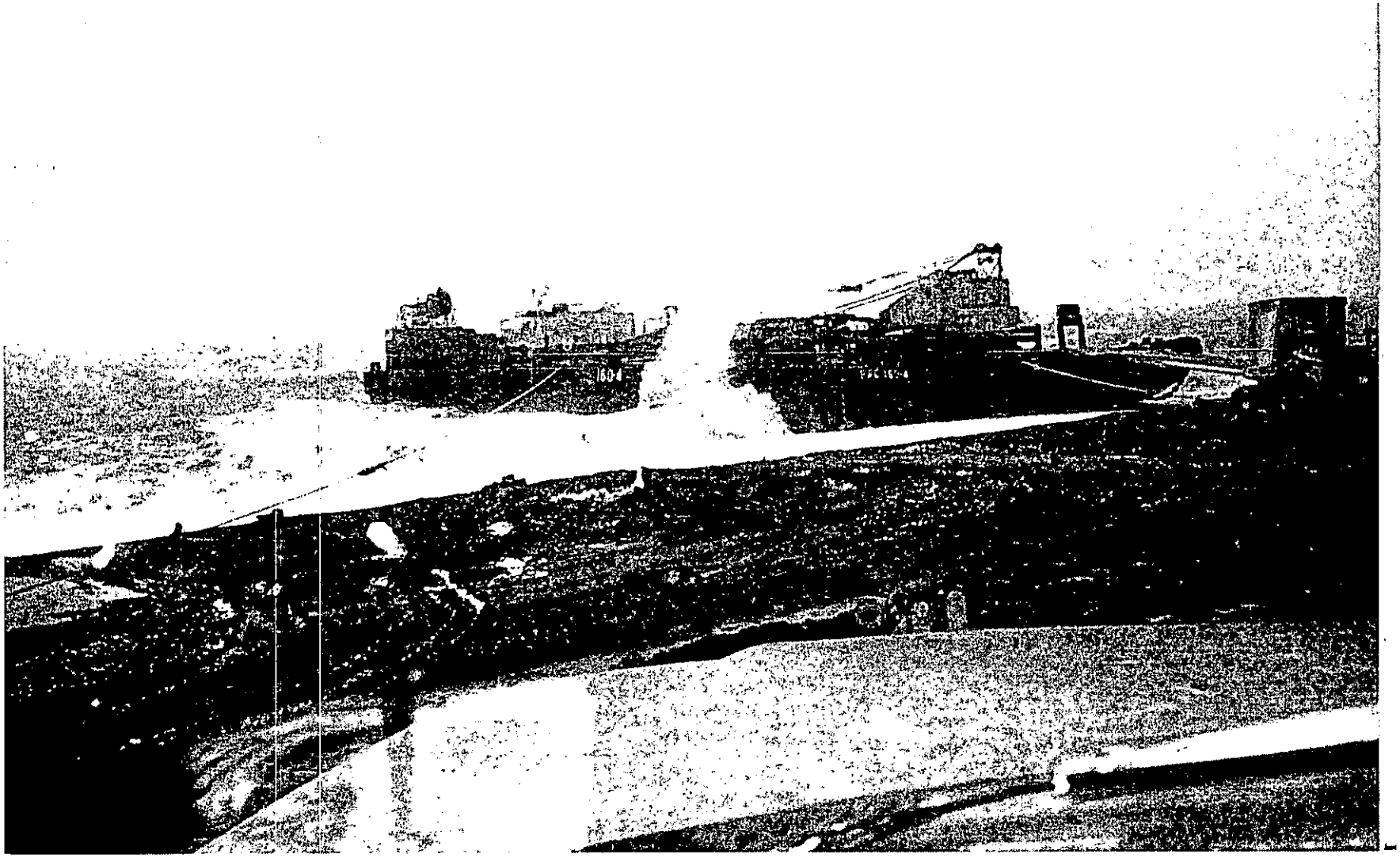
Trucking at Twin Hills

Holding the Barge off the Rocks at Little Diomede

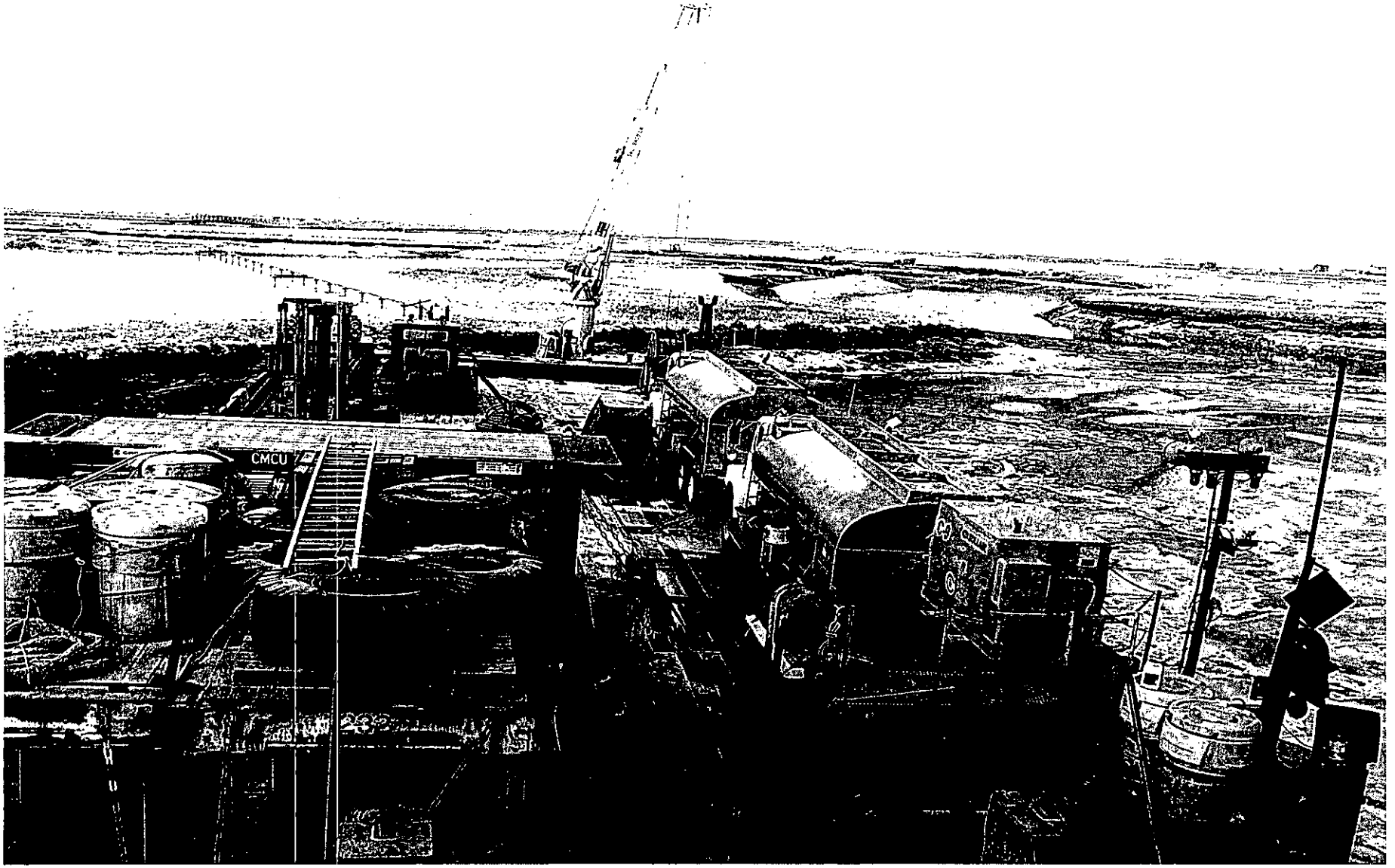


CROWLEY®
People Who Know™

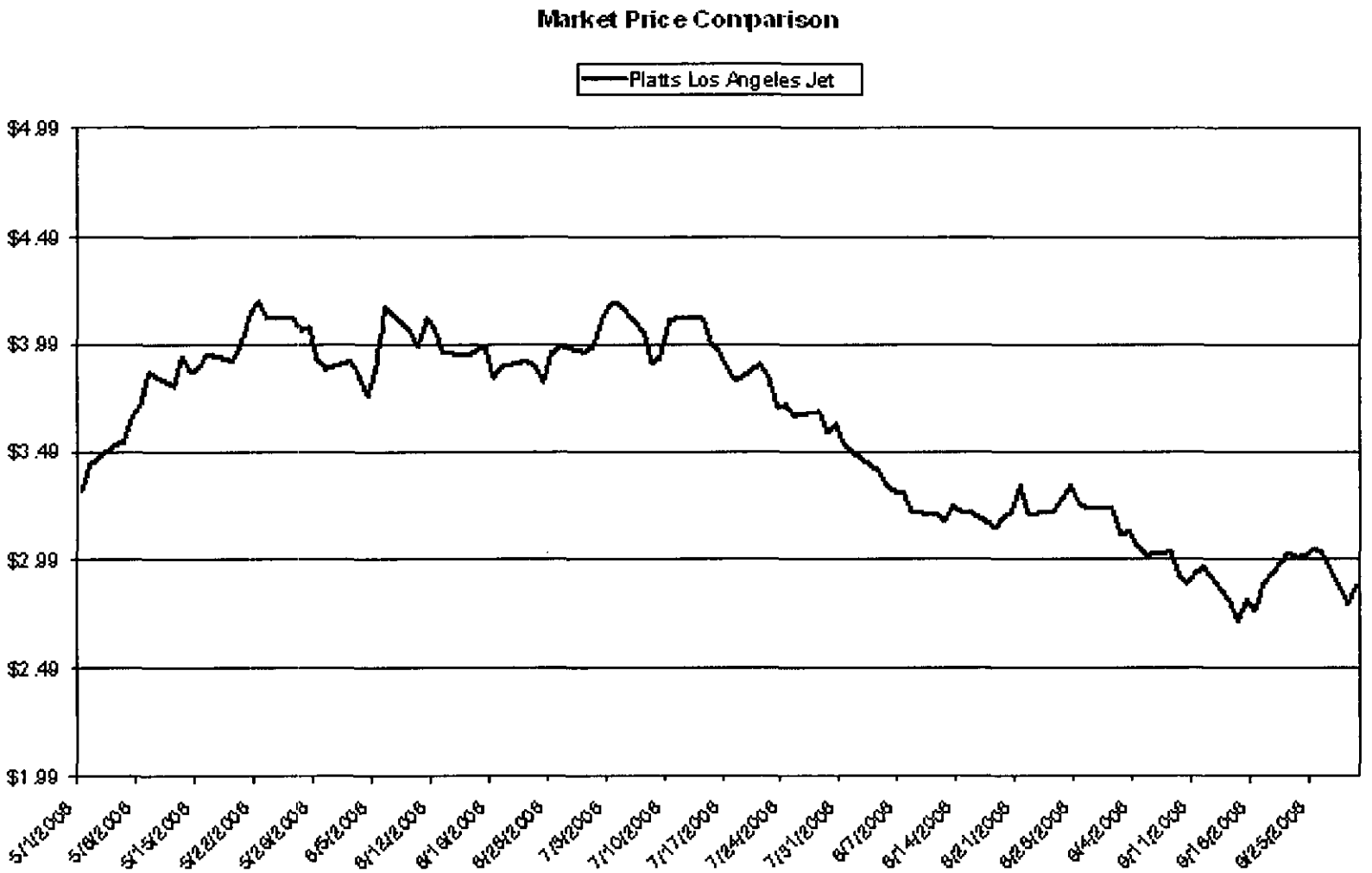
Battered on the Beach at Barter Island



End of Season Ice at Kwigillingok



PLATTS Index Chart for May – September 2008



Introduced by: Mayor Zulkosky
Date: March 24, 2009
Action: Passed
Vote: 6-0

CITY OF BETHEL

Resolution # 09-16

REQUESTING THE STATE OF ALASKA HOUSE JUDICIARY COMMITTEE TO INQUIRE INTO THE EFFECTIVENESS OF THE CONSENT DECREE BETWEEN THE STATE OF ALASKA AND CROWLEY MARINE SERVICES, INC. CROWLEY MARITIME CORPORATION; NORTHLAND FUEL, LLC; YUKON FUEL COMPANY; NORTHLAND VESSEL LEASING COMPANY LLC; AND YUTANA BARGE LINES, LLC., IN ACHIEVING ITS INTENDED GOAL OF PREVENTING A MONOPOLISTIC MARKET AND TO ALLOW FOR FAIR COMPETITION

WHEREAS, communities within Western Alaska like much of the country are facing exorbitant fuel charges, unfortunately the prices paid by communities within Western Alaska are established by a small number of distributers operating within this region;

WHEREAS, to insure a competitive market rate would be maintained and to prevent Crowley Marine Services from establishing market power over the regions fuel sources, a consent decree was produced and ordered;

WHEREAS, without an annual or bi-annual operational review and compliance verification of the consent decree, the communities affected by the transaction of fuel cannot be comfortable in knowing they are being charged fairly for the product;

WHEREAS, reviewing the market rate for storage and use, in conjunction with the consent decree will confirm the business practices between Crowley Marine Services and their only local competitor Delta Western, are in the fair interest of the communities they service;

WHEREAS, because of the market control Crowley Marine Services has on this region and its competitors it is in the best interest of every surrounding community to have a review of continued fulfillment of the consent decree;

NOW, THEREFORE, BE IT RESOLVED that the Bethel City Council hereby requests the State of Alaska House Judiciary Committee to inquire into the effectiveness of the Consent Decree between the State of Alaska and Crowley Marine Services, Inc.; Crowley Maritime Corporation; Northland Fuel, LLC.; Yukon Fuel Company; Northland Vessel Leasing Company LLC.; and

Introduced by: Mayor Zulkosky
Date: March 24, 2009
Action: Passed
Vote: 6-0

Yutana Barge Lines, LLC., in achieving its intended goal of preventing a monopolistic market and to allow for fair competition.

ENACTED THIS 24th DAY OF MARCH 2009 BY A VOTE OF 6 IN FAVOR AND 0 OPPOSED.

Tiffany Zulkosky, Mayor

ATTEST:

for Laurie J. Walters
Lori Strickler, City Clerk

REPORT OF THE ATTORNEY GENERAL REGARDING THE ACQUISITION OF YUKON FUEL COMPANY BY CROWLEY MARINE SERVICES.

I. Introduction.

In the fall of 2003, the Alaska Attorney General's Office became aware that Crowley Marine Services ("Crowley) made an offer to purchase all of the assets of Yukon Fuel Company ("Yukon"). Both Crowley and Yukon compete with each other for the sale, storage, and distribution of petroleum products in parts of Western Alaska. Concerns were raised by several individuals, communities, and businesses about the potential harm this transaction might have on the price of delivered petroleum products in the region. The Attorney General considered these concerns and began an informal review of the proposed transaction and its potential effects on competition for the sale and delivery of fuel in Western Alaska.

In response to this proposed transaction, the Alaska Village Electric Cooperative, Inc., ("AVEC") and members of the Western Alaska Fuel Group ("WAFG")[1] filed a complaint on November 19, 2003 in the Alaska Superior Court in Nome. The primary allegation in the complaint is that the transaction will eliminate the existing competition between Crowley and Yukon for the delivery of fuel, leaving Crowley with monopoly power over fuel prices in Western Alaska.

After filing the complaint, the parties to the lawsuit continued their request that the Attorney General initiate a formal investigation of the transaction to determine

[1] Those six members are: (1) Inn Electric Cooperative, Inc.; (2) Kotzebue Electric Association, Inc.; (3) Naknek Electric Association, Inc.; (4) City of Nome d/b/a Nome Joint Utility System; (5) Nushagak Electric & Telephone Cooperative, Inc.; and (6) Unalakleet Valley Electric Cooperative, Inc.

whether it would violate Alaska's antitrust laws. In February 2004, the Attorney General held a meeting in Anchorage with the parties to discuss these concerns in more detail, and to determine whether the parties could take any action on their own to resolve the pending lawsuit. Following the meeting, the Attorney General decided further review by the state was warranted, and initiated a formal investigation to determine if the transaction would violate Alaska's antitrust laws.

II. Summary.

There are currently very few competing firms engaged in the sale of delivered petroleum products ("fuel") in Western Alaska. Some of the equipment and assets necessary for delivering fuel in this area is specialized. With the exception of small amounts of fuel delivered by air, all fuel is delivered by barge. Purchases by utility companies account for the majority of fuel sales. About 75% of all fuel in this region is purchased through the bidding process. Both AVEC and WAFG select the supplier of their fuel as a result of bidding. Once selected, the successful bidder usually enters a long term (two or three year) contract for supplying fuel.

In order for a competitor to bid on these contracts, it must have access to the necessary equipment and storage facilities to deliver fuel economically and profitably to the prospective customers. There are two primary components involved in the delivery of fuel by barge to a significant number of customers: (1) the barge, and (2) storage facilities. There are also two primary kinds of barges required to serve this market; (1) deep water (or "line haul") barges that can hold several million gallons of fuel, and (2)

smaller barges capable of navigating shallow coastal and up-river locations, called "shallow draft" barges.

Most fuel delivered to Western Alaska locations originates from refiners in Anchorage. Bulk fuel is purchased by the barge company, loaded into line haul barges, then brought to Western Alaska for delivery to the customer. Some customers have storage tanks that can be accessed directly by a line haul barge. Other customers can only be reached by shallow draft barges. To make shallow draft deliveries, fuel must be transferred to a shallow draft barge directly from a line haul barge (called lightering), and it is then delivered directly to the customer, or stored in a storage tank for future delivery.

To maximize the efficiencies of delivering fuel, it is necessary for a competitor to own, or have access to, line haul barges, shallow draft barges, and storage facilities in key locations. Without all these elements, it is difficult to compete in this market. Currently, only Crowley and Yukon operate these kinds of assets in the immediate region. Thus, the proposed transaction creates a significant threat that Crowley would be the owner of all the assets necessary for delivering fuel in this market, and could exercise "market power" to increase prices.

Additionally, Crowley and Yukon each own a fuel storage facility in Bethel. Crowley recently constructed a new 5 million gallon facility in Bethel which became operational in December, 2003. Yukon owns a 10 million gallon facility that has served Bethel and the surrounding area for over 20 years. Allowing Crowley to own both facilities would eliminate this newly created competition for fuel sales in and around Bethel.

The state approached Crowley and Yukon with these issues, and expressed serious reservations about approving the transaction unless Crowley was willing to sell sufficient assets to another competitor to address the state's antitrust concerns. The state expressed to Crowley its goal of maintaining a competitive marketplace for the delivery of fuel that was consistent with Alaska's antitrust laws. After months of review and investigation, the state and Crowley agreed on the terms of a Consent Decree the state believes complies with Alaska law. The main features of the decree are:

1. The buyer of the assets is Delta Western, one of the largest and most experienced barge companies on the West Coast.

2. Crowley will sell Delta Western two sets of tugs and barges that are capable of navigating the shallow coastal and up-river waters in Western Alaska. Coupled with Delta Western's other tugs and barges, this will allow Delta Western to compete effectively in this market.

3. Crowley will divest four million gallons of fuel storage capacity to Delta Western in Bethel. Because Crowley also plans to remove one million gallons of storage capacity from the Yukon facility in Bethel, this amount approximates the current level of competition in Bethel. The term of the divestiture extends to a potential of 30 years, with an initial term of 10 years plus four 5-year options.

4. Crowley must offer Delta Western an option to purchase or lease certain property Crowley owns in Bethel. The location of this property will allow Delta Western the opportunity to construct new fuel storage facilities in the future if competitive forces require expansion.

5. Crowley must offer Delta Western 29% of any additional storage capacity Crowley adds to its existing facilities in Bethel. This will allow Delta Western to grow along with Crowley.

6. Crowley must allow Delta Western and others access to fuel storage facilities in Nome, Kotzebue, and St. Michael. Access to storage at these locations will allow Delta Western to compete more effectively in and around these areas without the need to construct its own storage facilities.

By agreeing to these conditions, the state believes any legitimate concern about a reduction in competition for delivered petroleum products is resolved. The resulting competitive environment will prevent Crowley from charging monopoly prices, or exercising market power.

III. Alaska's Antitrust Laws.

Alaska's antitrust statutes, AS 45.50.562 - .596, are patterned after federal antitrust laws. These laws are aimed at stopping conduct that prevents or inhibits competition in the free marketplace. In the United States, unlike other countries, our policy of encouraging competition among free enterprise is based on the notion that consumers will benefit from lower prices, higher quality, and greater choice than under a system where capital ventures are controlled by the government. This national policy of competition has made the United States economy one of the strongest in the world.

A primary goal of the antitrust laws is to ensure that consumer choice is not unreasonably restricted since consumer choice is a powerful incentive for sellers to keep prices low and quality high. To ensure consumer choice, the antitrust laws set 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. These principles are set forth in general terms in both state and federal antitrust laws, and courts are left to decide on a case-by-case basis whether any particular conduct is unlawful.

Application of the antitrust laws, however, can be very complicated. It is not always obvious whether conduct is unlawful under these complex standards. For example, monopolies that form as a result of superior marketing efforts or a superior product may be completely lawful. A company that offers a new product in a market where no other comparable products have been sold before will have a monopoly until a competitor decides to enter the market and compete. The antitrust laws do not prevent someone from gaining market power if it is acquired through legitimate business practices.

Another basic principle of antitrust law is to prevent the illegal accumulation of market power in a single entity.[2] If one entity was able to obtain market power, it could control prices. The ability to control prices through illegal conduct is something state and federal governments try very hard to prevent. The role of the Alaska Attorney General in enforcing the state's antitrust laws is to review proposed transactions, like the Crowley/Yukon transaction, to make sure the resulting entity is not left with this kind of market power.

[2] If a business has "market power" it has the ability to restrict competition or control prices. Thus, antitrust law does not distinguish between "how much" market power one business has. Any amount of market power is illegal.

A. Defining Markets.

The start of any antitrust investigation begins with determining what market is potentially affected by the alleged conduct. In this case, the state had to determine what markets would be affected by the sale of Yukon to Crowley. This is called the "relevant market." In general terms, the relevant market consists of two components: (1) a "product market" which consists of all the competing products sold by the merging companies plus any products that can be used as a reasonable substitute; and (2) a "geographic market" which consists of all the areas from which these products can be economically and profitably supplied.

In this case, the product market was determined to be "barge delivered petroleum products." The product market is not simply "petroleum products" because none of the competitors in this area actually own a source of fuel. Both Yukon and Crowley, for example, purchase all their fuel from a third party. The product is also not "barge services" because barge services by themselves are rarely purchased by customers. Fuel is typically purchased on a "delivered" basis.

There are no other reasonable substitutes for barge delivered petroleum products in this area. There are no roads that service Western Alaska, thus land transportation of petroleum is not possible. Some limited amounts of fuel are delivered by air. These deliveries are isolated, and not economical in large volumes. Other sources of energy, such as coal, hydro, and wind power, are also not economic alternatives to petroleum. None of the communities currently using petroleum products could quickly

and economically switch to one of these alternative energy sources. Accordingly, the Attorney General defined the product market as "delivered petroleum products."

The geographic market was more difficult to define. To determine the relevant geographic market, antitrust law requires that you include all places a customer could go to get the relevant product at competitive prices. Courts have frequently, and consistently, defined geographic markets for barge transportation as generally broad, and have found them to include all waterways where there is no physical barrier to barge movement.

The area affected most by the proposed transaction is Western Alaska. Fuel can be economically delivered to Western Alaska by barge, however, from locations outside of Western Alaska. For example, a barge company from as far away as Southern California could bid on contracts to supply AVEC, the WFAG, and other customers. If successful, the bidder could arrange to purchase fuel in Anchorage, lease (or buy) line haul and shallow draft barges, then arrange necessary storage space to deliver the fuel to customers. Economic and profitable deliveries, however, depend on a variety of factors, including the volume of fuel sold, and the cost to position equipment in Western Alaska to make deliveries. Complicating this analysis is the unique geography of Western Alaska. The experience and knowledge required to operate here is unique and challenging.

Antitrust economists hired by Crowley determined that profitable fuel deliveries could be made by using a single set of tugs and barges from Southern California if the seller could obtain at least 2.1 million gallons of delivered fuel sales.

This estimate considered the cost of bringing a shallow draft tug and barge from San Diego to Alaska.

The analysis done by an expert economist hired by the state suggests the minimum volume necessary for deliveries to be made from California is probably higher than the volumes calculated by Crowley's economist. But under either analysis, it was clear that at some volume, fuel could be profitably delivered to Alaska from locations as far away as California, including locations in Oregon and Washington State. There is about 90 million gallons of bulk fuel sales annually in Western Alaska. Considering these volumes, the state concluded the geographic market for supplying barge delivered petroleum products includes all of Western Alaska and the West Coast of the United States.

B. Competitors in the Market.

The next step in analyzing the potential competitive effects of the proposed transaction required the state to identify competitors currently participating in the relevant market, and the amount of "market power" held by each. Knowing the number of competitors and each competitor's share of the market is critical to understanding how the elimination of one competitor may impact competition among the remaining competitors.

For barge delivered petroleum, the Western Alaska market has been recently dominated by three competitors. When a market has few competitors, it is considered "highly concentrated." Crowley and Yukon have been the major competitors in recent years making bids on contracts to supply fuel in shallow-draft markets. Delta

Western and Crowley are the two dominant competitors bidding for contracts to supply fuel by line haul barge. Of all the barge companies actively operating in Western Alaska, Crowley is the only competitor with a mix of assets that allows it to serve both the shallow draft and line haul markets. Delta Western does not own any shallow draft barges in the Western Alaska region, and Yukon does not own any line-haul barges.

To get fuel to its smaller barges, Yukon contracts with other companies for the delivery of fuel by line haul barge. Recently, Yukon has contracted with Sirrius Maritime, Inc., a Seattle-based barge company, to deliver fuel by line haul barge to specific locations in Western Alaska where it is then loaded onto Yukon's storage facilities or barges. Sirrius does not have any other customers in Western Alaska.

There are no other "active" competitors supplying bulk fuel by barge to Western Alaska. Thus, this transaction would eliminate one of the three barge companies operating in Western Alaska, and eliminate the only other current competitor for shallow draft barge deliveries. This reduction in competition raises serious concerns, but is not entirely determinative of the actual competitive impact caused by this transaction. Because the fuel market is a "bidding market" all potential bidders must be considered as potential competitors, regardless of whether they have actually made any historic sales of fuel in the market.

C. Market Power.

Once the competitors in a market are identified, the "market power" of each competitor must be assessed. Market power is defined as the ability to raise prices or exclude competition. The most common basis for predicting a firm's ability to raise

prices in the future is to calculate its historic percentage of sales in the relevant market. There are exceptions to this approach, however, when future sales are not dependent on past percentages, but are determined by independent events. In a bidding market, like the Western Alaska fuel market, past performance is not a good indicator of market power. Future sales depend on future bids, not past sales. Market power also cannot be inferred from high percentages of past sales in markets that are characterized by low entry barriers, as discussed more fully below. A firm with 100% of sales cannot profitably overcharge if doing so would simply attract new competition lured by the higher-than-competitive prices.

Because all competitors in a bidding market have an equal chance of winning future bids, each is assigned the same amount of market share. Even if a company makes no sales in one year, it still has an equal share of the market along with companies that made significant sales. The antitrust law requires consideration of these other "potential" or "uncommitted" competitors. These are competitors who are not currently participating in the market, but would likely enter the market in a timely manner if prices rose above competitive levels. This "threat" of competition is a strong deterrent to active competitors, and acts to keep prices from reaching monopoly levels. Thus, all potential bidders are assigned an equal share of the market.

D. Entry Barriers.

Federal regulators have often approved mergers and acquisitions that have left only one competitor in the market when evidence showed a strong likelihood that other competitors could easily enter the market. A merger or acquisition is not likely to

create or enhance market power if entry into the market is so easy that market participants could not profitably maintain a price increase above pre-merger levels. Entry into a market is considered "likely" if it would be profitable at pre-merger prices, and those prices could be secured by the new entrant. In addition, to be "sufficient" under antitrust guidelines, the assets required for entry must be available so that entrants can respond fully to new sales opportunities.

To determine which potential competitors are likely to enter the market in response to a price increase, the barriers to entering the market must be identified. Entry barriers are defined to include potential obstacles that a new competitor would have to overcome that the current competitors did not have to deal with. Examples of entry barriers include new governmental regulations that impose new requirements (i.e. permits) that current competitors did not have to comply with. Another barrier could be the ownership of a necessary resource by an incumbent firm (such as land or a manufacturing plant) that a new competitor cannot obtain. If access to these necessary components are constrained, or controlled by the existing competitors, new competition is not likely to happen.

Applying these principles to the Crowley/Yukon transaction, the state identified the following as potential entry barriers. There is some reasonable debate about whether any of these items, standing alone, would prevent a potential competitor from entering the market. But taken together, these items present significant obstacles to anyone looking to compete in this market.

1. Shallow draft barges. The state's research showed that shallow draft barges are not readily available. Although there are some used shallow draft barges on the market, most are not suitable for use in Alaska waters without significant retrofitting. One of the largest barge brokerage firms in the world, Markon International, Inc., lists several shallow draft barges for sale on its web page. A competitor could acquire one of these barges and invest in the necessary modifications, but the cost to do so would approach over 50% of the cost of a new barge. New shallow draft barges can be built for as little as $1 million, and Crowley is currently completing construction of a state-of-the art barge for approximately $3 million. The building process takes less than one year to complete.

Regardless of the cost, any investment in a shallow draft barge would not be profitable unless the buyer could obtain sufficient fuel sales to warrant the investment. Shallow draft barges are designed for a specific purpose, and cannot be used for a broad range of tasks. There are a few river systems in the U.S. where these assets can be deployed, including, for example, the Columbia River and the Mississippi River systems. However, the Attorney General remains concerned that these shallow-draft vessels are not as freely available as, for instance, line-haul barges, and the market for shallow draft barges is limited.

The current competitors, furthermore, had to obtain shallow draft barges to participate in this market, so the state's reliance on this obstacle is not fully supported by the antitrust law. Nonetheless, these barges are necessary assets to

competition that only Crowley and Yukon have ready access to.[3] These considerations generate some concern about the willingness of a new competitor to enter this market.

2. Storage facilities. If the proposed transaction were allowed to proceed with no conditions, Crowley would own nearly all of the fuel storage facilities in Western Alaska, including all of the fuel storage facilities inland from the coast used for up-river deliveries. Of significant importance are the two facilities in Bethel. These facilities require heightened attention because there is current competition in the Bethel market for fuel that is directly tied to ownership of these facilities. There is an extremely limited opportunity for new competitors to build a storage facility in Bethel because there is a scarcity of suitable land, and the market simply does not justify adding additional storage capacity for the reasonably foreseeable future.

Storage facilities outside Bethel present less of a concern, but are still important. There appears to be fewer limitations on the ability to construct new facilities in necessary locations along the West Coast of Alaska. Historically, the common practice in the area has been for owners of these facilities to allow access to storage capacity by other competitors at a reasonable rate. Still, if one competitor owned all the necessary storage facilities, it could exercise control over its competitors in a harmful way. This presents some concerns for new competitors looking to compete in this market. It bears note, however, that the storage facilities in these other areas have not historically faced immediate competition, and that Crowley's acquisition will not consolidate competing resources.

[3] The state's research showed there was a readily available supply of tugs and line-haul barges.

3. Knowledgeable barge pilots. State and federal regulations require licensed pilots to have knowledge of the waters to be navigated. The coastal and river waterways in Western Alaska offer some of the most challenging navigation anywhere in the world. The only way to gain the experience required to operate shallow draft equipment in some of these remote waterways is to log hours of time with an experienced pilot. New competitors looking to operate shallow draft barges would need to locate and hire knowledgeable mariners with the requisite experience navigating the shallow waters of Western Alaska.

The current competitors had to face this obstacle as well, so any argument about finding qualified pilots as a "barrier to entry" in antitrust terms is subject to reasonable debate. This is particularly so in view of the ability of any new entrant to hire away pilots from Crowley or other incumbent barge companies operating around the State. Nonetheless, coupled with the other barriers to competition, this presents another potential deterrence to new market entrants.

Courts addressing entry barrier issues consistently agree that barge markets are typically open to new entry. While the State is unwilling to rely on this market mechanism entirely to resolve its concerns in this case, it is equally true that any monopoly "gouging" by Crowley would probably cause other barge companies to enter or consider entering the Western Alaska fuel market.

IV. Analyzing the Crowley/Yukon Acquisition.

Considering the above, the state's analysis of the Crowley/Yukon Acquisition involved a preliminary assessment of market power based on a proper

definition of the relevant market, followed by an analysis of mitigating factors, such as the ease of entry into the market. Applying these principles to Crowley and Yukon, the attorney general concluded that the transaction, if allowed, would violate Alaska's antitrust laws that prohibit mergers or acquisitions if the effect of the merger will "substantially lessen competition." The Attorney General reached this conclusion based on the following three assessments:

1. Crowley could obtain monopoly power over nearly all fuel sales in Bethel. At the very least, there would be a significant lessening of competition in Bethel if Crowley were to own both of the existing fuel storage facilities in Bethel. The total volume market demand for fuel, coupled with the limited availability of land prevents a new competitor form entering this market easily and timely.

2. Crowley would obtain ownership of all other fuel storage facilities required for deliveries to some locations, particularly areas served by shallow draft barges. Obtaining control over these necessary assets for a significant portion of the market presents a dangerous probability that Crowley could exercise market power over fuel prices.

3. Crowley would obtain ownership of all the shallow draft barges currently used and available in Western Alaska for deliveries to shallow coastal and up-river locations. This would eliminate existing competition in areas where Crowley and Yukon currently compete for shallow draft deliveries. Although new competitors could purchase barges for use in these areas, there are significant obstacles to doing so.

The fact that Crowley would be in control of nearly all the assets currently used for barged delivered fuel, and would be the overwhelmingly dominant player, cannot be ignored. This alone presents serious concerns to the Attorney General.

V. The Remedy.

After concluding the transaction would violate Alaska's antitrust laws, the state was faced with only two options: (1) block the transaction, or (2) enter a consent decree that requires the parties to take affirmative steps to eliminate the potential for competitive harm. There are risks associated with each option. If the state filed a lawsuit to stop the transaction, Crowley and Yukon could litigate against the state to get the transaction approved. Crowley and Yukon argued vigorously that the transaction did not violate any state or federal antitrust laws, and the parties are confident they could get the transaction approved, without conditions, by a court.

The risk with a consent decree is that its terms may not adequately prevent the exercise of market power. Even though the Attorney General carefully reviewed the transaction, no one can predict the future. Events may occur that were not contemplated, or market conditions may change in ways not anticipated by a consent decree. Even so, the attorney general always retains the authority to take steps in the future if the intent and goal of a consent decree is not followed.

It is also important to recognize there are benefits that flow to the economy as a whole from mergers and acquisitions, and there are potential benefits to the economy of the state that can result from this merger. Here, Crowley will consolidate resources into a single firm that will be of a scope and scale sufficient to improve fuel delivery

service and reliability, and also at a potentially lower cost due to the resulting efficiencies. Crowley's strong economic commitment to Alaska's maritime markets also ensure that a responsible owner will operate these resources, which is important for environmental and economic reasons. While the Attorney General is deeply committed to preventing anticompetitive conduct in the state's markets, the state is equally committed to promoting the benefits of economic activity.

Given the nature of this transaction and all the information reviewed by the state and its expert, the Attorney General decided to enter a consent decree that required Crowley to take certain steps to alleviate the concerns identified by its investigation. Those include:

1. Divesting significant amounts of storage capacity to a competitor under terms that position the competitor as tantamount to the owner of the capacity of that facility.

2. Selling at least two sets of shallow draft tugs and barges to a buyer willing and able to compete in the shallow draft market.

3. Making space available in key storage facilities on a non-discriminatory basis to any competitor who wants it.

4. Making land available in Bethel to a competitor for the purpose of constructing a new fuel storage facility.

5. Requiring the divestiture to a competitor of 29% of any additional storage capacity added by Crowley to the Bethel facility.

6. Finding a buyer for these assets with the economic ability and required experience to compete effectively in this market.

A consent decree was crafted with these goals in mind. After several weeks of negotiation, Crowley agreed to the terms of the decree. Providing all the terms are complied with, the attorney general believes the transaction will satisfy Alaska's antitrust law, and will encourage continued competition in the market for barge delivered petroleum.

VI. Further Proceedings and Opportunity to Comment.

The consent decree has been filed in the Superior Court in Nome, the same court in which the pending lawsuit is located. The consent decree must be reviewed and approved by the court before it is effective.

In addition to review by the court, Crowley and Yukon must file a notice with the Department of Justice and the Federal Trade Commission that describes the transaction. These federal agencies will have an opportunity to review the transaction for antitrust violations, and may decide to initiate their own investigation.

Finally, any interested person can file an "exception" to the consent decree with the court in Nome. An exception must be filed with the court within 60 days of filing the consent decree. These exceptions can be mailed to the Nome Superior Court, Box 1110, Nome, Alaska, 99762. The court will consider these comments and objections when deciding to approve or disapprove the consent decree.

VII. Conclusion.

The Attorney General believes the proposed transaction, as modified by the conditions set forth in the consent decree, is lawful under applicable Alaska (and federal) law, the federal antitrust merger guidelines, and the judicial decisions that interpret these laws and guidelines. Under the proposed consent decree, the Attorney General believes the transaction will benefit consumers in Western Alaska by maintaining strong competition, and securing reliable sources of barge delivered fuel by reputable competitors.

IN THE SUPERIOR COURT FOR THE STATE OF ALASKA

SECOND JUDICIAL DISTRICT AT NOME

STATE OF ALASKA, Plaintiff, v. CROWLEY MARINE SERVICES, INC.; CROWLEY MARITIME CORPORATION; NORTHLAND FUEL, LLC; YUKON FUEL COMPANY; NORTHLAND VESSEL LEASING COMPANY LLC, and YUTANA BARGE LINES, LLC, Defendants.	Case No.: 2NO-04- _____CIV

CONSENT DECREE

Preamble

Plaintiff State of Alaska filed its Complaint herein and defendants, CROWLEY MARINE SERVICES, INC. and CROWLEY MARITIME CORPORATION (collectively, "Crowley"), NORTHLAND FUEL, LLC ("Northland Fuel"); YUKON FUEL COMPANY ("YFC"), YUTANA BARGE LINES, LLC ("Yutana"), and NORTHLAND VESSEL LEASING COMPANY LLC ("NVLC")[1]; were duly served with the Summons and Complaint. Defendants, by and through their undersigned attorneys, have consented to the entry of this Consent Decree without trial or adjudication of any issue of fact or law herein. This Consent Decree does not constitute

[1] YFC, Yutana, and NVLC are referred to collectively as the "Sellers."

any evidence against or admission by any party with respect to any issue of law or fact herein or in the Complaint.

RECITALS

WHEREAS, YFC is a wholly owned subsidiary of Northland Fuel, and owns and operates a business delivering and selling petroleum products to end users and other customers in Western Alaska, employing various barges, tug boats, storage facilities and other assets to this end;

WHEREAS, NVLC is a wholly owned subsidiary of Northland Fuel, and holds title to most of the barges and boats used in YFC's business, which NVLC bareboat charters to Yutana, and which Yutana then time charters to YFC;

WHEREAS, Crowley owns and operates a business similar to YFC's, employing similar assets, delivering and selling petroleum products into some of the same locales in competition with YFC, and bidding for some of the same contracts;

WHEREAS, concurrently with the filing of this Consent Decree, the Defendants have executed agreements (together, the "Crowley/Sellers Purchase Agreement"), a copy of each of which has been provided to the Attorney General, pursuant to which the Sellers have agreed to sell, and Crowley has agreed to purchase, all or substantially all of the assets of Sellers (the "Acquisition"),[2] subject to certain conditions set forth therein, including that the Court enter an order approving this Consent Decree;

WHEREAS, the Acquisition will combine under Crowley's sole ownership all of YFC's assets used for delivery of petroleum products in Western Alaska, and the

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[2] Pursuant to the Crowley/Sellers Purchase Agreement, Crowley has also agreed to acquire from Northland Fuel all of the outstanding capital stock of Service Oil & Gas, Inc. ("SOG"). SOG operates a land-based fuel distribution business, primarily in South Central Alaska.

Attorney General believes that these assets when combined with Crowley's assets will constitute a significant portion of all assets currently located and available in Western Alaska that are necessary to compete in the relevant markets for delivered petroleum products;

WHEREAS, the Defendants claim the Acquisition will eliminate certain inefficiencies that Crowley and Sellers, operating separately, currently experience, including, among other things, (1) combining their diverse fleets to enable more efficient distribution of products during the relatively limited warm-weather periods during which such deliveries must be made in a timely fashion, (2) eliminating redundancies in their operations, and (3) combining the purchasing function and aggregating the quantities to be purchased from refineries;

WHEREAS, the State of Alaska ("State"), through its Attorney General, alleges in its complaint that the Acquisition is unlawful under Alaska and federal antitrust law (the allegations in the State's complaint are re-alleged and incorporated herein);

WHEREAS, the State has brought this action against Defendants on behalf of the people of Alaska, and in the State's capacity in *parens patriae*;

WHEREAS, prompt divestiture of certain assets is an essential element of the agreement among the parties to resolve this matter, and concurrently with the filing of this Consent Decree, Crowley and Delta Western, Inc. ("Delta Western") have executed agreements (collectively the "Crowley/Delta Western Agreement"), a copy of which has been provided to the Sellers and the undersigned Assistant Attorney General, pursuant to which Crowley has agreed to divest to Delta Western, and Delta Western has agreed to purchase from Crowley, assets described herein, subject to the Court's approval of this Consent Decree;

WHEREAS, Crowley and YFC own and operate the only tank farms in or immediately near the City of Bethel;

WHEREAS, Crowley's tank farm facility in the City of Bethel (the "Crowley Tank Farm") was recently put into operation in October of 2003, and has approximately five million gallons of capacity; and YFC's tank farm facility in the City of Bethel (the "YFC Tank Farm" and together with the Crowley Tank Farm the "Bethel Tank Farms") has approximately ten million gallons of capacity, of which approximately one million gallons is likely to be eliminated due to age irrespective of the proposed Acquisition;

WHEREAS, new or expanded competition in the relevant markets for marine-delivered fuel products to Western Alaska could be impeded by the limited availability of tank farm storage capacity in and near the City of Bethel;

WHEREAS, pursuant to the Crowley/Delta Western Agreement, Crowley has agreed to divest storage capacity from the Bethel Tank Farms in accordance with the terms of this Consent Decree in order to facilitate Delta Western's expanded sales in the region, subject to the Court's approval;

WHEREAS, Delta Western is one of the largest tug and barge companies on the West Coast of the United States and one of the most experienced tug and barge operators in the United States, including experience with operating in Western Alaska;

WHEREAS, the State has determined that Delta Western is adequately qualified to purchase and operate the assets described in this Consent Decree, and to provide strong competition in the delivery of petroleum products in the relevant market;

WHEREAS, neither the execution or entry of this Consent Decree nor the terms hereof are intended to alter, modify, supplement, or rescind in any way the respective rights or obligations of the Defendants related to the Acquisition;

WHEREAS, Defendants do not admit, and continue to deny, that such transaction is unlawful;

WHEREAS, the Court has made no determination of any violation of law;

WHEREAS, the State and Defendants wish to avoid litigation and to resolve the controversy on mutually acceptable terms;

WHEREAS, the Defendants have agreed to be bound by the provisions of this Consent Decree;

WHEREAS, the Attorney General believes the terms of this Consent Decree are fair and reasonable and in the public's interest.

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED as follows:

I.

JURISDICTION

This Court has jurisdiction over the subject matter of this action pursuant to AS 45.50.582 and over each of the parties hereto. Venue is proper in this Judicial District pursuant to Alaska Civil Rule 3. The Complaint states a claim upon which relief may be granted against the Defendants under Alaska antitrust law. The Attorney General of the State of Alaska, Gregg D. Renkes, has authority to bring this action pursuant to AS 45.50.580.

II.

DEFINITIONS

As used in this Consent Decree:

A. "Defendants" means the defendants listed in the State's complaint filed in this matter.

B. "Delta Western" means Delta Western, Inc.

C. "Crowley" means Crowley Marine Services, Inc. and Crowley Maritime Corporation, together.

D. "YFC" means Yukon Fuel Company.

E. "Yutana" means Yutana Barge Lines, LLC.

F. "Northland Fuel" means Northland Fuel LLC.

G. "NVLC" means Northland Vessel Leasing Company, LLC.

H. "Attorney General" means the Alaska Attorney General.

I. "Western Alaska" means the coastal regions of Alaska from Bristol Bay north to Point Hope, and inland regions west of Alaska's road system.

J. "Relevant Market" means the market for marine-delivered petroleum products in the relevant geographic area, which includes the State of Alaska or parts thereof.

III.

APPLICABILITY

A. The provisions of this Consent Decree apply to Defendants, their successors and assigns, and all other persons in active concert or participation with any of them who shall have received actual notice of this Consent Decree by personal service or otherwise.

B. Nothing herein shall be deemed to have been created for the benefit of any third party and nothing herein shall be construed to provide any rights to third parties, specifically including, without limitation, plaintiffs Alaska Village Electric Cooperative, Inc.; Inn Electric Cooperative, Inc.; Kotzebue Electric Cooperative, Inc.; Naknek Electric Cooperative, Inc.; City of Nome d/b/a Nome Joint Utility System; Nushagak Electric and Telephone Cooperative, Inc.; and Unalakleet Valley Electric Cooperative,

Inc.; together who have filed a lawsuit titled *Alaska Village Electric Co-op, et al. v. Crowley Marine Services, Inc. et al.,* Case No. 2NO-03-174 Civ., an action pending in Alaska Superior Court, in the Second Judicial District, at Nome.

IV.

DIVESTITURE OF ASSETS

A. Crowley is hereby ordered and directed, following the consummation of the Acquisition, to divest, absolutely and in good faith, two sets of tugs and barges designed and currently able to transport petroleum products in Western Alaska. These assets shall be in good condition, immediately available for use in Western Alaska, and have all applicable Coast Guard approvals and/or certificates necessary for the intended use of serving shallow-draft areas for deliveries of petroleum products in Western Alaska. The barges shall be of sufficient capacity to enable Delta Western to compete effectively for the delivery of fuel to these areas considering the availability of storage facilities, contract volumes necessary for profitable operations, and other factors. These assets shall be divested according to the following schedule:

1. Crowley shall close the aforesaid divestiture transaction and completely divest the assets within 60 days after approval of this Consent Decree.

2. If, notwithstanding the exercise of its good faith best efforts, Crowley is unable to close the transactions and divest the assets described herein within 60 days after approval of this Consent Decree, Crowley may apply to the Attorney General for additional time to close such transactions and divest the assets, as the Attorney General deems appropriate. The decision to grant any such additional extension of time rests within the sound discretion of the Attorney General and his decision upon such request shall be final.

B. The purpose of divesting these assets is to ensure their continued use in Western Alaska for delivered petroleum products and to remedy the lessening of competition that might otherwise result from the proposed Acquisition as alleged in the State's Complaint. This section shall be interpreted and construed to accomplish this intent to the fullest extent possible.

V.

DIVESTITURE OF STORAGE CAPACITY IN BETHEL

A. Crowley is hereby ordered and directed, following the consummation of the Acquisition, to divest four million gallons of fuel storage capacity in Bethel, on fair and reasonable terms, to Delta Western under the following conditions:

1. There shall be no restriction on the amount of fuel Delta Western may run through (or "throughput") the Bethel Tank Farms so long as Delta Western does not exceed four million gallons of capacity at any given time, unless agreed to by the parties;

2. Subject to the provisions hereof, Crowley shall allow Delta Western to store any combination of fuel types and in any amount requested by Delta Western, including but not limited to all grades of gasoline and diesel fuel, heating oil, aviation gas and Jet A; the storage requested by Delta Western shall be reasonably compatible with the overall storage capacity and tank assignments made from time to time by Crowley for annual throughput requirements, and Crowley shall be required to make its tank assignments in good faith taking due account of capacity commitments requested by Delta Western on a timely basis.

3. Subject to any contractual or other arrangements with the City of Bethel, Delta Western and Crowley shall have equitable, nondiscriminatory loading

rights to the Bethel fuel dock so that each will have access to the dock when needed. Neither Delta Western nor Crowley shall interfere with the other's equitable access to the Bethel fuel dock.

4. Crowley shall allow Delta Western full access to the Bethel Tank Farms, including equitable access to all loading racks. Neither Delta Western nor Crowley shall interfere with the other's equitable access to ensure Delta Western has access to its fuel supply as if it were an owner of the Bethel Tank Farms.

5. Upon reasonable advance notice to Crowley, Delta Western may provide unused storage capacity to Crowley on terms and conditions mutually agreed upon by the parties. Nothing in this paragraph shall prevent Delta Western from selling, leasing, or assigning any part of its storage capacity to other third parties.

B. In addition to the initial storage capacity of four million gallons, Crowley shall give Delta Western the option of acquiring additional storage capacity at the Bethel Tank Farms under the following conditions:

1. If Crowley expands its storage capacity in Bethel beyond 14 million gallons, it shall give Delta Western the option of acquiring up to 29% of the additional capacity on substantially the same terms as the initial four million gallon divestiture.

2. Notwithstanding paragraph (B)(1), Crowley is not required to provide Delta Western with additional capacity if Delta Western has constructed its own storage facility in Bethel or has otherwise acquired rights to use any other such storage capacity In Bethel.

C. The storage capacity divestiture (including any such divestiture under paragraph B above) in Bethel shall be for an initial term of 10 years with four five year

renewal options. The terms of the divestiture may include provisions that allow Crowley to adjust the amount charged to Delta Western upon each renewal to reflect additional operational costs incurred by Crowley during this time that are not already included in the original lease amount.

D. The storage capacity divestiture in Bethel shall terminate if Delta Western builds a competing facility in Bethel with at least 4 million gallons of storage capacity, or such other lesser amount of capacity as may be determined by the Attorney General to resolve competitive concerns.

E. It is the intent of this section to allow Crowley to charge an amount for storage capacity that equals its actual cost of providing the storage (including actual cost of construction and operation) plus a reasonable return. It is not the intent of this section to allow a storage charge that is excessive or unreasonable considering the goal of this Consent Decree to foster competition for the delivery of petroleum products.

VI.

DIVESTITURE OF STORAGE CAPACITY AT OTHER FACILITIES

A. Crowley is ordered and directed to make available, on a non-discriminatory basis, seasonal throughput storage capacity at its facilities in Nome, Kotzebue, and St. Michael under the following conditions. For purposes hereof, "seasonal throughput" means barge-in/barge-out temporary storage during open-water shipping season, and shall not include, among other things, storage for rack sale or delivery:

1. Upon reasonable notice, Crowley must allow other competitors to store fuel at these facilities, and may not refuse storage unless there is no space in the facility. Crowley will use its best efforts, consistent with good business practices, to

consolidate its products to maximize the space available for storage by others. Crowley shall not shift its products or use these facilities in any manner that intentionally or unreasonably limits the amount of storage capacity available to others.

2. Crowley shall make its Kotzebue dock facilities available to all shippers of commercial quantities of petroleum products on a non-discriminatory basis. Crowley shall maintain the right to schedule the use of the Kotzebue dock facility, but may not exercise this right so as to make the facilities unavailable to Crowley's competitors under reasonable and normal business practices.

None Similarly Situated

3. Crowley may not charge more than the prevailing competitive market rate for seasonal throughput storage at these facilities and other facilities similarly situated, which at the time of the approval of this Consent Decree is approximately 6 cents per gallon. Nothing herein shall prevent Crowley from charging a lesser amount at its discretion, or a greater amount according to market conditions.

4. Crowley shall refrain from selling petroleum products from its storage facilities in Nome, Kotzebue and St. Michael at discriminatory rates. It is the intent of this paragraph that Crowley shall not discriminate against any of its customers because the customer is also a competitor of Crowley.

5. Crowley is not required to offer storage space at these facilities if the entity requesting storage builds a storage facility or otherwise acquires access to storage capacity in the area that can be used for the same purpose. It shall not constitute a violation hereof for Crowley to refuse to do business with any firm or individual that is not credit worthy in Crowley's reasonable judgment, or for legitimate safety concerns.

B. It is the intent of this section to facilitate competition in the delivery, transportation, storage, and sale of petroleum products to coastal and inland areas of Western Alaska. This section shall be interpreted and construed to accomplish this intent to the fullest extent possible. Crowley agrees that it will not use its ownership and control of these facilities in any manner that will restrain competition.

C. The terms of this Consent Decree shall replace and supercede the "*Agreement regarding Crowley Maritime Corporation's Acquisition of Chevron Tank Farms in Nome and Kotzebue*" executed on or about July 26, 1985, between the State and Crowley.

VII.
OPTIONS ON PROPERTY IN BETHEL

A. Crowley is the owner of certain property in Bethel identified as Lot 40 within U.S. Survey No. 4117. Crowley is ordered and directed to make this property available for sale at fair market value to Delta Western as part of this Consent Decree. If Delta Western declines to purchase the property, Crowley may offer the property for sale to third parties. Before completing the sale of the property to a third party, Crowley must provide Delta Western the opportunity to purchase the property on substantially the same terms and conditions offered by the third party. If the offer made by the third party is not a bona fide, good faith offer, Delta Western shall have the option of purchasing the property at the fair market value.

B. YFC is the lessee of a parcel of property located adjacent to the YFC tank farm, consisting of approximately 14.97 acres. YFC leases this property from William Hately under lease No. 01-ONC-01 (the "Hately lease"). The term of the lease is

25 years beginning on April 1, 2001. Subject to the receipt of all required third party consents, this lease will be assigned to Crowley as part of the Acquisition. Crowley is directed and ordered to give Delta Western the option to take an assignment of all of Crowley's rights and duties under this lease at any time in the next five years. If Crowley receives a bona fide, good faith offer from a third party to take an assignment of the lease after this time, Crowley must first give Delta Western the option to take an assignment of the lease, on the same terms and conditions contained in the original lease with YFC.

C. If for any reason Crowley is unable to obtain an assignment of the Hately lease, and therefore unable to offer Delta Western an option on the lease consistent with paragraph B above, the Attorney General retains the authority to consider and implement any appropriate remedy consistent with the intent of this Consent Decree to foster and insure competition.

D. Crowley agrees it will not unreasonably withhold its consent to give Delta Western all necessary easements, or to enter necessary agreements to access or traverse property owned by Crowley for the purpose of connecting new tank farm facilities constructed by Delta Western to the Bethel Dock or other loading/unloading facilities that are required for the operation of the newly constructed tank farm. It is the intent of this paragraph that Crowley will not use its property ownership status as a means to interfere with or impede the construction and practical use of new tank facilities in Bethel.

VIII.

OTHER REMEDIAL PROVISIONS

A. Crowley is ordered and directed, following the consummation of the Acquisition, to provide Delta Western with private office space at the combined facility of YFC and Crowley in Bethel. The office space provided must be of a size and configuration suitable for the daily management and operation of Delta Western's fuel business in Bethel. The space must be located so as to minimize the potential for illegal communications between Crowley and Delta Western concerning the marketing and sales strategy of each company.

Office Space

B. Crowley is ordered and directed, following the consummation of the Acquisition, to provide Delta Western with suitable space at the combined Crowley/YFC facility for the purpose of erecting or placing a sign of the same general size and nature as the largest sign used by Crowley at the combined facility. The location chosen must be at least as visible and noticeable as other prominent signs at the facility.

Signage

C. Crowley is ordered and directed, following the consummation of the Acquisition, to allow Delta Western to use its facilities in Bethel for tug and barge docking and loading/unloading in accordance with other provisions of the Consent Decree.

D. Crowley shall not engage in any conduct that directly or indirectly interferes with Delta Western's ability to operate its fuel business in a competitive manner consistent with the purpose and goals of this Consent Decree.

IX.

PROHIBITION ON ACQUIRING DIVESTED ASSETS

For a period of 20 years from the date this Consent Decree is entered, Crowley, either individually or jointly, shall not acquire any of the assets or the right to utilize fuel storage capacity divested pursuant to this Consent Decree without the prior approval of the Attorney General. The Attorney General shall approve or disapprove a request to acquire divested assets or storage capacity within 60 days of receipt of a written request for approval. Failure to act within this time will be deemed an approval by the Attorney General.

X

SALE OF CROWLEY OR YFC TANK FARM

For the term of this Consent Decree, Crowley shall not dispose of the Bethel Tank Farms except in accordance with all applicable antitrust and other laws of the State of Alaska and the United States. Crowley agrees to provide the Attorney General with 30 days notice before executing a sale of the Bethel Tank Farms.

XI.

COMPLIANCE INSPECTION

A. For the purpose of determining or securing compliance with this Consent Decree, and subject to any legally recognized privilege, authorized representatives of the State, including consultants and other persons, shall, upon the written request of the Attorney General, and on reasonable notice to Crowley, be permitted:

1. Access during office hours to inspect and copy all books, ledgers, accounts, correspondence, memoranda, and other records and documents in the possession or under the control of Crowley, which may have counsel present, relating to this Consent Decree; and

2. Subject to the reasonable convenience of Crowley and without restraint or interference from them, to interview directors, officers, employees, and agents of Crowley, which may have counsel present, regarding any such matters.

B. Upon written request, Crowley shall submit written reports as requested by the State concerning the matters contained in this Consent Decree.

C. No information nor any documents obtained by the means provided in this paragraph nor the Crowley/Sellers Purchase Agreement or the Crowley/Delta Western Purchase Agreement shall be divulged by any representative of the State to any person other than a duly authorized representative of the Alaska Attorney General, except for the purpose of enforcing compliance with this Consent Decree, or as otherwise required by law or directed by the court.

XII.

NOTICES

Any notices required by this Consent Decree shall be delivered to the parties at the following addresses:

A. For the State of Alaska:

Attorney General's Office
Attn: Clyde E. Sniffen, Jr.
Assistant Attorney General
1031 W. 4th Avenue, #200
Anchorage, AK 99501
(907) 269-5200
(907) 276-8554 (fax)

B. For Defendants Crowley:

Jesse W. Markham, Jr.
Morrison & Foerster LLP
425 Market Street
San Francisco, CA 94105-2482
(415) 268-7448
(415) 268-7522 (fax)

and

William P. Verdon,
Senior Vice President & General Counsel
Crowley Maritime Corporation
Lake Merritt Towers
155 Grand Avenue
Oakland, California 94512
(510) 251-7574
(510) 251-7610 (fax)

C. For Defendant Sellers:

Yukon Fuel Company
Attn: Mark Smith, President
7941 Sandlewood Place, Suite 100
Anchorage, AK 99507
(907) 777-5508
(907) 777-5556 (fax)

with a copy to:

Patton Boggs LLP
Attn: Douglas J. Serdahely, Esq.
601 West Fifth Avenue, Suite 700
Anchorage, AK 99501
(907) 263-6310
(907) 263-6345 (fax)

XIII.

RETENTION OF JURISDICTION

Jurisdiction is retained by this court for the purpose of enabling any of the parties to this Consent Decree to apply to this court at any time for such further orders and directions as may be necessary or appropriate for the construction, implementation, or modification of any of the provisions of this Consent Decree, for the enforcement of compliance herewith, and for the punishment of any violations hereof.

IX.

OTHER RELIEF

A. If Defendants fail to comply with the terms of this Consent Decree, the Court may order appropriate relief pursuant to AS 45.50.580 on motion of the State for cause.

B. The State is awarded its expert fees of $17,500. Defendants shall pay this sum to the State within thirty (30) days of entry of this Consent Decree.

XV.

VOLUNTARY ACT OF THE PARTIES

The parties hereto expressly acknowledge and agree that this Consent Decree is voluntarily entered into as the result of arm's-length negotiation, and all parties hereto were represented by counsel in deciding to enter into this Consent Decree.

XVI.

PUBLIC COMMENT

This Consent Decree is being submitted by the parties to the court for approval pursuant to AS 45.50.584. In accordance with this procedure, the Consent Decree does not become final until 60 days after its filing. During this 60-day period, interested persons may file verified exceptions to the form or substance of the Consent Decree, and after a hearing on such exceptions, the court may approve or refuse to enter the Consent Decree. Copies of all such verified exceptions shall be served by the submitting person on the parties to the Consent Decree for their review, and each party may respond to such exceptions at the hearing as each party deems appropriate or as directed by the court. Defendants agree to publish, at Defendants' expense, notice, the form and contents of which are subject to the State's approval, of the execution and terms of the Consent Decree, the place or places at which members of the public may obtain copies of the Consent Decree and/or any summaries thereof or comments thereon prepared by the parties, and the procedure for submitting verified exceptions thereto. Such notice shall be published in the Anchorage Daily News, Fairbanks Daily News-Miner and the Juneau Empire on two occasions, the first being within ten (10) days after

the lodging of this Consent Decree with the court, and the second between ten (10) and twenty (20) days after the lodging of this Consent Decree with the court. Other notice as necessary to inform residents in Western Alaska may also be required by the court.

XVII.

CONSUMMATION OF MERGER

The Acquisition may not be consummated prior to entry of an order by the court approving this Consent Decree.

XVIII.

TERMINATION

This Consent Decree will expire on the 30th anniversary of the date of its entry, or upon order of this court for good cause. This Consent Decree will automatically terminate upon any termination of the Crowley/Sellers Purchase Agreement without the consummation of the Acquisition.

XIX.

PUBLIC INTEREST

The terms of this Consent Decree are fair and reasonable and the entry thereof is in the public's interest.

STATE OF ALASKA
GREGG D. RENKES
ATTORNEY GENERAL

DATED:_____ By: _____
Clyde E. Sniffen Jr.
Alaska Bar # 8906036
Assistant Attorney General

CROWLEY MARINE SERVICES, INC.

DATED: By:_____
Bruce Love
Corporate Secretary

CROWLEY MARITIME CORPORATION

DATED:_____ By:_____
William P. Verdon
Senior Vice President
General Counsel

YUKON FUEL COMPANY

DATED:_____ By:_____
Herman E. Schliesing
Vice President

NORTHLAND VESSEL LEASING COMPANY LLC

DATED:_____ By:_____
Herman E. Schliesing
Senior Vice President

YUTANA BARGE LINES, LLC

DATED:_____ By:_____
Michael J. Doan
Manager

NORTHLAND FUEL, LLC

DATED:_____ By:_____
Herman E. Schliesing
Vice President

[PROPOSED] ORDER

IT IS SO ORDERED.

Dated: _____

_____
Alaska Superior Court Judge

econ ONE

• REGULATION PRACTICE-IN-BRIEF

Special session of Alaska State Legislature on natural gas issues
This past summer, the Alaska State Legislature approved a license to TransCanada for the construction of a natural gas pipeline running from the North Slope in Alaska to the Canadian province of Alberta. This license gives TransCanada access to $500 million in Alaska state funds for engineering and pre-construction work. Once completed, the pipeline would be capable of delivering more than 4 billion cubic feet of gas per day to U.S. markets--approximately 6 percent of total U.S. consumption. Econ One was retained several years ago by the Alaska State Legislature to serve as its economic advisor on issues relating to the State's attempts to commercialize North Slope gas resources. Barry Pulliam testified on two separate occasions this summer relating to the legislature's consideration of the TransCanada proposal and license. On the first occasion, Mr. Pulliam, who was the first witness to testify, outlined the TransCanada proposal, discussed the economics of the tariff structures proposed by TransCanada, and highlighted issues for consideration by the legislature. On the second occasion, Mr. Pulliam testified regarding the viability of alternative projects designed to export Alaska gas via LNG to Asian markets.

Gas sales agreements proposed by Enstar Natural Gas Company with ConocoPhillips and Marathon Oil
In this proceeding before the Regulatory Commission of Alaska, Enstar Natural Gas Company, a gas distribution company, proposed two new supply agreements that would set its prices for gas supply in Cook Inlet based on levels in the Lower 48 states. Econ One was retained by Chugach Electric Association, an intervenor in the proceeding, to review and comment on Enstar's economic justifications regarding the reasonableness of its pricing provisions. Jeff Leitzinger offered both prepared and direct testimony before the Commission stating that the pricing provisions in the two agreements (1) would reverse the long-standing price advantage enjoyed by Cook Inlet gas users relative to gas consumers in the Lower 48 states and (2) were not supported with any reasonable economic justifications for doing so.

Econ One has been retained by the Alaska Legislature
to assist in the evaluation of a contract or contracts between the State and potential developers of a large-scale natural gas pipeline designed to move more than 4 billion cubic feet (bcf) per day from the North Slope of Alaska. Once constructed, the pipeline is expected to bring natural gas supplies totaling approximately 5% of U.S. demand and is expected to cost in excess of $13 billion. Econ One was initially retained by the legislature in the Spring of 2005. The Econ One consulting team includes energy economists and experts, including former senior executives with major oil and gas producers. Econ One has advised the legislature on issues including the role of Alaska gas in U.S. gas markets, the potential impact and consequences on the State of various contract provisions and the analysis of alternative projects. In addition to its work on gas line matters, Econ One has advised the Legislature over the course of the spring and summer of 2006 regarding the overhaul of Alaska's petroleum severance tax laws.

Merger review for the State of California

Tesoro acquired Shell Oil's Los Angeles refinery (100,000 barrels per day) and 278 retail gasoline stations in Southern California for $1.8 billion in the spring of 2007. Earlier in 2007, Tesoro also acquired USA Petroleum's 138 gasoline stations in California for $273 million. These two acquisitions resulted in a large increase in Tesoro's refining capacity in California and also dramatically increased its presence in retail gasoline operation within the state. Econ One was retained by the California Attorney General to assist the State in its review of these acquisitions. Barry Pulliam and Tony Finizza analyzed potential competitive issues associated with these transactions.

Barry Pulliam issued a study for the Alaska Department of Natural Resources (DNR)
His report examined valuation and royalty policies related to natural gas production on federal, state and provincial lands in both the U.S. and Canada. Alaska's interest in natural gas royalty policies had increased as the prospect of economically feasible development of its vast gas resources seems brighter. This report follows an earlier study (January 2002) for DNR concerning U.S. natural gas and NGL markets. Both reports are available at www.dnr.state.ak.us/.

Barry Pulliam presented testimony on behalf of the State of Alaska.
He appeared before the Federal Energy Regulatory Commission and Alaska Public Utility Commission at a joint hearing concerning the Quality Bank on the Trans Alaskan Pipeline (TAPS). TAPS utilizes the prices of both intermediate and finished petroleum products (including naphtha) in the operation of the system's Quality Bank. Mr. Pulliam testified as to the market value of naphtha produced on the West Coast of the U.S. and the ability of valuation methodologies proposed by the TAPS shippers to predict naphtha values. As part of his work on this matter, Mr. Pulliam analyzed more than 300 contracts entered into by West Coast refiners, all of which involved naphtha.

Barry Pulliam consulted with the Federal Trade Commission in its investigation of Sunoco, Inc.'s
proposed acquisition of the Coastal Eagle Point refinery from El Paso Corporation. The investigation by the FTC focused on the potential for the acquisition of the New Jersey refinery to cause price increases in reformulated gasoline sold in Philadelphia (where Sunoco owns other refineries) and/or conventional gasoline delivered at points along the Laurel Pipeline, which extends from Philadelphia to Pittsburgh. Upon completion of its investigation, the FTC voted 5 to 0 to allow the acquisition to proceed.

Econ One consulted with the State of Alaska regarding the potential competitive impact of Crowley Marine Services Inc's acquisition of Yukon Fuels
Both firms provided transportation services and sold petroleum products to a number of regional utilities and to cities and communities in Western Alaska, including the City of Bethel. After its investigation, the State of Alaska required the parties to divest some storage and distribution assets as part of a consent decree. The City of Bethel and eight utilities opposed the acquisition in Alaska Superior Court, arguing that the consent decree would not be sufficient to prevent price increases to consumers in Western Alaska. They argued that there were significant entry barriers involved in providing barge-delivered petroleum services to Western Alaskan cities and communities that would allow Crowley to dominate the market and raise prices. Barry Pulliam testified on behalf of the State of Alaska in support of the consent decree during a hearing in Superior Court in Anchorage. His testimony included the conclusion that the consent decree adequately addressed the competitive concerns identified in the investigation, including

the potential entry barrier concerns. The Court ruled in favor of the State. After the hearing, the utilities attempted to obtain a temporary restraining order in Federal Court preventing the acquisition from proceeding. Their request was denied.

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• STAFF

• PRACTICE-IN-BRIEF

• INTELLECTUAL PROPERTY

• ECONOMIC DAMAGES

• EMPLOYMENT ISSUES

• ANTITRUST

Identifying non-competitive activity and quantifying its effects are not exactly simple, straightforward tasks. Each requires rigorous, empirical analysis of real world activity to answer the difficult questions. We have the tools and expertise it takes to accurately reveal the competitive nature of firms within a market, and to measure how it might have operated under competition.

Our antitrust experience includes :

- Market Definition
- Price Fixing
- Vertical/Horizontal Arrangements
- Predatory Conduct
- Price Discrimination
- Unfair Competition
- Market Power
- Damages Analysis/Calculation
- Class Certification
- Bundling/Tying
- Exclusive Contracts
- Market Structure/Conduct/Performance Analysis

Over your head.
Sorry, we don't speak that.

econ ONE

federal antitrust law.[1] Crowley Marine Services, Inc. ("Crowley"), a supplier of bulk fuel to Western Alaska, seeks to purchase Yukon Fuel Company ("Yukon"), a similar company.[2] Plaintiffs argue that the sale violates federal antitrust laws because its effect "may be substantially to lessen competition."[3]

Before the Court reaches the merits of whether a temporary restraining order should be granted, the Court must consider whether it may be involved in this dispute at all.

Plaintiffs' Motion for Temporary Restraining Order is not the first instance where a court has considered the potential antitrust ramifications of this sale. In November of 2003, Plaintiffs filed an antitrust lawsuit in Alaska State Court to stop the sale. In March of 2004, the Alaska Attorney General initiated a formal investigation of the contemplated transaction. The State Court stayed its action until completion of this investigation. The Attorney General's investigation included interviewing people involved in large transportation services, retaining an antitrust economist to review relevant documents, meeting with the City of Bethel, the utility groups, and Plaintiffs, and consulting with

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[1] Clerk's Docket No. 2 at 3.

[2] Id.

[3] Id. (citing 15 U.S.C. § 18).

antitrust attorneys in other states and federal authorities. As a result, the Attorney General determined that modifying the sale was necessary to avoid state anti-trust violations. Thus, at the end of the eight month investigation, a consent decree was reached that allowed the sale of Yukon to go forward as long as Crowley divested certain assets and provided other accommodations to Delta Western, another supplier of bulk fuel in western Alaska. The consent decree was then published and subjected to a public comment period. The State then initiated its own complaint in State Superior Court alleging that the sale would be an antitrust violation, but that its proposed consent decree would remedy the violation.

After the expiration of the comment period, the State Superior Court proceeded to have a hearing[4] where Plaintiffs presented their arguments, the Assistant Attorney General presented

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[4] While the court limited its review to determine whether the settlement was within the reaches of the public interest, it was not a rubber-stamp and the court considered: "(1) the degree to which the decree achieves the relief sought in the complaint; (2) the nature of the case, including the size of the defendant, the scope and complexity of the proposed settlement, and the importance of the case to the economy as a whole; (3) the quantity and quality of information available to the court on which to base an evaluation of the decree, including the competitive impact statement, public comment and government responses, and any pretrial discovery and trial evidence actually presented; (4) any prior or current history of attempts by the same parties to evade public scrutiny of alleged anti-competitive practices." Clerk's Docket No. 12 at Ex. A at 6.

his comments, and expert economists were heard.[5] On August 25, 2005, State Superior Court Judge Ben Esch issued his opinion approving consent decree and allowing the sale to proceed. Judge Esch concluded that the sale was in the public interest. This Court has reviewed Judge Esch's opinion and found it thoughtful, thorough, and well-reasoned.

Plaintiffs now wish this Court to issue a temporary restraining order preventing the sale while it considers whether the sale, as modified by the consent decree, is a violation of federal antitrust law. In so doing, this Court would effectively prevent the judgment of the State Superior Court from taking effect. The Anti-Injunction Act, 28 U.S.C. § 2283, "precludes federal courts from enjoining state court actions unless (1) Congress has expressly authorized such relief by statute, (2) an injunction is necessary in aid of the court's jurisdiction, or (3) an injunction is necessary to protect or effectuate the court's judgments."[6] "In the interest of comity and federalism, these three exceptions must be strictly construed."[7] Therefore, "doubts

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[5] While Plaintiffs were not a party to the lawsuit, they were participants and were parties to a companion lawsuit that raised identical issues. Furthermore, the Attorney General provided them documentary evidence and they submitted formal objections to the court and participated in the hearing.

[6] Alton Box Board Co. v. Esprit de Corp., 682 F.2d 1267, 1270-71 (9th 1982) (quotations omitted).

[7] Id. at 1271.

as to the propriety of a federal injunction against state court proceedings should be resolved in favor of permitting the state courts to proceed in an orderly fashion to finally determine the controversy."[8] The Act applies to any stage of state proceedings, including judgments and appeals.[9] Additionally, "[i]t makes no difference whether the injunction applies to the private litigants or is imposed directly on the State Court itself."[10]

Here, Plaintiffs move for a temporary restraining order that would preclude the State Court's decision approving the sale from taking effect. Thus, the Act applies to prohibit this Court from so acting, unless an exception to the Act applies, which does not appear to be the case here. First, there has been no statutory authorization by Congress for the relief sought by Plaintiffs. Second, such an order is not necessary to aid the Court's jurisdiction. Third, such an order is not necessary to protect or effectuate a judgment of the Federal District Court. Thus, it appears that this Court is likely barred from granting the relief requested by Plaintiffs.

Moreover, after having reviewed the briefs and documentation supplied by the parties, and noting the extensive

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[8] Id. (citation omitted).

[9] Hill v. Martin, 296 U.S. 393, 403 (1935).

[10] Alton Box Board Co. V Espirit de Corp., 682 F.2d 1267, 1271 (9th Cir. 1982).

nature of the investigation and litigation that led to the consent decree and subsequent State Court decision, and without even considering the issue of collateral estoppel, the Court concludes that Plaintiffs have not shown probable success on the merits or that there is a high degree of irreparable harm, which is critical to the issuance of a temporary restraining order.[1]

Therefore, the Court **DENIES** Plaintiffs' Motion for a Temporary Restraining Order.

This is not to say that Plaintiffs' complaint lacks merit or that Plaintiffs will ultimately fail. Indeed, although Defendants are not precluded from proceeding with the sales transaction, they do so with full knowledge of the pending litigation and its potential consequences.

ENTERED at Anchorage, Alaska, this 2nd day of September, 2005.

RALPH R. BEISTLINE
UNITED STATES DISTRICT JUDGE

[1] Earth Island Inst. V. United States Forest Service, 351 F.3d 1291, 1298 (9th Cir. 2003).

Westlaw

West's Alaska Statutes Annotated Currentness
Title 45. Trade and Commerce
Chapter 50. Competitive Practices, Regulation of Competition, Consumer Protection
Article 4. Monopolies; Restraint of Trade
→ **§ 45.50.562. Combinations in restraint of trade unlawful**

Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce is unlawful.

§ 45.50.564. Monopolies and attempted monopolies unlawful

It is unlawful for a person to monopolize, or attempt to monopolize, or combine or conspire with another person to monopolize any part of trade or commerce.

§ 45.50.566. Transactions and agreements not to use or deal in commodities or services unlawful

It is unlawful for a person to lease or make a sale or contract for sale of goods, wares, merchandise, machinery, supplies, or other commodities, or services, whether patented or unpatented, for use, consumption, enjoyment, or resale, or fix a price charged for it, or discount from, or rebate upon, that price, on the condition, agreement, or understanding that the lessee or purchaser will not use or deal in the goods, wares, merchandise, machinery, supplies, or other commodity or service of a competitor or competitors of the lessor or seller, if the effect of the lease, sale, or contract for sale, or of the condition, agreement, or understanding may be substantially to lessen competition or tend to create a monopoly in any line of commerce.

§ 45.50.568. Mergers and acquisitions unlawful when competition lessened

(a) It is unlawful for a person to acquire and hold, directly or indirectly, the whole or a part of the stock, or other share capital, or assets of any corporation after August 5, 1975 if the effect of the acquisition and holding may be substantially to lessen competition or to tend to create a monopoly in any line of commerce in the state or in a section of the state. This subsection does not apply to persons purchasing such stock solely for investment if it is not used by voting or otherwise to bring about, or in attempting to bring about, the substantial lessening of competition. Nothing in this subsection prevents a corporation from causing the formation of subsidiary corporations for the actual carrying on of their immediate lawful business, or the natural and legitimate branches or extensions of it, or from owning and holding all or a part of the stock of the subsidiary corporation, when the effect of the formation is not substantially to lessen competition.

(b) When the court finds that the effect of the holding of such stock, share capital, or assets is substantially to lessen competition or tends to create a monopoly and no other remedy will eliminate the lessening of competition or the tendency to create a monopoly, the court shall order the divestiture or other disposition of the stock, share capital, or assets and shall prescribe a reasonable time, manner, and degree of the divestiture or other disposition of it.

(c) This section does not apply to mergers, acquisitions, or holding companies permitted by AS 06.05.235 or to a merger carried out in accordance with AS 21.69.590 - 21.69.600, or to mergers, acquisitions, or holding companies permitted and regulated by a regulatory agency of the United States having jurisdiction and control over those mergers and acquisitions.

§ 45.50.570. Interlocking directorates and relationships

(a) It is unlawful for a person to be at the same time a director, officer, partner, or trustee in any two or more firms, partnerships, trusts, associations, or corporations or any combination of them engaged in commerce, if these firms, partnerships, trusts, associations, or corporations or a combination of them, are by virtue of their business and location or operation, competitors and if the effect may be substantially to lessen competition or tend to create a monopoly.

(b) A person may not by the use of a representative accomplish the result prohibited in (a) of this section.

(c) The validity or invalidity of an act of a director, officer, or trustee done by the director, officer, or trustee while occupying the position in violation of this section shall be determined by the statutory and common law of the state relating to corporations, trusts, or associations.

(d) The attorney general may bring an action at any time to cause a director, officer, or trustee who may be occupying such a position in violation of this section to vacate the office or offices to effect the termination of the prohibited interlocking relationship.

(e) A person affected by an act of a director, officer, or trustee may bring an action at any time to cause the director, officer, or trustee who may be occupying the position in violation of this section to terminate the prohibited interlocking relationship.

(f) The court, upon finding that a director, officer, or trustee is holding office in violation of this section, shall order the person to terminate the interlocking relationship, and, in the case of a trustee, the court may, when it considers it appropriate, order the trustee to vacate the office of the trustee. A remedy provided in this section does not limit and is in addition to any other remedy available under another section of this chapter or another law.

§ 45.50.572. Exemptions

(a) AS 45.50.562 - 45.50.596 do not forbid the existence or operation of labor, agricultural, horticultural, or marine pilot organizations created for the purpose of mutual help, and not conducted for profit, or forbid or restrain members of those organizations from lawfully carrying out the legitimate objectives of them; nor are these organizations or members illegal combinations or conspiracies in restraint of trade under the provisions of AS 45.50.562 - 45.50.596.

(b) AS 45.50.562 - 45.50.596 do not forbid actions or arrangements authorized or regulated under the laws of the United States that exempt these actions or arrangements from application of the antitrust laws of the United States or under the following statutes of this state:

(1) AS 06.05.235 and 06.05.570;

(2) AS 10.15; and

(3) AS 31.05.110.

(c) AS 45.50.562--45.50.596 do not forbid persons engaged in the fishing industry as fishermen who catch, collect, or cultivate aquatic products from acting together in associations for the purpose of collectively catching, producing, preparing for market, processing, handling, and marketing their product. Associations may have marketing agencies in common and may make contracts and agreements necessary to achieve the purposes of this subsection. In this subsection, "association" means an association, corporate or otherwise, with or without capital stock, that

(1) is operated for the mutual benefit of its members;

(2) does not deal in the aquatic products of nonmembers to an amount greater in value than the association handles for its members; and

(3) either

(A) does not allow a member of the association more than one vote because of the amount of stock or membership capital the member may own in the association; or

(B) does not pay dividends on stock or membership capital in excess of eight percent a year.

(d) AS 45.50.562 - 45.50.596 apply to long distance telecommunications services provided by public utilities. AS 45.50.562 - 45.50.596 do not apply to other services provided by public utilities that have been issued a certificate of public convenience and necessity under AS 42.05.

(e), (f) Repealed.

(g) AS 45.50.562 - 45.50.596 do not forbid activities expressly required by a regulatory agency of the state. Activities permitted by a regulatory agency of the state are not forbidden by this chapter if the regulatory agency has given due consideration to the possible anticompetitive effects before permitting the activities, and enforcement of the provisions of AS 45.50.562 - 45.50.596 would be disruptive of the regulatory scheme.

(h) AS 45.50.562 - 45.50.596 do not forbid actions or arrangements necessary to carry out the provisions of the Alaska Native Claims Settlement Act. [FN1]

(i) AS 45.50.562 - 45.50.596 do not prohibit activities of the Alaska Housing Finance Corporation to stabilize the market price of and demand for residential housing in the state under AS 18.56.210.

(j) AS 45.50.562--45.50.596 do not forbid persons engaged in the fishing industry as fishermen, including fishermen acting through associations allowed under (c) of this section, from collectively agreeing with fish processors, including fish processors acting through associations of processors, on the (1) price paid to the fishermen for aquatic products; and (2) minimum price that fish processors will accept for the sale of processed aquatic products. Nothing in this subsection allows fish processors to agree among themselves on the price paid to fishermen or the minimum price that fish processors will accept for the sale of processed aquatic products if fishermen did not participate in the making of the agreement and are not a party to the agreement.

(k) AS 45.50.562--45.50.596 do not apply to action taken by a person to comply with AS 45.25 or to action refrained from by a person in order to comply with AS 45.25 (motor vehicle transactions).

(l) AS 45.50.562--45.50.596 do not forbid the existence or operation of organizations of physicians acting in accordance with AS 23.50, or forbid or restrain members of those organizations from lawfully carrying out the legitimate objectives of them; nor are these organizations or members illegal combinations or conspiracies in restraint of trade under the provisions of AS 45.50.562--45.50.596.

[FN1] See 43 U.S.C.A. § 1601 et seq.

§ 45.50.574. Contracts voidable

A contract or agreement in violation of a provision of AS 45.50.562 - 45.50.596 is voidable by either party as to future performance by either party; however, the court may, in its discretion, order payment for goods or services already received to prevent unjust enrichment.

§ 45.50.576. Suits by persons injured; treble damages; costs

(a) A person who is injured in business or property by a violation of AS 45.50.562--45.50.570, or a person so injured because the person refuses to accede to a proposal for an arrangement that, if consummated, would be a violation of AS 45.50.562--45.50.570, may bring a civil action

(1) for damages sustained by the person, and, if the judgment is for the plaintiff, the plaintiff shall be awarded threefold the amount of damages sustained by the person, plus the costs of the suit, including reasonable attorney fees; and

(2) to enjoin the unlawful practice, and, if the judgment is for the plaintiff, the plaintiff may be awarded costs of the suit, including reasonable attorney fees.

(b) If a home rule or general law city or borough or other governmental entity is injured by reason of a violation of AS 45.50.562--45.50.570, it may maintain an action in the same manner as prescribed in (a) of this section for an injured person, and the city, borough, or other governmental entity is entitled to the same relief as provided in (a) of this section.

(c) In a civil action brought under AS 45.50.562--45.50.570, if judgment is for the defendant, the defendant shall be awarded the defendant's costs of the suit, including reasonable attorney fees in accordance with rules adopted by the supreme court for awarding costs and attorney fees to prevailing parties in civil actions. If the plaintiff in a civil action brought under this section in which judgment is for the defendant is a class certified under Rule 23, Alaska Rules of Civil Procedure, any award of costs and attorney fees to the defendant

(1) may be satisfied only through funds, if any, that the class has collected from settlements with or judgments against other defendants; and

(2) is not a liability of any individual member of the class.

§ 45.50.577. Enforcement by attorney general

(a) The attorney general may bring a civil action in superior court to secure monetary relief as provided in this section on behalf of the state and its agencies injured either directly or indirectly by reason of any violation of AS 45.50.562--45.50.570.

(b) The attorney general may bring a civil action in superior court in the name of the state, as parens patriae on behalf of governmental entities or persons doing business or residing in this state, to secure monetary relief as provided in this section for injuries directly or indirectly sustained by persons by reason of any violation of AS 45.50.562--45.50.570.

(c) The court shall exclude from the amount of monetary relief awarded in an action under

(a) or (b) of this section any amount of monetary relief that

(1) duplicates amounts that have been awarded for the same injury; or

(2) is properly allocable to persons who have excluded their claims under (e) of this section.

(d) The court shall award the attorney general as monetary relief three times the total damage sustained as described in (a) or (b) of this section and, additionally, the costs of the action, including reasonable attorney fees.

(e) In any action brought under (b) of this section, the attorney general, at the times, in the manner, and with the content the court directs, shall cause notice of the action to be given by publication. Any governmental entity or person on whose behalf an action is brought under (b) of this section may elect to exclude from civil action the portion of the state claim for monetary relief attributable to that governmental entity or person by filing notice of the election with the court within the time specified in the attorney general's notice given in accordance with this subsection.

(f) The final judgment in an action under (a) or (b) of this section is res judicata as to any claim under AS 45.50.576 by any governmental entity or person on whose behalf the action was brought and who fails to give notice of election to exclude under (e) of this section within the period specified in the attorney general's notice given under (e) of this section.

(g) An action under (b) of this section may not be dismissed or compromised without the approval of the court, and notice of any proposed dismissal or compromise shall be given by publication at the times, in the manner, and with the content the court directs in accordance with (e) of this section and AS 45.50.584.

(h) Monetary relief recovered in an action under this section shall be (1) distributed in the manner the court, in its discretion, authorizes; or (2) deemed a civil penalty by the court and deposited in the general fund, and may be appropriated to the Alaska permanent fund (AS 37.13.010(a)) or for any other public purpose. A distribution procedure authorized by the court under this subsection must afford each governmental entity or person participating in the civil action a reasonable opportunity to secure that entity's or person's appropriate portion of the net monetary relief.

(i) Only the attorney general, in a suit brought under this section, may seek monetary relief for injury indirectly sustained for a violation of AS 45.50.562--45.50.570.

§ 45.50.578. Certain violations constitute misdemeanor

A person who violates AS 45.50.562 or 45.50.564 is guilty of a misdemeanor and upon con-

viction is punishable, if a natural person, by a fine of not more than $20,000, or by imprisonment for not more than one year, or by both; and if not a natural person, by a fine of not more than $50,000.

§ 45.50.579. Proof of aggregate damages

In a civil action brought by the attorney general under AS 45.50.577, the attorney general may recover aggregate damages by using statistical sampling or sampling methods, by the computation of illegal overcharges, or by a similar, reasonable system of estimating aggregate damages that the court, in its discretion, permits, without the necessity of separately proving the individual claim or amount of damage to governmental entities or persons on whose behalf the civil action was brought.

§ 45.50.580. Injunction by attorney general

(a) In addition to any other relief provided by AS 45.50.562 - 45.50.596, the attorney general may bring an action to enjoin a violation of AS 45.50.562 - 45.50.596. This action may be brought as a sole action or in conjunction with another action that the attorney general is authorized to bring.

(b) The court may make additional orders or judgments as may be necessary to restore to a person in interest any money or property, real or personal, that may have been acquired by an act prohibited by AS 45.50.562 - 45.50.596, and as may be necessary to prevent continuing or future violations of AS 45.50.562 - 45.50.596.

§ 45.50.582. Jurisdiction of court

An action arising under AS 45.50.562 - 45.50.596 shall be brought in the superior court.

§ 45.50.584. Consent judgment

(a) In an action maintained under AS 45.50.562 - 45.50.596, the parties to it may file with the court a consent judgment or decree. The consent judgment or decree shall set out the alleged violations, future obligations of the parties, if any, damages, or other relief, the defendant agrees to make, if any, and the reasons for entering into the consent judgment or decree.

(b) A consent judgment or decree does not become final until 60 days from its filing. During the 60-day period an interested party may file verified exceptions to the form or substance of the consent judgment or decree, and the court, upon a full hearing on those exceptions, may approve or refuse to enter the consent judgment or decree.

§ 45.50.586. Judgment in favor of the state as evidence in another action

A final judgment rendered in a civil or criminal action brought by the state under AS 45.50.562 - 45.50.596 is prima facie evidence against the defendant in any other action under AS 45.50.562 - 45.50.596 brought by another party, or by the state, a city, a borough, or other governmental entity; however, this section does not apply to consent judgments or decrees entered under AS 45.50.584.

§ 45.50.588. Limitation of actions

An action to enforce a claim arising under AS 45.50.562 - 45.50.596 is barred unless commenced within four years after the claim accrues, except that when an action is brought by the attorney general under AS 45.50.562 - 45.50.596, the running of this period of limitation, with respect to every private right of action for damages that is based in whole or in part on a matter complained of in the action by the attorney general, shall be suspended during the pendency of the action brought by the attorney general. For the purpose of this section, a claim for a continuing violation is considered to accrue at any time during the period of the violation.

§ 45.50.590. Powers of the attorney general

If the attorney general determines, upon complaint or otherwise, that a person has engaged in, or engages in, or is about to engage in an act or practice prohibited or declared unlawful by AS 45.50.562 - 45.50.596, or that a person has assisted or participated in a plan, scheme, agreement, or combination of the nature described in AS 45.50.562 - 45.50.596, or when the attorney general believes it to be in the public interest, the attorney general may commence an investigation. The attorney general may compel production of documentary material and take testimony, under oath, before the institution of an action under AS 45.50.562 - 45.50.596.

§ 45.50.592. Investigatory demand for documentary evidence

(a) If the attorney general determines that a person is in possession, custody, or control of a documentary evidence, wherever situated, that the attorney general believes to be relevant to an investigation authorized in AS 45.50.590, the attorney general may execute in writing and cause to be served upon that person an investigative demand requiring the person to produce the documentary material and permit inspection and copying.

(b) Each demand must

(1) state the specific statute the alleged violation of which is under investigation, and the general subject matter of the investigation;

(2) describe, with reasonable specificity so as fairly to indicate the material demanded, the

documentary material to be produced;

(3) prescribe a return date within which the documentary material is to be produced; and

(4) identify the state employees or representatives to whom the documentary material is to be made available for inspection and copying.

(c) A demand may not

(1) require the production of documentary material that would be privileged from disclosure if demanded by a subpoena duces tecum issued by a court of the state; or

(2) contain a requirement that would be unreasonable or improper if contained in a subpoena duces tecum issued by a court of the state; however, this does not limit the power of the attorney general to require production of documents located outside the state that pertain to matters affecting the state.

(d) The demand may be served by the attorney general or the designee of the attorney general by

(1) delivering a copy of it to the person to be served, or, if the person is not a natural person, to an officer of the person to be served;

(2) delivering a copy of it to a place of business in the state of the person to be served; or

(3) mailing by registered or certified mail a copy of it addressed to the person to be served at a place of business in the state, or, if the person has no place of business in the state, to principal office or place of business of the person.

(e) Documentary material produced pursuant to a demand, or copies of it, unless otherwise ordered by a superior court for good cause shown, may not be produced for inspection or copying by, nor may its contents be disclosed to, anyone other than an authorized employee of the state without the consent of the person who produced the material. However, under those reasonable terms and conditions the attorney general prescribes, copies of the documentary material shall be available for inspection and copying by the person who produced the material or an authorized representative of that person. The attorney general, or a designee, may use copies of the documentary material as the attorney general or designee considers necessary in the enforcement of AS 45.50.562-45.50.598, including presentation before a court; however, material that contains trade secrets may not be presented except with the approval of the court in which the action is pending after adequate notice to the person furnishing the material.

(f) At any time before the return date specified in the demand, or within 20 days after the demand has been served, whichever period is shorter, a petition to extend the return date for, or to modify or set aside a demand issued under (a) of this section, stating good cause, may

be filed in the superior court for the judicial district where the parties reside. A petition by a person on whom a demand is served, stating good cause, to require the attorney general or another person to act in accordance with the requirements of (e) of this section, and all other petitions in connection with a demand, may be filed in the superior court for the judicial district in which the person on whom the demand is served resides.

(g) A person upon whom a demand is served under this section shall comply with the terms of the demand unless otherwise provided by an order of court issued in response to a petition filed under (f) of this section. A person who, with intent to avoid, prevent, or obstruct compliance, in whole or in part, with an investigative demand under this section, removes from any place, conceals, withholds, or destroys, mutilates, alters, or by any other means falsifies, a documentary material in the possession, custody, or control of a person which is the subject of a demand duly served upon any person, or who otherwise wilfully disobeys any such demand, is guilty of a misdemeanor, and is punishable upon conviction by a fine of not more than $5,000, or by imprisonment for a term of not more than one year, or by both. Failure of the state to serve the demand properly under (d) of this section is a defense to prosecution under this subsection, but invalidity of the demand under (b) or (c) of this section is not a defense, and that invalidity may be tested only in an action under (f) of this section to modify or set aside the demand.

(h) Nothing in this section impairs the authority of the attorney general or a designee to lay before a grand jury of this state evidence concerning a violation of AS 45.50.562 - 45.50.596, to invoke the power of a court to compel the production of evidence before a grand jury, or to file a civil complaint or criminal information alleging a violation of AS 45.50.562 - 45.50.596.

§ 45.50.594. Investigatory demand for attendance of witness

(a) In connection with an investigation authorized by AS 45.50.590, the attorney general may issue an investigative demand compelling the attendance of a person for examination under oath before the attorney general or before a court of record.

(b) Each demand shall

(1) state the specific statute the alleged violation of which is under investigation, and the general subject matter of the investigation;

(2) state the date, time, and place at which the examination is to take place.

(c) A demand may be served by the attorney general, or a designee, in accordance with the procedures prescribed in AS 45.50.592(d).

(d) If a person ordered to attend the inquiry fails to attend without good cause, the person is

guilty of a misdemeanor and upon conviction is punishable by a fine of not more than $5,000, or by imprisonment for not more than one year, or by both. If a person in attendance at the inquiry refuses to answer a question on the ground that the person may be incriminated by the answer, and if the attorney general, or a designee, in a writing directed to the person being questioned orders the person to answer the question, the person shall comply with the order. After complying, and if but for this section the person would have been privileged to withhold the answer given, the person may not be prosecuted for an offense or subjected to a penalty or forfeiture for or on account of a transaction, matter or thing concerning which the person gave evidence. However, the person may nevertheless be prosecuted or subjected to penalty or forfeiture for a perjury, false swearing, or contempt committed in answering or failing to answer. If a person refuses to testify after being granted immunity from prosecution and after being ordered to testify, the person may be adjudged in contempt and committed to jail until the time the person purges the contempt by testifying. A grant of immunity does not prevent the attorney general from instituting civil contempt proceedings against a person who violates any of the above provisions.

§ 45.50.596. Definitions

In AS 45.50.562 - 45.50.596,

(1) "asset" includes any property, tangible or intangible, real, personal, or mixed and wherever located, and any other thing of value;

(2) "documentary evidence" includes an original or copy of a book, record, report, memorandum, paper, communication, tabulation, map, chart, photograph, mechanical tabulation, magnetic tape, or other computer data storage system, or other tangible document or recording;

(3) "trade" and "commerce" include but are not limited to, trade in goods, merchandise, natural resources, whether or not severed, extracted, harvested, or produced, agricultural products, produce, choses in action, commodities, and any other article of commerce; they include trade or business in service trades, transportation, banking, lending, advertising, bonding, and any other business whether or not that business furnishes a personal service.

§ 45.50.598. Short title

AS 45.50.562--45.50.598 may be cited as the Alaska Restraint of Trade Act.

END OF DOCUMENT

Components of Delivered Fuel Prices in Alaska

prepared for
Alaska Energy Authority

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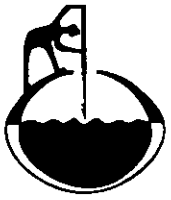

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Abstract

This is a systematic analysis of components of delivered fuel prices in Alaska. Data for the analysis include limited publicly available Alaska fuel prices (fall 2007 prices), as well as information the authors gathered from extensive interviews with fuel retailers and transporters, communities, and agencies. We identify the individual components of delivered fuel costs—including world price of crude oil, refining costs, transportation costs, storage and distribution costs, taxes and financing costs—and investigate how these factors influence the final retail prices of home heating fuel and gasoline. Transportation, storage, and distribution costs appear to be the most variable factors driving the large retail fuel price differentials among Alaska communities. Therefore, we investigate how factors such as seasonal icing, the number of fuel transfers enroute to specific communities, local storage and delivery infrastructure, marine and river characteristics, and distance from refineries or fuel hubs influence fuel prices. We did an in-depth analysis of how those factors influence prices in ten case study communities around the state—Allakaket/Alatna, Angoon, Bethel, Chitina, False Pass, Fort Yukon, Lime Village, Mountain Village, Unalakleet, and Yakutat. Together, the quantitative data and information on Alaska fuel logistics provide a comprehensive analysis of Alaska's fuel prices.

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Alaska Aerofuel, Inc.

Alaska Department of Commerce, Community and Economic Development

Alaska Energy Authority

Alaska Village Electric Cooperative

Angoon Oil and Gas

Azachorok Village Corporation in Mountain Village, Alaska

Brooks Fuel, Inc.

Chitina Native Corporation

Crowley Maritime Corporation

Everts Air Alaska

Fisher's Fuel Incorporated

City of Allakaket and Alatna

City of Mountain Village

Delta Western, Inc.

Denali Commission

Gwitchyaa Zhee Utility in Fort Yukon, Alaska

Henry Hill Services

Lime Village Traditional Council

Mark A. Foster and Associates

Norton Sound Economic Development Corporation

Osprey Lodge near Lime Village, Alaska

Peter Pan Seafoods in False Pass, Alaska

Petro Marine Services

Ruby Marine

Rural Alaska Fuel Services

Small Municipality Energy Assistance Program

Unalakleet Native Corporation

Contents

Tables and Figures

I. Introduction

Purpose

This study is a systematic analysis and comparison of the components of delivered fuel prices in Alaska. The Alaska Energy Authority asked the Institute of Social and Economic Research (ISER), at the University of Alaska Anchorage, to do the study. The more Alaskans know about what drives fuel prices in various communities, the more it may be possible to identify opportunities for reducing or mitigating the high fuel prices many Alaskans face.

The framework underlying the analysis is that the delivered *price* of fuel in Alaska communities equals the sum of the following components:

- World price of crude oil
- Refining cost (Alaska, West Coast, other)
- Transportation cost (truck, railroad, barge, air)
- Storage and distribution costs
- Taxes (federal, state and local)
- Other (including subsidies and abnormal profits)

This framework holds true if the final component, "other," is calculated as the residual between total price and everything else. But the framework also serves as a research hypothesis: that the "other" component is generally small and/or readily identifiable as a bona fide cost. In other words, *delivered prices* ought to reflect *identifiable costs*.

Methods and report organization

We initially gathered information—mostly from existing sources—for 100 communities in Alaska. But we found that information was neither reliable enough nor consistent enough to use for statistical analysis. We therefore focused on comparative case studies of ten communities, reflecting as much as possible all the forces driving fuel prices around Alaska. Figure 1 shows locations of the study communities:

- Angoon
- Allakaket/Alatna
- Bethel
- Chitina
- False Pass
- Fort Yukon
- Lime Village
- Mountain Village
- Unalakleet
- Yakutat

Figure 1. Map of ten case study communities

Source: Meghan Wilson, ISER, 2007

In the rest of this section we provide some background discussion of fuel pricing and consumption in a national context. Section II covers world oil markets. In Section III we describe the refining process and refinery sources for Alaska fuel; we also present a statistical analysis of the relationship between crude oil prices and refined fuel prices. Section IV addresses product transportation and distribution—how fuel is transported and who stores, owns, and distributes the final products. Section V covers taxes, including federal excise taxes and state and local taxes. Subsidies and assistance programs are discussed in Section VI. Section VII reports the findings from the ten case studies. Section VIII concludes with a summary and discussion of some policy implications.

Background

"Petroleum" refers to crude oil or the refined products obtained by processing crude oil. Those include gasoline, diesel fuel, and heating oil.[1] Petroleum products are used in virtually every aspect of modern human life—heating our homes and offices, generating electricity, providing fuel so we can drive to the grocery store. Petroleum products are also used in plastics, foods, and medicines; they are part of things as diverse as tires, deodorant and ink.

[1] For more information on the physical characteristics of petroleum products, see: U.S. Energy Information Administration, Energy Basics 101, Petroleum Basics 101.
http://www.eia.doe.gov/basics/petroleum_basics.html

Fuel oil (also often called diesel) is one of several products distilled from crude oil and used for heating fuel or engine fuel. Alaskans use a number of petroleum products, including motor gasoline, diesel fuel #1, diesel fuel #2, aviation gasoline, and jet fuel. Motor gasolines are used in automobiles, small boats, and snowmachines; there are typically three grades of gasoline available (mostly in larger communities in Alaska). Diesel fuel #1 is a kerosene product used for heating fuel. Diesel fuel #2 is a light gas-oil used for home and commercial heating and as a motor fuel. Aviation gasoline and jet fuel are used to fuel aircraft, but a type of jet fuel is also often used for home heating. According to Crowley Marine, one of Alaska's largest fuel distributors, most of the diesel fuel in more populated areas like Southcentral Alaska and Fairbanks is ultra low sulfur diesel. Most villages in Western Alaska still use low sulfur diesel, because they are exempt from the ultra low sulfur diesel requirement until 2011.[2]

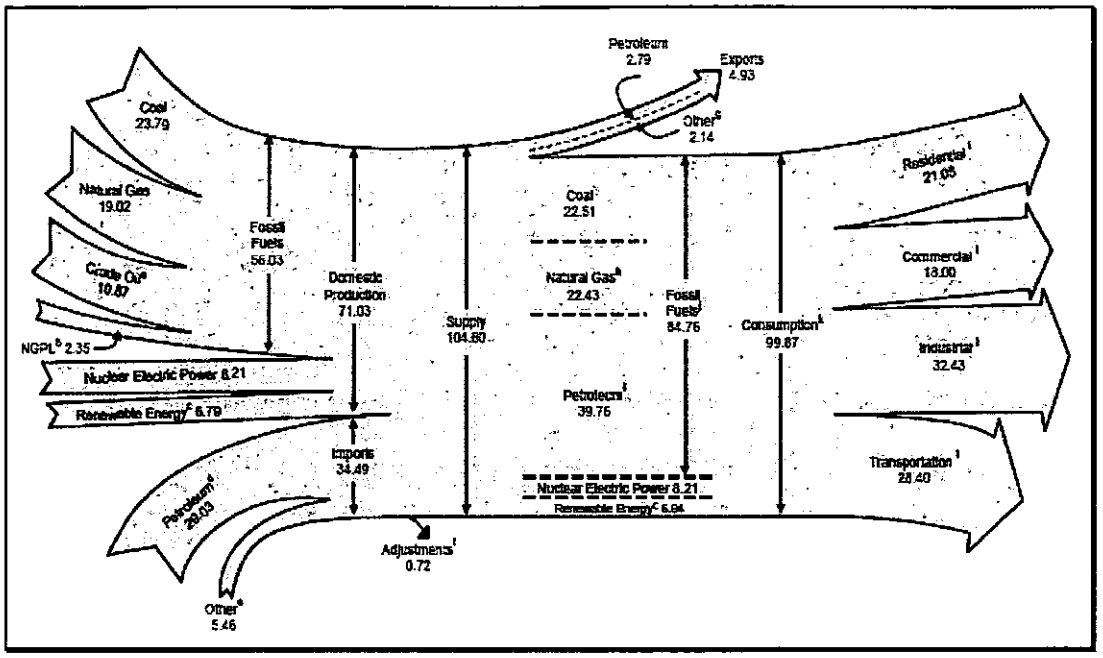
Alaska has the nation's highest per capita energy consumption, at 1,186 million Btu—almost four times the U.S. average of 342 million Btu—largely because so much jet fuel is consumed at the Anchorage and Fairbanks international airports.[3] Alaska produces more crude oil than any other state except Texas, but the prices of petroleum products in Alaska are among the highest in the country. According to state surveys, the average annual energy expenditure per household in rural Alaska is more than three times the U.S. average, while per capita income is less than 75% of the U.S. average. The burden of high energy prices falls particularly hard on remote communities, many of which also struggle with high unemployment, limited local economic bases, and local governments that are struggling to provide basic local services to residents and businesses.[4]

Fuel prices and components in the national context

Figure 2 illustrates the flow of energy (both domestic production and imports) through the U.S. economy, including final consumption by sector. Petroleum accounts for about 40% of total energy consumption.

[2] Phone Interview with Craig Tornga, Crowley Marine. October 24, 2007.
[3] Energy Information Administration, Annual Energy Review 2006. State-Level Energy Consumption, Expenditures and Prices, 2004.
[4] State of Alaska, Division of Community Advocacy – Report to the Commissioner. December 2005. Current Community Conditions: Fuel Prices across Alaska.

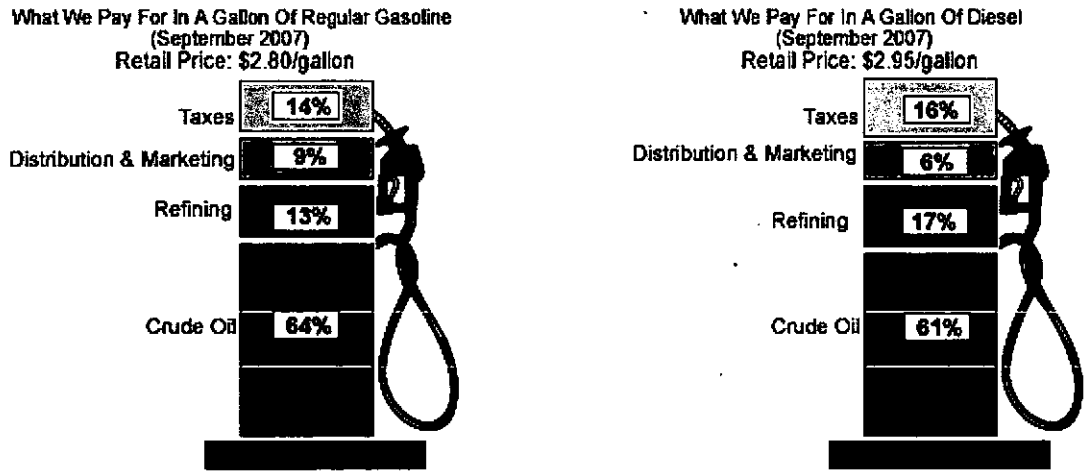
Figure 2. Energy flow through the U.S. in 2006 (Quadrillion Btu)



Source: Energy Information Administration, Annual Energy Review 2006

The Energy Information Administration has conducted research to determine the components of retail fuel prices. It believes the cost to produce and deliver fuel to consumers includes crude oil, refining, distribution and marketing, and taxes.[5] Figure 3 shows these components for gasoline and diesel prices as of September 2007.

Figure 3. Components of U.S. gasoline and diesel fuel prices, September 2007



Source: Energy Information Administration, Gasoline and Diesel Fuel Update.

[5] Energy Information Administration. Gasoline and Diesel Components. Gasoline Components History. 2006.

Crude oil prices are determined by worldwide supply and demand and are influenced by natural and political events that affect or potentially affect supplies. Consumption of and demand for crude oil products have increased, putting intense pressure on world crude oil supplies.

Refineries in the U.S. have operated at over 90% capacity during the last 10 years. The refining cost component is calculated by EIA as the difference between the monthly average of the spot price of gasoline or diesel fuel at the refinery and the average price of crude oil purchased by refiners.

Distribution and marketing costs include bulk storage, tanker truck transport, and retail sales operations (such as gas stations). In addition to seasonal shifts in demand caused by the winter heating season, retail fuel prices tend to rise with increasing distance between retail locations and distribution terminals and refineries. Areas farthest from the Gulf Coast, which is the source of nearly half the diesel fuel produced in the U.S., tend to have higher prices. Finally, the cost of doing business depends on location—including sources of supply, other competitors, and number of employees.[6] This component is calculated as the difference between the average retail price of gasoline or diesel fuel and the sum of the other three components (taxes, crude oil and refining).

Federal excise taxes were 18.4 cents per gallon on gasoline and 24.4 cents per gallon on diesel for motor fuel as of 2007, while state excise taxes averaged about 21.8 cents per gallon. Some states, counties, and cities levy additional taxes. Fuel oil used for home heating—which is also often called diesel and is virtually identical to diesel used for motor fuel—is exempt from federal and state taxes but is subject to local sales taxes.

The components of the cost of both gasoline and diesel have increased rapidly over the past few years. EIA statistics show that the prices of both diesel and gasoline doubled between 2002 and 2006. The broad pattern of component costs is similar for both fuels and both time periods. But the component breakdowns for these prices (Table 1 and Table 2) reveal some interesting possible trends. Costs of crude oil and refining made up larger percentages of the retail price in 2006 and taxes a smaller percentage. Distribution costs made up less of the retail price of gasoline but more of the price of diesel in 2006.

[6] EIA, 2006.

Table 1. Components of U.S. retail gasoline prices, 2002 and 2006

Month/Year	Retail Price (per gallon)	Refining (percentage)	Distribution and Marketing (percentage)	Taxes (percentage)	Crude Oil (percentage)
September 2002	$1.40	10.8%	12.6 %	30.0%	46.7%
September 2006	$2.80	12.8%	8.6%	14.2%	64.3%

Source: Energy Information Administration, Gasoline Components History.

Table 2. Components of U.S. retail diesel fuel prices, 2002 and 2006

Month/Year	Retail Price (per gallon)	Refining (percentage)	Distribution and Marketing (percentage)	Taxes (percentage)	Crude Oil (percentage)
September 2002	$1.41	12.0%	7.5 %	34.2%	46.3%
September 2006	$2.78	13.8%	15.2%	19.1%	51.9%

Source: Energy Information Administration, Diesel Components History.

II. Crude oil prices

World crude oil prices

- Crude oil is a global commodity and crude oil prices are determined by global supply and demand. Apart from an allowance for tanker transportation costs and quality differentials, it makes economic sense to speak of the world price of oil.
- The price of crude oil is one of the most significant factors determining the price of petroleum products. The prices of gasoline and diesel—and especially the *changes* in those prices—are largely determined by the worldwide demand for and supply of crude oil.
- World crude oil prices reflect the interactions of thousands of buyers and sellers, each with their own knowledge and expectations about the demand for and supply of crude oil and petroleum products. These interactions occur in both the physical and the futures markets, with the resulting prices reflecting both current and future expected supply and demand conditions.[7]
- Regional and local markets for refined products are also influenced by the level of competitiveness in these markets and the costs of distribution to end-users.

Petroleum products represent a critical source of fuel for the world's economy, with oil being the largest source of energy for the world economy. The value of crude oil is driven by demand for petroleum products, particularly for use in transportation. Petroleum products power most motor vehicles, aircraft, marine vessels, and trains worldwide. In total, products derived from oil, such as motor gasoline, jet fuel, diesel fuel, and heating oil, supply nearly 40 percent of the energy consumed by households, businesses, and manufacturers. Natural gas and coal, by comparison, each supply less than 25 percent of the world's energy needs.[8]

According to the American Petroleum Institute (API), current high world oil prices result from sustained, strong economic growth, notably including that in China. This economic growth resulted in stronger-than-anticipated global demand for these fuels, which reduced excess production capacity as well as the quality of the crude oil available in the marketplace. These changes in global supply and demand were compounded by unexpected losses in both crude oil production and refining capacity in the United States as a result of damage from hurricanes Katrina and Rita in 2005. Oil prices have risen sharply, particularly for better-quality crude oils. In summary, API attributes changes in world oil prices and subsequent prices of refined products to be driven largely by the forces of supply and demand.[9]

The Energy Information Administration (EIA) also attributes current oil prices and volatility to overall shifts in supply and demand, but to a number of specific international events as well. In 2000, real oil prices fluctuated between $20 and $30 per barrel (year 2006 dollars) and had been relatively stable since 1986 (Figure 4). The recession in the

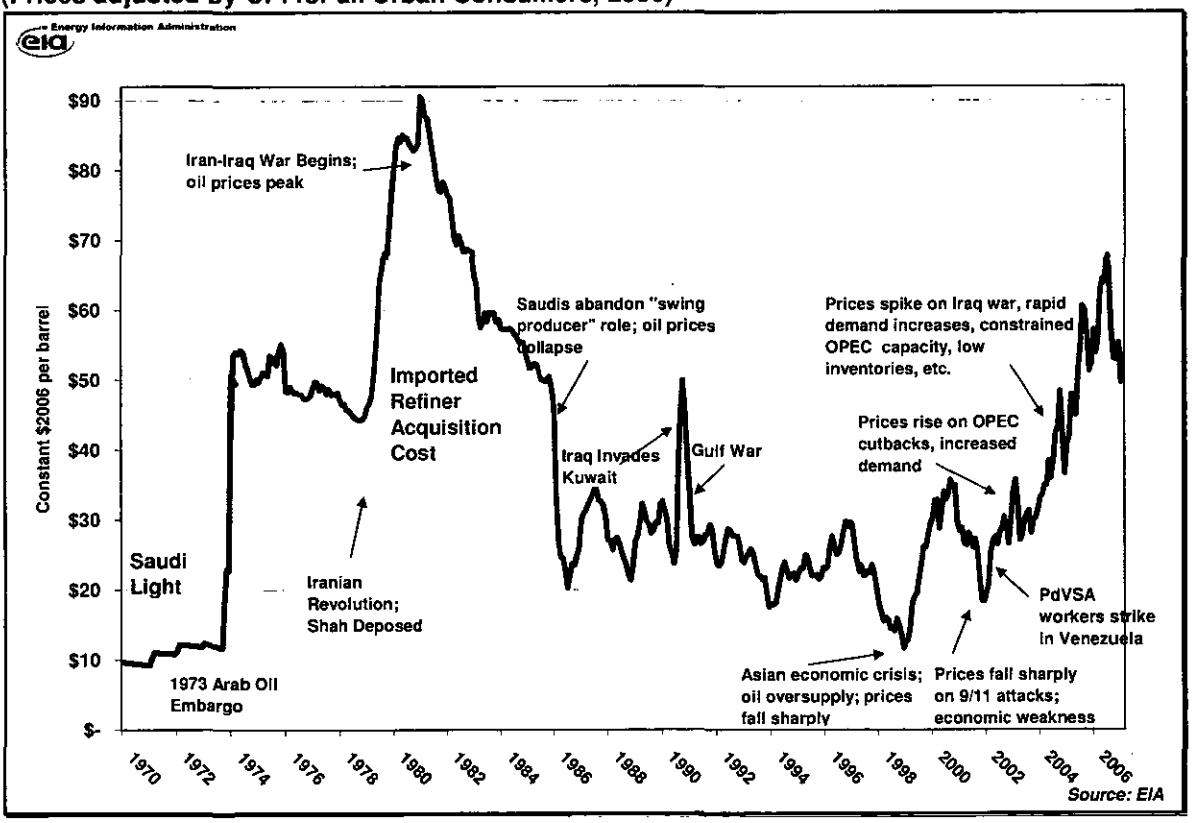
[7] Grant, Kenneth, 2006, et al., p. 2.
[8] U.S. Energy Information Administration, International Energy Outlook 2005, Table A2.
[9] Grant, 2006.

U.S. following the September 11, 2001 attacks reduced demand and caused oil prices to drop below $20 a barrel. In the following two years, however, the U.S. economy began to rebound, increasing energy demand and causing an upward trend in oil prices. The current upward trend of oil prices largely began in late 2003.

After the U.S. invaded Iraq, world oil prices began to escalate sharply. The war in Iraq proved to be more complicated than originally predicted, and energy market uncertainty was further exasperated in August 2003 when Iraqi insurgents began attacking an oil pipeline in northern Iraq.

In 2004, the price of oil reached $50 a barrel. In addition to the deteriorating security situation in Iraq and the regular attacks on pipelines, workers in oil-rich Nigeria launched a general strike to protest rising domestic fuel prices.

Figure 4. Major events and real world oil prices, 1970-2006
(Prices adjusted by CPI for all Urban Consumers, 2006)



By the end of 2005, oil prices hit $70 a barrel and then stabilized between $60 and $70. EIA blamed instability in Iraq, mounting ethnic unrest in Nigeria, concerns about Iran's nuclear program, and growing energy demand in China for the dramatic price increase. Contributing to rising oil prices was also Hurricane Katrina, which devastated the eastern coast of the Gulf of Mexico, damaging offshore oil rigs, disrupting supply, and affecting U.S. refining capacity.

These events were followed in 2006 by a number of other events—growing unrest in Iraq; Russia's temporary reduction of gas supplies to Europe; the threat of sanctions against Iran; an escalating ethnic insurgency in Nigeria's oil-producing region; a low-

scale war between Israel and Lebanon; an attack on Saudi Arabia's Abqaiq oil facilities; and a temporary shutdown of a section of the trans-Alaska oil pipeline. EIA cites all these events as contributing to 2006 oil prices of over $80 a barrel. During October 2007, oil prices reached record highs—tied to growing fears that Turkey would invade northern Iraq, the weak U.S. dollar, and impending increased winter demand for energy. Prices have continued up throughout the first half of 2008, rising above $130 a barrel.

OPEC (the Organization of Petroleum Exporting Countries) blames the spike on geopolitical developments and speculation and maintains there is no supply shortage and no reason to boost production—but as of fall 2007 it held out the possibility of meeting to discuss additional supply boosts.[10] Table 3 shows the volatility in world oil prices and markets during fall 2007. Monthly Alaska North Slope oil prices from 1988 to 2007 are shown in Table 4.

Despite these higher prices, the world economy grew in 2004 and 2005. A worldwide recession in response to high oil prices would have dampened price increases, but sustained economic growth fueled continued demand. With the current geopolitical outlook, world oil prices are likely to continue to rise.[11]

[10] Power and Interest News Report, 29 October 2007, "Record Oil Prices and Washington's Desire for Energy Independence".
[11] Power and Interest News Report, 09 August 2006, "Economic Brief: Alaska Pipeline Shutdown and the Rise of Oil Prices".

Table 3. World crude oil prices by location and type

(US dollars per barrel)

Crude Type	9/28/2007	10/5/2007	10/12/2007	10/19/2007	10/26/2007	11/2/2007
Total World	75.91	75.57	75.66	80.12	81.27	86.02
United States	73.50	73.65	73.39	77.84	79.47	83.69
OPEC* Average	76.52	76.18	76.22	80.58	81.62	86.47
Abu Dhabi, Murban 39º	79.40	78.53	78.88	82.17	83.52	87.98
Algeria, Saharan Blend 44º	80.09	79.80	79.65	84.67	85.49	91.12
Angola, Cabinda 32º	76.40	75.69	74.75	79.48	80.44	85.72
Dubai, Fateh 32º	75.61	74.00	73.92	77.23	78.90	83.22
Gabon, Mandji 30º	NA	NA	NA	NA	NA	NA
Indonesia, Minas 34º	79.08	80.95	80.83	84.74	86.98	92.34
Iran, Heavy 30º	75.37	74.68	74.41	78.43	79.40	84.89
Iran, Light 34º	76.91	76.23	76.03	80.13	81.10	86.59
Iraq, Kirkuk 36º	73.94	74.28	74.67	79.25	79.63	85.45
Kuwait, Kuwait 31º	73.97	72.88	72.85	76.19	77.72	82.40
Libya, Es Sider 37º	77.00	77.19	77.56	82.45	83.37	89.13
Neutral Zone, Khafji 28º	75.77	75.56	75.58	80.16	81.43	85.81
Nigeria, Bonny Light 37º	80.96	80.44	80.19	85.15	86.12	91.42
Nigeria, Forcados 31º	80.56	80.04	79.84	84.81	85.76	91.02
Qatar, Dukhan 40º	78.22	78.55	78.98	80.71	81.17	85.72
Saudi Arabia, Arabian Heavy 27º	73.12	72.46	72.48	77.06	78.33	82.41
Saudi Arabia, Arabian Light 34º	75.77	75.56	75.58	80.16	81.43	85.81
Saudi Arabia, Arabian Medium 31º	74.37	73.91	73.93	78.51	79.78	83.86
Venezeula, Bachaquero 17º	NA	NA	NA	NA	NA	NA
Venezeula, Bachaquero 24º	NA	NA	NA	NA	NA	NA
Venezuela, Tia Juana Light 31º	74.77	74.57	75.17	80.29	80.43	84.66
Non-OPEC* Average	75.18	74.85	74.99	79.59	80.85	85.48
Australia, Gippsland 42º	81.50	80.08	79.26	83.35	84.68	90.04
Cameroon, Kole 34º	76.16	76.58	76.55	81.78	81.59	87.30
Canada, Canadian Par 40º	80.89	80.61	77.71	81.99	85.48	88.30
Canada, Heavy Hardisty 22º	60.99	60.13	60.02	61.87	67.94	69.52
China, Daqing 33º	76.47	77.46	77.07	80.93	83.04	88.32
Colombia, Cano Limon 30º	77.51	76.64	77.10	82.38	83.53	87.78
Ecuador, Oriente 30º	67.56	67.18	67.53	72.79	74.02	77.98
Egypt, Suez Blend 33º	72.43	72.82	73.16	77.59	78.17	84.08
Gabon, Mandji 30º	NA	NA	NA	NA	NA	NA
Malaysia, Tapis Blend 44º	84.40	84.04	83.49	87.26	88.81	94.33
Mexico, Isthmus 33º	74.66	74.46	75.06	80.18	80.32	84.55
Mexico, Maya 22º	66.60	66.41	66.98	71.72	72.04	76.43
Norway, Ekofisk Blend 42º	79.20	79.26	79.23	84.32	84.92	90.44
Oman, Oman Blend 34º	75.63	74.45	74.47	77.84	79.23	83.28
Russia, Urals 32º	75.43	74.96	75.88	81.00	81.47	86.72
United Kingdom, Brent Blend 38º	77.96	78.07	78.66	83.61	84.14	89.40

Source: Energy Information Administration, November 2007.

See http://tonto.eia.doe.gov/dnav/pet/pet_pri_wco_k_w.htm for detailed information on price sources and definitions.

Last Updated 11/07/2007 - = No Data Reported; -- = Not Applicable; NA = Not Available; W = Withheld to avoid disclosure of individual company data. Degrees refer to specific weight and quality of crude.

Alaska crude oil prices

There is no price for Alaska crude oil on the New York Mercantile Exchange (NYMEX) or other commodity exchanges. The spot price of Alaska North Slope (ANS) crude oil is calculated by subtracting a market differential from the price of West Texas Intermediate (WTI) quoted on the NYMEX. Four different assessment services estimate that market differential and report a daily spot price for ANS.[12]

As can be seen in Table 4, month-to-month crude oil prices are volatile—monthly ANS West Coast prices ranged from $17.52 per barrel to $73.10 per barrel between 2002 and 2007 alone. But the trend has been up dramatically since 2002. As recently as December 1998, ANS prices dipped as low as $9.39.The 60-month moving average for the period from 1988 to 2007 was $42.62 per barrel.

Table 4. Alaska monthly crude oil prices, 1988 to 2007
($$ per barrel, nominal dollars)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1988	14.23	14.03	13.79	15.29	14.86	14.14	13.70	13.63	12.58	11.34	11.36	13.23
1989	15.11	15.99	17.25	19.37	17.64	17.00	16.78	16.04	16.62	17.27	17.49	19.07
1990	20.00	19.30	17.91	14.82	14.38	13.20	15.55	25.99	32.16	31.53	28.79	24.02
1991	20.57	15.74	17.02	17.56	16.67	16.36	17.25	17.18	17.37	18.47	17.57	14.83
1992	14.92	15.30	15.50	16.96	18.03	20.20	19.40	17.97	18.46	18.71	17.46	16.33
1993	15.62	16.78	17.35	18.17	17.47	16.02	14.84	15.42	14.98	15.39	13.07	10.29
1994	11.66	12.59	12.91	14.96	16.47	16.43	16.52	16.66	16.11	16.02	16.71	15.38
1995	16.16	17.14	17.31	18.36	18.43	17.43	16.23	16.72	16.65	15.96	15.88	16.94
1996	17.23	17.78	20.40	22.04	19.65	18.98	19.79	19.90	21.69	22.60	21.50	23.66
1997	23.57	21.03	20.07	18.54	19.41	17.30	17.48	17.98	18.09	19.59	18.33	16.39
1998	14.79	13.39	12.25	12.41	12.31	11.62	12.92	12.49	14.13	13.38	11.47	9.39
1999	10.69	10.43	13.07	15.64	15.86	15.82	18.16	20.08	22.96	21.83	23.65	24.54
2000	25.74	27.65	28.01	23.83	27.15	29.62	27.63	29.40	32.25	31.56	32.74	23.72
2001	24.37	26.02	24.70	25.55	26.70	25.82	24.60	24.12	23.21	19.45	17.23	16.69
2002	17.52	19.14	22.76	24.99	25.87	24.16	25.82	27.39	28.76	27.53	24.69	28.03
2003	31.91	35.20	32.59	25.59	26.19	29.35	29.17	30.22	27.09	28.55	29.11	30.67
2004	33.10	33.66	35.50	35.43	39.07	36.73	39.44	43.12	42.71	48.56	42.15	36.66
2005	41.12	43.59	50.63	49.75	46.77	53.67	56.67	62.40	63.47	60.37	56.11	57.17
2006	62.85	59.26	60.61	67.74	69.32	69.50	73.10	71.74	62.33	54.27	54.26	58.13
2007	51.52	57.00	59.01	63.92	64.76	69.11	75.93	73.83	79.72			

Source: Alaska Department of Revenue, Tax Division, November 2007,
http://www.tax.state.ak.us/programs/oil/prices/index.asp
Spot prices are unaudited and do not reflect Production Tax Settlement Values
Effective December 2003, the ANS west coast published price is the Department of Revenue's calculated ANS West Coast average spot price.

All of Alaska's oil production is delivered to refineries on the U.S. West Coast, including Alaska and Hawaii. Consequently, Alaska's royalty and production tax revenue depends in large part on the average market price of ANS crude oil at U.S. West Coast refining centers.

[12]Alaska Department of Revenue, Tax Division, Revenue Sources Book, 2007, p. 10.

III. Refining

Crude oil has to be refined to extract useful products. This section describes the refining process and the types of petroleum products produced; provides a list of the refineries that supply Alaska markets; examines the relationship between crude oil prices and refined product prices, including a comparison of refined product prices from different refineries; and describes some of the sources of refined petroleum product prices.

Refining process

Crude oil is a mixture of hydrocarbons that exists in liquid form in underground reservoirs. It may also include small amounts of gaseous hydrocarbons that are liquefied upon extraction, and some non-hydrocarbons such as sulfur and various metals.

Refining is the process of converting crude oil into various marketable petroleum products by separating component hydrocarbons. It can also involve chemical reactions and the blending of components and additives. The separation of hydrocarbons is most commonly achieved by fractional distillation. Fractional distillation is the process of heating a mixture to separate it into its component parts (fractions), each of which has a different boiling point. The mixture is boiled, transforming its components into vapor. Beyond the chamber in which the mixture is boiled is a distillation column with outlets at different heights, corresponding to where each fraction condenses after it rises and cools. The heavier fractions (those with higher boiling points) condense lower in the column, while the lighter fractions (those with lower boiling points) condense higher in the column. After condensation, the fractions exit the column in liquid form, each through a different outlet.

Types of refined petroleum products

After isolation, the various hydrocarbons may be mixed to produce a number of petroleum products, including motor gasoline, aviation gasoline, jet fuels, #1 distillate, #2 distillate, and asphalt, among many other potential products. Motor and aviation gasoline are difficult to produce and require complex refining equipment. Common petroleum products include:

- **Motor gasoline** is the type of fuel used in most vehicles with internal combustion engines. The production of the various grades of gasoline is complex, compared with other types of fuel, and requires expensive and sophisticated equipment. One 42-gallon barrel of crude oil produces about 20 gallons of gasoline.[13]
- **Aviation gasoline** is used in aircraft with reciprocating engines. It is subject to especially stringent specifications.[14]
- **Jet fuel** is a kerosene-based fuel used in aircraft with turbine engines. The two main types are Jet A and Jet B, which have the corresponding military designations JP-5 and JP-4. Jet-A is often sold in Alaska as fuel oil/heating oil at

[13] U.S. Energy Information Administration

[14] Keiser, Gretchen and Teal, David, House Research Agency, Alaska State Legislature. Fuel Consumption and Pricing in Alaska: A Regional Analysis. January 1984.

the price of #2 fuel oil. One reason why it is sometimes sold for heating fuel is that it has a low pour point—meaning that it won't gel until it reaches a very low temperature.[15]

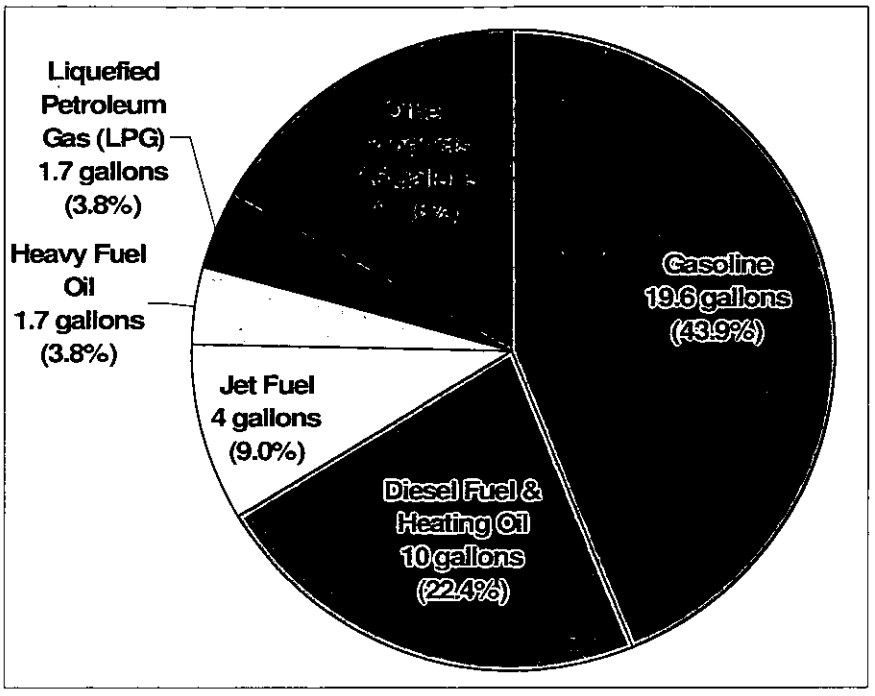
- **#1 distillate** can be used as fuel oil/heating oil or as a diesel fuel for high-speed diesel engines that operate at frequently changing speeds, such as city buses.[16] It is available at various sulfur levels: high sulfur, low sulfur, and ultra low sulfur.
- **#2 distillate** can be used as fuel oil/heating oil or as a diesel fuel for high-speed diesel engines operating at relatively constant speeds and loads—like locomotives. It must meet different specifications, depending on how it's used. It's available in various sulfur levels: high sulfur, low sulfur, and ultra low sulfur.

Figure 5 shows, in broad categories, how much of each type of product is extracted from a barrel of crude oil. You may note that while a barrel contains 42 gallons of crude oil, the total output volume of refined product according to this figure is 44.6 gallons. This chart is based on data from the Energy Information Administration. Another source, the California Energy Commission, gives 48.43 gallons as the total output volume, on average, from a barrel of crude. This increase is called *processing gain*, and is due to the addition of various additives, such as alkylates. Also worth noting is that the latter source gives 51.4% as the percentage of output that is gasoline, rather than the 43.9% indicated by the EIA numbers. This is due partly to the addition of ethanol to gasoline at a level of 5.7% by volume, as required in California, which brings the total output volume up to 49.59 gallons for California refineries.

[15] Communications with Craig Torgen at Crowley Maritime Corporation, October 2007. Also, Alaska Department of Environmental Conservation, Division of Air Quality. http://www.dec.state.ak.us/AIR/anpms/as/ulsd/ulsd-bkgrd.htm

[16] EIA, 2007.

Figure 5. Quantity of refined products yielded from one barrel of crude oil



Source: U.S. Energy Information Administration

Diesel fuel sulfur content regulations

Diesel fuels are subject to new regulations regarding sulfur content. The U.S. Environmental Protection Agency (EPA) finalized the Highway Diesel Rule in January 2001, and the Non-road Diesel Rule in June 2004, mandating the use of cleaner-burning ultra-low-sulfur diesel (ULSD)—diesel with no higher than 15 ppm sulfur content), for road and non-road uses, respectively. This cleaner-burning fuel, along with new equipment on tailpipes and exhaust stacks that require it, will "dramatically reduce particulate matter and nitrogen oxides in diesel exhaust."[17] The Highway Diesel Rule took effect in 2006, and the Non-road Diesel Rule in 2007. However, because of the unique characteristics of rural Alaska, including its geography, economy, air quality, and distribution challenges, the effective dates were extended for rural areas of the state. They will be allowed to use diesel with uncontrolled sulfur content for all uses until 2010 beginning the transition to ultra-low-sulfur diesel on January , and finishing by December 1, 2010. Urban areas of Alaska (those served by the Federal Aid Highway System) were required to adhere to the same implementation schedule as the other states.[18]

The ULSD regulations do not apply directly to fuel used for home heating or jet fuel.[19] However, there will be indirect effects on heating fuel prices, because most fuel used for heating will probably be ULSD. That's because for many communities, it would be impractical to separately store both a less expensive type of fuel to use for heating (higher

[17] Alaska Department of Environmental Conservation (DEC), Division of Air Quality. http://www.dec.state.ak.us/AIR/anpms/as/ulsd/ulsd-bkgrd.htm
[18] EPA. http://www.epa.gov/otaq/regs/fuels/diesel/420f06040.htm
[19] DEC. http://www.dec.state.ak.us/AIR/anpms/as/ulsd/ulsd-bkgrd.htm

sulfur Jet A, #1 fuel oil, #2 fuel oil) as well as ULSD for other purposes—so they will have to use only ULSD. According to the Alaska Department of Environmental Conservation (DEC), "The fuel storage and distribution infrastructure in rural Alaska is designed to handle a single grade of diesel fuel." In some communities, especially hub communities, there will be enough demand for Jet A for turboprop and turbojet aircraft that it may be purchased in large enough quantities to use for home heating as well.

The transition to ULSD will mean higher diesel and heating fuel prices for Alaska communities. It will also increase the cost of diesel-generated electricity, both because of the more expensive fuel and the more expensive equipment that will also be required by the regulations.

Sources of refined petroleum products sold in Alaska

Petroleum products consumed in Alaska come from refineries in Alaska and, to a smaller extent, out-of-state refineries. Table 5 lists Alaska's six refineries, along with their capacity, measured in barrels of crude oil input per day.

Table 5. Alaska petroleum refineries

	Total input capacity as of Jan. 1, 2007 (barrels/day)
Flint Hills Resources Alaska LLC (North Pole)	210,000
Tesoro Petroleum Corp. (Nikiski/Kenai)	72,000
Petro Star Inc. (Valdez)	48,000
Petro Star Inc. (North Pole)	17,500
ConocoPhillips Alaska Inc. (Kuparuk)	15,000
BP Exploration Alaska Inc. (Prudhoe Bay)	12,500
Total	375,000

Source: U.S. Energy Information Administration

Alaska crude oil production in 2006 was 741,000 barrels per day,[20] about twice the total input capacity of Alaska refineries. Also, Alaska refineries aren't currently producing at full capacity. Estimated total production from the Flint Hills, Tesoro, and Petro Star refineries in early 2008 was roughly 127,000 barrels per day.

The Flint Hills refinery in North Pole was originally built by Mapco in 1977 to coincide with the completion of the trans-Alaska oil pipeline and taps directly into the pipeline.[21] The refinery is the largest in Alaska with a current capacity of 210,000 barrels per day—more than half Alaska's total refinery capacity and more than three times the capacity of Tesoro's refinery in Nikiski. Flint Hills acquired the refinery in 2004. It produces gasoline, jet fuel, heating oil, diesel, gasoil, and asphalt. About 60 percent of its output is sold in the aviation market. It has terminals in Anchorage, to which fuel is transported by rail, and Fairbanks, to which fuel is transported by truck.[22]

[20] EIA. http://tonto.eia.doe.gov/dnav/pet/hist/mcrfpak1A.htm
[21] Keiser & Teal, 1984.
[22] EIA and Flint Hills Resources website, http://www.fhr.com/alaska/

A second refinery in North Pole along the oil pipeline was built by Petro Star in 1983. This refinery has a capacity of 17,500 barrels per day and produces commercial and military jet fuel, kerosene, diesel, and heating oil. Petro Star is owned by Arctic Slope Regional Corporation. It distributes its products to communities, military bases, and commercial customers in the Interior and the North Slope.[23]

Petro Star built another, larger refinery in Valdez that began operation in 1993. That refinery has a capacity of 48,000 barrels per day and produces commercial jet fuel, military JP-8 and JP-5 jet fuel, marine diesel, heating oil, and turbine fuel. Its primary market is in fuel for military and commercial aviation.

The Tesoro refinery in Nikiski was built in 1969 and was the second refinery built in Alaska, after Chevron's Nikiski refinery was built in 1963.[24] Chevron closed its refinery in 1991 due to "eroding profit margins and increasing liability risks."[25] These refineries were built to process crude oil discovered in Cook Inlet in 1957. The Tesoro refinery currently has a capacity of 72,000 barrels per day, making it the second largest refinery in Alaska.[26] With the completion of a diesel de-sulfurizer unit in May 2007, Tesoro became the first producer of ultra-low-sulfur diesel in Alaska. The unit has a capacity of 10,000 barrels per day.[27]

The ConocoPhillips refinery in Kuparuk and the BP refinery in Prudhoe Bay are topping plants that supply fuel to meet the North Slope oil producers' own needs and do not sell to the general public. ConocoPhillips recently cancelled a $300 million upgrade to its refinery that would enable the production of ultra-low-sulfur diesel, citing a lack of tax breaks under the new Alaska oil tax rules.[28]

Most of the fuel distributed to rural Alaska communities is produced by Alaska refineries, the exception being communities in Southeast Alaska, which receive a significant share of their fuel from refineries in Washington. Fuel distributed to Alaska customers in general also occasionally comes from refineries in Anacortes, Washington, and even places as distant as Korea and Russia. However, the cost of transporting the fuel over such long distances is usually greater than any savings from purchasing it from out-of-state refineries. For example, since 1983, adjusting for inflation, the average Alaska wholesale price for #2 distillate was only 4.4% higher than the average Washington price. Since 2000, the Alaska average was only 0.5% higher.[29] Table 6 ranks average wholesale prices for #2 distillate by region from 2000 to 2007.

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[23] EIA and Petro Star, Inc. website, http://www.petrostar.com/
[24] Keiser & Teal, 1984.
[25] Richardson, Jeffrey. Alaska Business Monthly. *Refining rivalry.* June 1, 1991. http://www.allbusiness.com/north-america/united-states-alaska/165637-1.html
[26] EIA, 2007.
[27] Tesoro Corporation website. http://www.tsocorp.com
[28] Loy, Wesley. Anchorage Daily News. *Conoco cancels refinery upgrade on North Slope.* November 27, 2007.
[29] EIA, 2007.

Table 6. Average wholesale #2 price from refiners by region, 2000-2007 (in 2007 dollars)

Region	#2 price	% U.S.
Rocky Mountain (PADD 4)	$ 1.454	108.3%
West Coast (PADD 5)	$ 1.425	106.1%
Alaska	$ 1.418	105.6%
Washington	$ 1.412	105.1%
Midwest (PADD 2)	$ 1.361	101.4%
U.S.	$ 1.343	100.0%
East Coast (PADD 1)	$ 1.316	98.0%
Gulf Coast (PADD 3)	$ 1.298	96.7%

Source: U.S. Energy Information Administration

There are two refineries in Anacortes: Shell Oil Products U.S., with a capacity of 145,000 barrels per day of crude oil input, and Tesoro West Coast, with a capacity of 120,000 barrels per day, for a total of 265,000 barrels per day (bpd).[30] South Korea, while it produces no crude oil, has a total refinery capacity of 2,577,000 barrels per day, ranking it fifth in the world. North Korea has a capacity of 71,000 bpd. Russia has a total refinery capacity of 5,339,000 bpd, ranking it second in the world. The U.S. ranks first, with a total capacity of 17,397,000 bpd.[31]

Relationship between crude oil prices and refined product prices

In addition to the Energy Information Administration (EIA), the Oil Price Information Service (OPIS) provides petroleum product price information for various locations around the world. OPIS prices are often used as a benchmark price for fuel suppliers when making price quotes. When a fuel supplier quotes a price to a community, this price is typically based on an OPIS price for the day of the quote, plus an additional amount to cover the service of handling and transporting the fuel, although often only a single quoted amount (the sum) is provided.[32]

The price data from EIA used in the analysis below comes from Form EIA-782A, *Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report.* These data differ from the OPIS price data in several ways. The purpose of the EIA-782 survey, according to EIA, is to collect data "to fulfill legislative mandates from Congress and to provide comprehensive information for evaluating market behavior." OPIS is privately owned and is a paid subscription service, with historical data available for a fee, while EIA current and historical data is freely available to the public.

While EIA has broader coverage (the information is collected from a census of refiners, while OPIS data is collected from a sample), OPIS has much more detail and is a "real-time" service that serves a different purpose. OPIS updates prices daily, while EIA updates its data on a monthly basis. OPIS provides data by city, while EIA provides data by region (Petroleum Administration for Defense District, or PADD) and in some cases

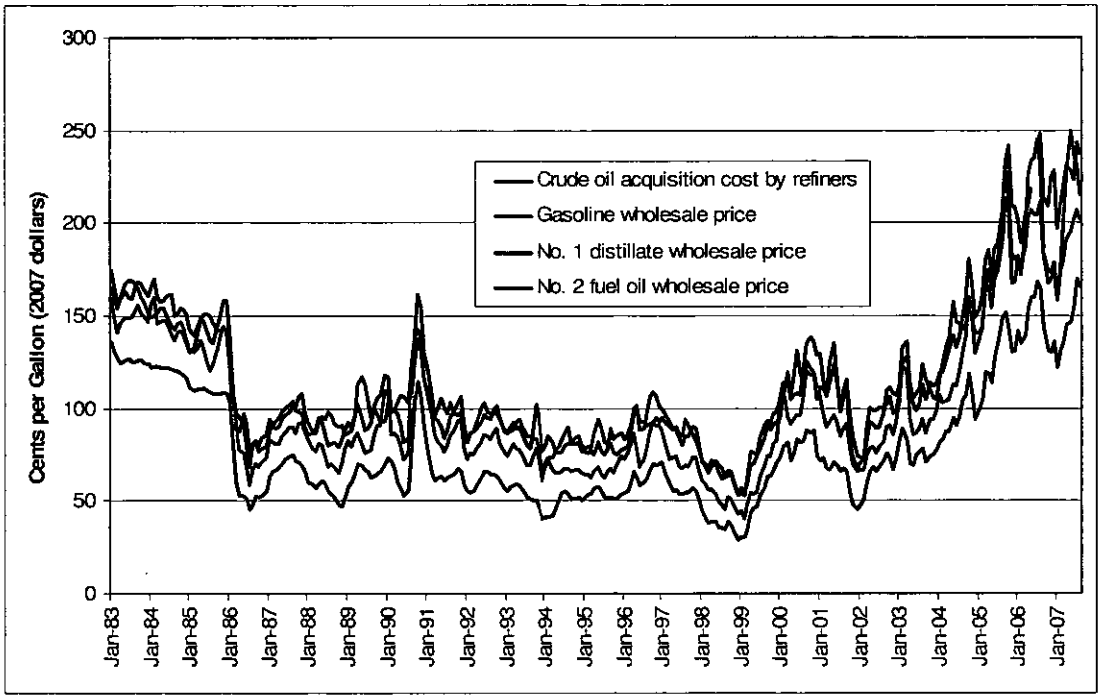
[30] EIA, 2007.
[31] EIA. Country Energy Profiles. http://tonto.eia.doe.gov/country/index.cfm
[32] Personal communications with Crowley and Matt Sweetsir at Ruby Marine, October 2007

by state. OPIS also takes into account many variables that define specific types of fuel, to break fuel out into more subcategories.

There are a number of other differences between OPIS and the EIA-782 methodologies and purposes, but the prices they report track each other closely.[33] EIA price data are used in this analysis because of the free availability of historical prices, accessible and comprehensive documentation, and less complex categorization of fuel types.

Figure 6 and Figure 7 show the relationship of refiner acquisition cost of crude oil[34] and refinery wholesale prices. Numbers are adjusted for inflation to 2007 dollars. The rapid increase in prices in the past few years is clearly visible, as is the close relationship of crude oil prices to the prices of refined petroleum products. The difference between the cost of crude oil and the wholesale price of the product is mostly constant, rather than a percentage.

Figure 6. U.S. crude oil acquisition cost and wholesale fuel prices

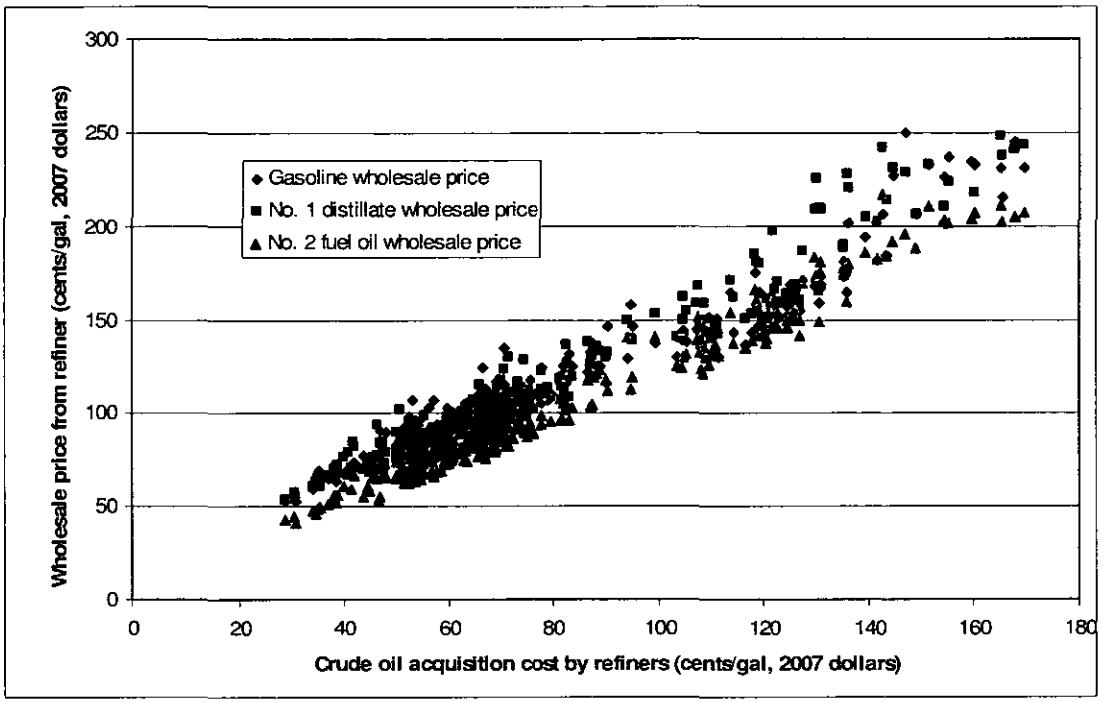


Source: U.S. Energy Information Administration

[33] Bournazian, Jacob. EIA. Comparison *of Selected EIA-782 Data with other Data Sources.* June 23, 2004. http://www.eia.doe.gov/pub/oil_gas/petroleum/feature_articles/2004/comparison782/comparison782.htm

[34] The EIA's definition of "refiner acquisition cost of crude oil" is "The cost of crude oil, including transportation and other fees paid by the refiner. The refiner acquisition cost does not include the cost of crude oil purchased for the Strategic Petroleum Reserve (SPR)." The EIA provides costs for domestic and imported oil, as well as a composite cost. The composite cost is shown here.

Figure 7. U.S. crude oil acquisition cost vs. wholesale fuel prices



Source: U.S. Energy Information Administration

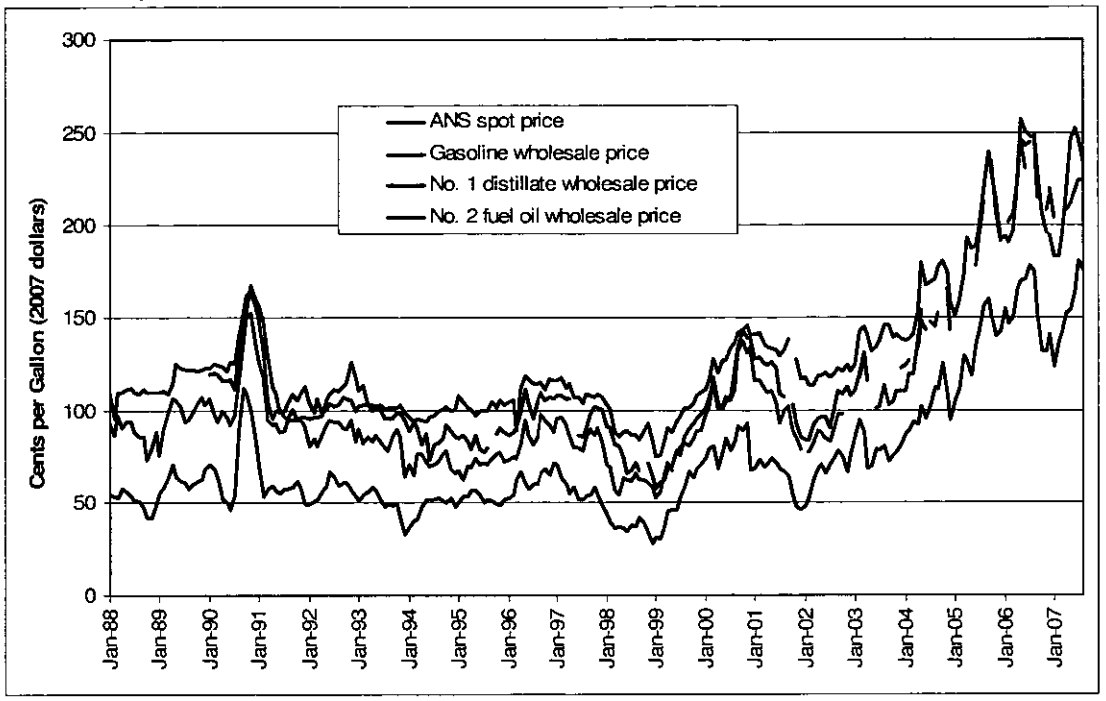
From these figures, it appears that the primary source of variance in the prices at which refineries sell their products is the cost of their crude oil feedstock. Linear regression results over the monthly data points for gasoline, #1 distillate and #2 fuel oil, shown in Table 7, seem to confirm this tight relationship. The regression uses refiner acquisition cost, in cents per gallon, as the independent variable.

Table 7. Results of regression of wholesale fuel prices on crude oil acquisition cost (U.S. refiners)

Fuel type	Slope	p-value	Intercept	p-value	R-squared
Gasoline	1.190	0.000	20.229	0.000	0.938
No. 1	1.317	0.000	12.855	0.000	0.943
No. 2	1.224	0.000	4.984	0.000	0.965

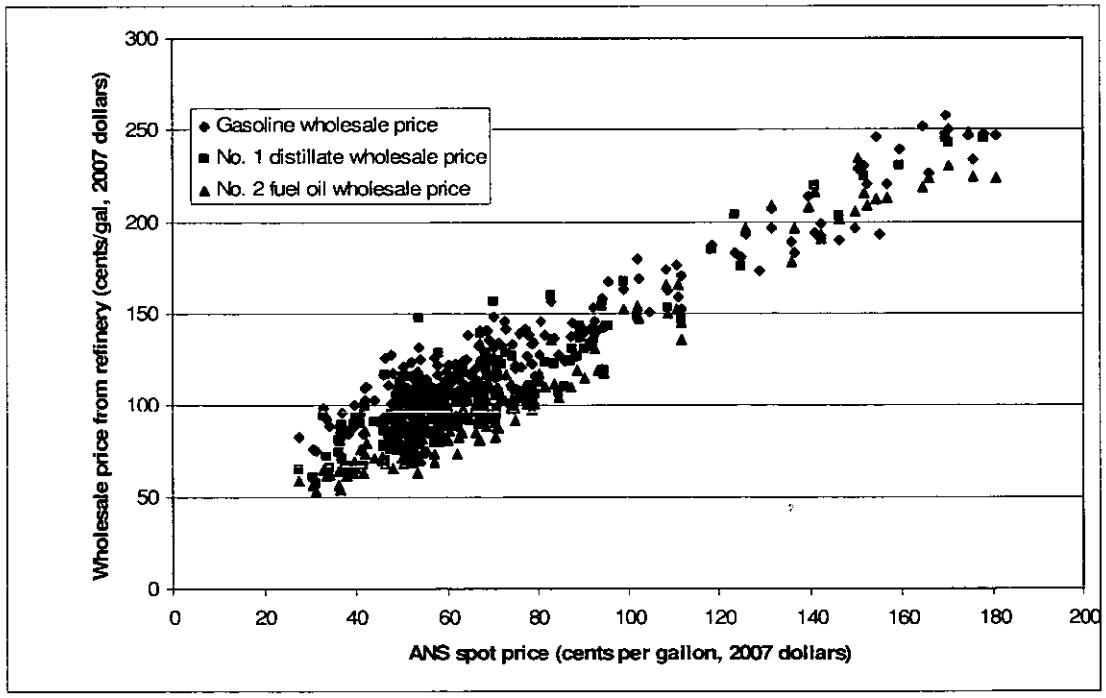
Figure 8 and Figure 9 show a similar relationship between Alaska North Slope (ANS) crude oil prices and wholesale prices from Alaska refineries. Here, the ANS spot price was used instead of the refiner acquisition cost of crude oil, which was unavailable from EIA for Alaska refineries before 2004.

Figure 8. Alaska North Slope crude oil spot price and Alaska wholesale fuel prices



Sources: Alaska Tax Division (ANS spot price), U.S. Energy Information Administration

Figure 9. Alaska North Slope crude oil spot price vs. Alaska wholesale fuel price



Sources: Alaska Tax Division (ANS spot price), U.S. Energy Information Administration

Table 8 shows the regression results (ANS spot price per gallon is the independent variable). Again, the results show a strong correlation between crude oil prices and refined product prices.

Table 8. Results of regression of wholesale fuel prices on Alaska North Slope spot price (Alaska refiners)

Fuel type	Slope	p-value	Intercept	p-value	R-squared
Gasoline	1.107	0.000	47.143	0.000	0.929
No. 1	1.193	0.000	30.401	0.000	0.849
No. 2	1.269	0.000	14.841	0.000	0.940

IV. Fuel Product Transportation

Fuel products in Alaska are transported in various ways, both from refineries to fuel terminals and from terminals to communities. Fuel is usually stored in communities before distribution to residents and businesses. This chapter describes fuel transportation (truck, barge, airplane), as well as storage and distribution methods, including how characteristics of each method influence fuel prices.

Refineries in Nikiski, Valdez, and North Pole make petroleum products that supply most of the Alaska market. (As discussed earlier, some products for Alaska also come from out-of-state refineries). Communities that are road accessible or connected via pipelines or railroad to these in-state refineries have lower costs of transportation than more remote locations. Anchorage is connected by pipeline and road to the refineries in Nikiski; Fairbanks is only a short truck trip from the North Pole refineries. In contrast, other Alaska communities are in remote locations, many without highway access and some even lacking navigable waterways. Transporting fuel to such communities is more complex and risky, and thus, more expensive. The widely differing circumstances of Alaska communities create widely varying fuel prices.

Refinery to terminals

The Tesoro refinery in Nikiski is able to ship refined product directly from its fuel terminal in Nikiski. It also transports refined product in a 72-mile long pipeline to Ted Stevens Anchorage International Airport and to its fuel terminal at the Port of Anchorage. From the Anchorage fuel terminal, heating fuel can be trucked to homes or regional fuel hubs. Gasoline is also trucked from the fuel terminal to gas stations.

Fuel from the Flint Hills refinery in North Pole is either trucked to the fuel terminal in Nenana, to be barged to communities on the Yukon River; trucked to Fairbanks and other neighboring communities; or carried on the Alaska Railroad to the fuel terminal at the Port of Anchorage. Most of the refined fuel that comes by rail to Anchorage from North Pole is jet fuel used at Ted Stevens International Airport.

The Valdez Petro Star refinery ships its fuel directly out of the Port of Valdez. Most of the refined fuel produced at the Petro Star refinery in North Pole is directly transported to Eielson Air Force base or nearby communities.

Table 9 summarizes the imports and outputs of refined petroleum products for the region's fuel terminals and fuel hubs. Fuel refined in Tesoro's Nikiski plant is shipped directly from the Nikiski Port, as well as piped to Anchorage where it is shipped from the Port of Anchorage.

Table 9. Shipments received and shipped from major fuel hubs and refineries (in gallons [1])

Community		Received[3]	Shipped[3]
Anchorage	Gasoline	165,901,639	134,426,230
	Distillate[4]	2,816,901	45,633,803
Valdez	Gasoline	327,869	82,950,820
	Distillate[4]	-	14,366,197
Ketchikan	Gasoline	18,032,787	12,459,016
	Distillate[4]	8,450,704	15,492,958
Nikiski[2]	Gasoline	-	213,442,623
	Distillate[4]	-	289,295,775
Dutch Harbor	Gasoline	21,967,213	5,245,902
	Distillate[4]	44,788,732	9,014,085
Juneau	Gasoline	18,360,656	655,738
	Distillate[4]	11,549,296	845,070

(1) Corps of Engineer data is reported in short tons. Gallon conversions assume gasoline weight of 6.1 pounds per gallon and distillate weight of 7.1 pounds per gallon.
(2) Assumes all fuel is shipped out of Nikiski and none is imported.
(3) ISER calculations to summarize in and outbound shipments.
(4) Distillates are primarily diesel #1 and #2.
Sources: U.S. Army Corps of Engineers, Waterborne Commerce Statistics, Pacific Coast, Alaska and Hawaii; ISER calculations. Bethel is also a major western Alaska fuel depot, but it is not shown here because shipments in and out are not segregated in Corps of Engineer data.

Refinery and terminals to communities

Truck

Of the most common methods of transporting fuel in Alaska, trucking is the least expensive and complex. All Alaska communities on the road system have fuel delivered by truck. Gasoline is generally delivered directly to gas stations. Heating fuel is delivered from the refinery to regional fuel hubs for distribution or by distributors directly to homes from refineries.

The transportation cost per gallon of fuel trucked is determined by the distance and the quantity of fuel delivered. Delivery prices vary with the quantity of fuel shipped because most of the delivery costs are fixed, regardless of the amount of fuel carried. So larger communities can order more fuel at a time, reducing delivery charges per gallon.

Having road access also lowers fuel costs, because communities have year-round access to fuel. Even the smallest road communities generally receive at least weekly fuel shipments. This reduces fuel storage and inventory costs.

Barge

Barging fuel to Alaska communities is an expensive, complex, and risky endeavor. Fuel transporters face a different set of delivery challenges and costs for each community. Thee are few fuel transport companies with the experience and capital needed to successfully deliver fuel to remote areas in Alaska. In addition to overcoming the physical challenges of barging fuel to Alaska communities, fuel transporters must correctly price their fuel transportation charges to fully recover the cost of delivery.

Barge Transportation Regions

For this analysis we divided Alaska into five regions: ice-free southern coast, Kuskokwim River, Yukon River, Northwest and Kobuk River, and Arctic. All these regions have some common factors that influence the cost of fuel delivery.

Ice-Free Southern Coast

This region extends from Southeast Alaska, along the Gulf of Alaska and out the Aleutian Island chain. The defining characteristic of this region is that it is ice-free year round and the communities are coastal. These characteristics allow year-round delivery of fuel. Crowley, Delta Western, and Petro Marine Services deliver fuel in this region.

Fuel for this region may be shipped from refineries in Valdez or Nikiski; from the fuel terminal at the Port of Anchorage; or from refineries in Washington or California. It is either shipped directly to communities or to larger hub communities, where it is reloaded onto smaller barges. Sometimes fuel will be lightered directly off the barge into a smaller barge for delivery to a community, thus bypassing the fuel hub.

Kuskokwim River

The Kuskokwim River Region includes all the communities on the Kuskokwim River and its tributaries, as well as coastal communities near the mouth of the river. Bethel serves as the regional hub, and almost all fuel delivered to the region is at least temporarily stored in Bethel. Fuel from Bethel storage tanks must be loaded into smaller barges to navigate the Kuskokwim River upstream of Bethel. Approximately four million gallons of fuel are shipped out of Bethel each year.

Fuel for this region is transported from Anchorage on large barges and must be lightered before being unloaded at the Bethel fuel depot. Once at the Bethel depot, the fuel is loaded onto barges for delivery upstream or to surrounding coastal communities. Both Crowley and Delta Western have tank farms in Bethel and deliver fuel to the surrounding areas.

Seasonal icing and the need to deliver all fuel into storage tanks in Bethel increases transportation costs for the Kuskokwim River and surrounding area—because the fuel has to be loaded and unloaded more times. Many of the communities that receive fuel from Bethel are located in remote locations on the Bering Sea coast or on tributaries of the Kuskokwim River. Barging fuel to these locations takes longer and includes additional risks. Bethel's distance from its primary fuel supply terminals in Cook Inlet also increases the cost of delivered fuel.

Yukon River

Nenana serves as the fuel hub for the Yukon River. Fuel arrives at the Nenana hub from refineries in North Pole, or is carried from Anchorage on the Alaska Railroad or by truck. From Nenana, fuel is barged both upstream as far as Fort Yukon and downstream to the mouth of the Yukon River. Crowley is the dominant fuel transporter in the region. Recently, Ruby Marine started competing on a small scale with Crowley.

Occasionally fuel is shipped from the mouth of the Yukon from the Bethel or Nome fuel hubs. Generally the more direct route from the Nenana fuel terminal is less costly, even for communities near the mouth of the Yukon.

Many communities served by the fuel terminal in Nenana are on smaller tributaries of the Yukon River that are remote and present navigational hazards. The difficulty of accessing many of these communities, the varying conditions of marine headers and moorage, and seasonal icing all affect the price of delivered fuel to the Yukon River region.

Northwest and Kobuk River

This region is defined as the area served by fuel hubs in Kotzebue and Nome and consists of Norton Sound, Kotzebue Sound and the Kobuk River. Nome's port can accommodate large barges and does not require lighterage, while Kotzebue's port is shallow and does require fuel lightering.

Kotzebue is the fuel hub for communities on the Kobuk River. The cost of barging fuel on the Kobuk is high because of difficult navigation and hazards. Most other communities in the Northwest region are coastal and present less navigational difficulty but have shallow ports. The long distance of this region from its primary fuel terminals in Cook Inlet further increases fuel costs.

Arctic

Fuel delivery in the Arctic region is subsidized by the North Slope Borough and is not investigated in this report.

Factors Contributing to Fuel Barging Costs

Distance from the refinery to the fuel hub. The further the hub is from refineries, the greater the cost. Also, proximity to multiple refineries allows for purchases at the cheapest rack price. For example, transporters delivering to Southeastern hubs such as Ketchikan and Juneau can buy fuel from refineries in Cook Inlet, Valdez, British Columbia, and Washington in order take advantage of the lowest prices.

Storage at fuel hub. A community that does not have its fuel delivered directly from the refinery typically gets fuel through a fuel hub community. When fuel is unloaded at the fuel hub and then later re-loaded, the costs increase. The wharfage fees charged by the hub port and additional transportation from the hub to the community also add to costs.

Small and shallow ports require lighterage. Fuel transported from a refinery or fuel hub in an ocean-going vessel to communities without deep draft ports require lighterage. Lighterage causes a significant increase in costs, because the fuel is handled an extra time and because smaller barges cost more to operate on a per gallon basis.

Quantity of fuel purchased. Communities that purchase more fuel receive a bulk discount, because the fixed costs of delivering fuel are spread over more gallons.

Regulations on fuel and transportation. Under the Oil Pollution Act of 1990 (OPA 90), all single-hulled fuel barges must be replaced with double hulled barges. The act also

made the fuel transporter and storage facility owners liable for any pollution resulting from spills. These regulations are reflected in growing transportation costs. Single-hulled barges are still allowed in Alaska waters west of 155 degrees west latitude (approximately the west side of Kodiak Island).[35]

Shallow drafts are required for river transportation. To transport fuel on Alaska's western rivers, barges cannot draft more than 3.5 feet of water. The barges must be custom built for these rivers, also increasing fuel costs.

Ice can prevent winter deliveries. For communities in northern and northwestern Alaska, fuel cannot be delivered during the winter ice-over months. Barges typically travel to these communities twice a year—in the spring when the ice melts and in the fall before the river freezes. The rivers in northern Alaska are typically frozen from November to April. The barges needed to deliver fuel sit idle through the winter, and the fuel transporters must recover their capital costs during the short shipping season. Icing also creates incentives to invest in more storage and disincentives to upgrade moorage and marine header conditions.

Deficient or missing moorage. Many communities lack proper moorage. To compensate, fuel barges are often forced to execute risky maneuvers to offload fuel. Either the barge is nosed into the bank and propelled forward against the current, or it is held in place in by the fuel hose that is unloading the fuel.

Deficient or missing marine header. A marine header is a series of piping, valves, and pumps that receives fuel from a barge and pumps it into a storage tank. The slower a marine header pumps, the longer the barge takes to unload, increasing costs and risks of spills. If a community is missing a marine header, the fuel must be trucked off the barge.

Tides delay barge movement. Some communities are only barge accessible at high tide. If a barge is forced to sit idle waiting for a tide change, the cost of fuel increases.

Navigational hazards. Many stretches of river are difficult and risky to navigate. Prices increase with the extra risk—because of longer running time per mile, higher insurance costs, and higher crew costs. Stretches difficult to navigate also require extensive local knowledge, making it difficult for new firms to compete.

Air delivery

Flying fuel is the most expensive method for transporting fuel to rural Alaska villages. Communities will generally only fly in fuel if they do not have access to navigable water, or in emergencies when the river is frozen and the barges are unable to deliver. This can happen if a community did not have the cash or credit available to purchase a full winter season of fuel before freeze-up, or when a community sells all its fuel before spring break-up when the barges are able to return.

When fuel is flown in larger planes, the delivery cost is approximately $1.00 per gallon. Smaller planes flying only a few hundred gallons at a time charge closer to $2.00 per gallon. The size of the plane flying fuel largely depends on local runway length and

[35] Crowley Maritime Corp – CWLM Amended Annual Report
http://sec.edgar-online.com/2006/04/14/0000950123-06-004668/Section2.asp

community population. One advantage of flying in fuel is that communities do not need to invest in large storage facilities, because fuel deliveries can usually be made year-round.

There are multiple commercial air services that fly fuel in Alaska. Everts Air Fuel is the largest. It operates four DC-6s and two C-46s equipped to carry 2,000 to 5,000 gallons of fuel per trip.[36]

Fuel delivery contracts

We examined publicly available fuel delivery contracts as one source of information about fuel transportation prices. A fuel delivery contract is an agreement between a fuel purchaser and a fuel supplier. Most fuel purchases involve a fuel contract. Fuel contracts are generally updated on a yearly or multi-yearly basis, in a competitive bidding process, with the contract being awarded to the lowest bidder. As a result of the competitive bid process, these contracts should provide a reasonable proxy for the costs of delivering fuel to specific ports with a reasonable return on investment and profits. The bids are generally broken into two components—the delivery cost and refinery price. The refinery cost component is the price paid at the refinery gate on the day the fuel is purchased at the refinery.

Table 10 shows the delivery cost component of 2003 and 2006 State of Alaska fuel contracts—that is, contracts for fuel for state-owned facilities. We combined the two fuel contract years and averaged costs for communities that received contracts in both years. For most communities with contracts in both years the delivery charge was similar.

It is clear the method of delivery is an important factor in determining transportation costs. Anchorage's delivery costs are negative, because the bidding transporter was expecting to be able to buy fuel at a lower cost than the indexed price.

Table 10. State of Alaska fuel contract delivery charges per gallon

Community	Delivery Charge	Transport Type
Anchorage	$ (0.01)	Truck
Delta Junction	$ 0.01	Truck
Chitina	$ 0.04	Truck
Nenana	$ 0.04	Truck
Circle	$ 0.09	Truck
Ketchikan	$ 0.13	Ice Free Barge
Kodiak	$ 0.16	Ice Free Barge
Homer	$ 0.18	Ice Free Barge
Kiawock	$ 0.20	Ice Free Barge
Dutch Harbor/Unalaska	$ 0.31	Ice Free Barge
Tanana	$ 0.40	Seasonal Barge
Nome	$ 0.63	Seasonal Barge
Ruby	$ 0.70	Seasonal Barge
Koyukuk	$ 0.91	Seasonal Barge
Naknek	$ 0.93	Seasonal Barge

Sources: State of Alaska, Department of Administration State Fuel Contracts for 2003 and 2006 and ISER calculations.

[36] Everts Air Fuel, available from: http://www.evertsair.com/airfuel/default.htm

Setting Delivery Prices

Fuel transporters face significant risk when determining their delivery price. If they place their price lower than their costs turn out to be, they will lose money when delivering fuel. If they set their price too high, they might be accused of price gouging, or competitors might undercut them and win the delivery bid. The ability to accurately assess the delivery costs to individual communities can be as important and require as much experience as delivering the fuel.

The structure of the fuel delivery prices is the same for most transporters. It includes a delivery charge, in addition to a refined fuel cost that is tied to a fuel price index—such as the OPIS Anacortes price. The refined fuel cost is set at the level of the fuel index on the day the fuel is purchased from the refineries.

Crowley personnel told us that the bid prices are reviewed in relation to cost experience every spring and fall by a team of employees, including those who deliver fuel. Prices are determined for each community based on the time and risks Crowley faces when delivering fuel. Fixed costs are estimated on a per gallon basis and require an estimate of how much fuel will be delivered to a particular community.

The amount of experience and expertise needed to accurately price fuel delivery costs presents two potential problems. The first is that new firms entering the market may lack the knowledge necessary to accurately reflect costs in the delivery charges they bid. It also makes it difficult to evaluate whether the delivery charge component (the price) is reasonable and reflects actual delivery costs.

Storage and distribution

In communities across Alaska, fuels must be stored in holding facilities for distribution to customers. Fuel storage requires a substantial capital infrastructure investment. The cost of the storage facility is sometimes paid for by communities (either city governments or village corporations) or by private companies that either have significant investment in specific communities as major storage or distribution points (e.g., Crowley or Delta Western) or are significant users of fuel, such as Peter Pan Seafoods in False Pass.

The storage capacity of tanks in various communities depends on many factors. These include the location of a community, and whether ports are ice-free in the winter, allowing fuel to be delivered anytime—as compared with communities that can only get fuel deliveries once or twice a year. Also, communities with harsher weather need to have storage facilities that are able to withstand that weather. All storage facilities must meet state and federal environmental regulations pertaining to leak or spill prevention and mitigation—such as having adequate liners.

For publicly owned facilities, communities can obtain assistance from the bulk fuel storage program administered by the Denali Commission. A report prepared for the Denali Commission in 2002 reported the following unit costs per gallon of storage capacity for bulk fuel projects in Alaska (Table 11).

Table 11. Bulk fuel project costs

Capacity	Benchmark Unit Costs
0 – 50,000 gallons	$18.00 to $14.00 per gallon
50,001 – 100,000 gallons	$14.00 to $12.00 per gallon
100,001 – 200,000 gallons	$12.00 to $9.50 per gallon
200,001 – 300,000 gallons	$9.50 to $8.50 per gallon
300,001 – 400,000 gallons	$8.50 to $7.50 per gallon
400,001 to 500,000 gallons	$7.50 to $6.50 per gallon
Greater than 500,000 gallons	$6.50 to $2.50 per gallon.

Source: Denali Commission. Final Denali Commission Project Cost Containment Assessment Projects in Various Alaska Villages, April 2002.

To determine these values, unit costs were calculated as the total project budget, divided by the total design storage capacity. In essence, a larger capacity project should relate to the lower end of the cost range for each capacity level.

Delivery or the distribution of the product in a community is another important component of total cost. Some communities charge a "delivery fee" if the product is delivered to the home. Some provide discounts if households order fuel to be delivered in bulk. In some communities, customers can pick up their fuel on an as needed basis. In other cases, the fuel is always delivered to the home and the "delivery charge" is included in the final fuel price. In these cases, the distribution charge is unknown.

V. Alaska Oil Taxes and Royalties

All oil and gas production in Alaska, except the federal and state royalty share and a small amount used for production, is subject to the state's production taxes and hazardous release surcharges that are levied only on crude oil. Alaska receives revenue from oil and gas production from the state's royalty share, production tax, corporate income tax, and property tax. This section provides a brief overview of these taxes.

Crude oil taxes

Petroleum Profits Tax

The Petroleum Profits Tax (PPT) is the production tax that was signed into law in 2006 and was reconsidered by the Alaska legislature during fall 2007. The PPT is a net value tax with tax credits designed to encourage investment in Alaska's petroleum sector, increase production, and increase long-term revenues.[37] The PPT replaced the Economic Limit Factor (ELF) severance tax.

Petroleum Property Tax

An annual tax is levied on the full and true value of property taxable under AS 43.56. The tax on oil and gas property is the only statewide property tax. The valuation procedure is for three distinct classes of property—exploration, production, and pipeline transportation. The pipeline transportation property tax is shared with local communities. The state tax rate is 20 mills, minus the local mill rate.

Petroleum Corporate Income Tax

Alaska levies two types of corporate income tax—one on oil and gas corporations and the other on all other corporations. An oil and gas corporation's Alaska income tax depends on the relative size of its Alaska and worldwide activities and the corporation's total worldwide net earnings. The corporation's taxable Alaska income is derived by apportioning its worldwide taxable income to Alaska, based on the average of three factors as they pertain to the corporation's Alaska operations: (1) tariffs and sales, (2) oil and gas production, and (3) oil and gas property.

Historically, oil and gas corporate income tax revenue has varied with oil prices and oil industry profits. In FY 1982, revenue from this tax was $668.9 million. As recently as FY 1994, the oil and gas corporate income tax generated only $17.8 million. For the past three years, revenues from the oil and gas corporate income tax have risen along with oil prices and oil industry profits, generating $661.1 million in FY 2006. This is the highest level for collections since the early 1980s.[38]

[37] Alaska Department of Revenue, Tax Division, *Revenue Sources Book, Spring 2007*, p.2.
[38] Ibid, p. 38.

Oil royalties

Almost all Alaska oil and gas production occurs on state lands leased for exploration and development. As the land owner, the state earns revenue from leasing as: (1) upfront bonuses, (2) annual rent charges and (3) a retained royalty interest in oil and gas production.[39]

The State of Alaska receives a royalty of approximately 12.5 percent of the oil and gas produced from leases on state lands. The state may take its share of oil production "in-kind" or "in-value." When the state takes its royalty share in-kind (RIK), it assumes possession of the oil or gas. The commissioner of the Department of Natural Resources may sell the RIK oil or gas in a competitive auction or through a noncompetitive sale negotiated with a single buyer. When the state takes its royalty in-value (RIV), the producers market the state's share along with their own share of production. The lessees remit cash payments on a monthly basis for the state's RIV share.[40]

Over the last 30 years the state has taken about one-half its royalty oil as RIK. The state has sold nearly 800 million barrels of RIK oil during this time, most of it in-state. These in-state sales provide long-term supplies of oil to each of the state's four refineries.

Cook Inlet

In 1969 the commissioner of the Department of Natural Resources negotiated a sale of 100 percent of the state's royalty share from Cook Inlet to the Alaska Oil and Refining Company. Within months after that, Alaska Oil and Refining Company merged with the Tesoro Petroleum Company. Tesoro subsequently built a new refinery in Nikiski on the Kenai Peninsula, next to Chevron's refinery, built in 1964. Between 1969 and 1985 the state sold all its Cook Inlet royalty oil to the Tesoro refinery. By 1980, the production decline in Cook Inlet prompted Tesoro to negotiate the first of several sales contracts with the state for supplies of RIK oil from the North Slope. By the end of 1985 Tesoro had replaced its Cook Inlet RIK volumes with supplies of RIK from the North Slope.

In 1987 the state began to export Cook Inlet RIK oil to the Chinese Petroleum Company. These volumes were produced from fields on the west side of Cook Inlet, after the federal government exempted Cook Inlet production from export administration regulations. The state sold 97 percent of the royalty production from the McArthur River, Trading Bay, North Trading Bay, and Granite Point fields in a series of one-year competitive auctions. In 1991 deliveries under the last Chinese Petroleum contract were halted following the December 1989 eruption of the Mount Redoubt volcano. There have been no Cook Inlet RIK sales since that time.

North Slope

Over the past 25 years, the state has held nine RIK sales involving portions of its Alaska North Slope (ANS) royalty oil production. These sales are summarized in Figure 10. For detailed information on royalty oil sales, see the Division of Oil and Gas Annual Report.

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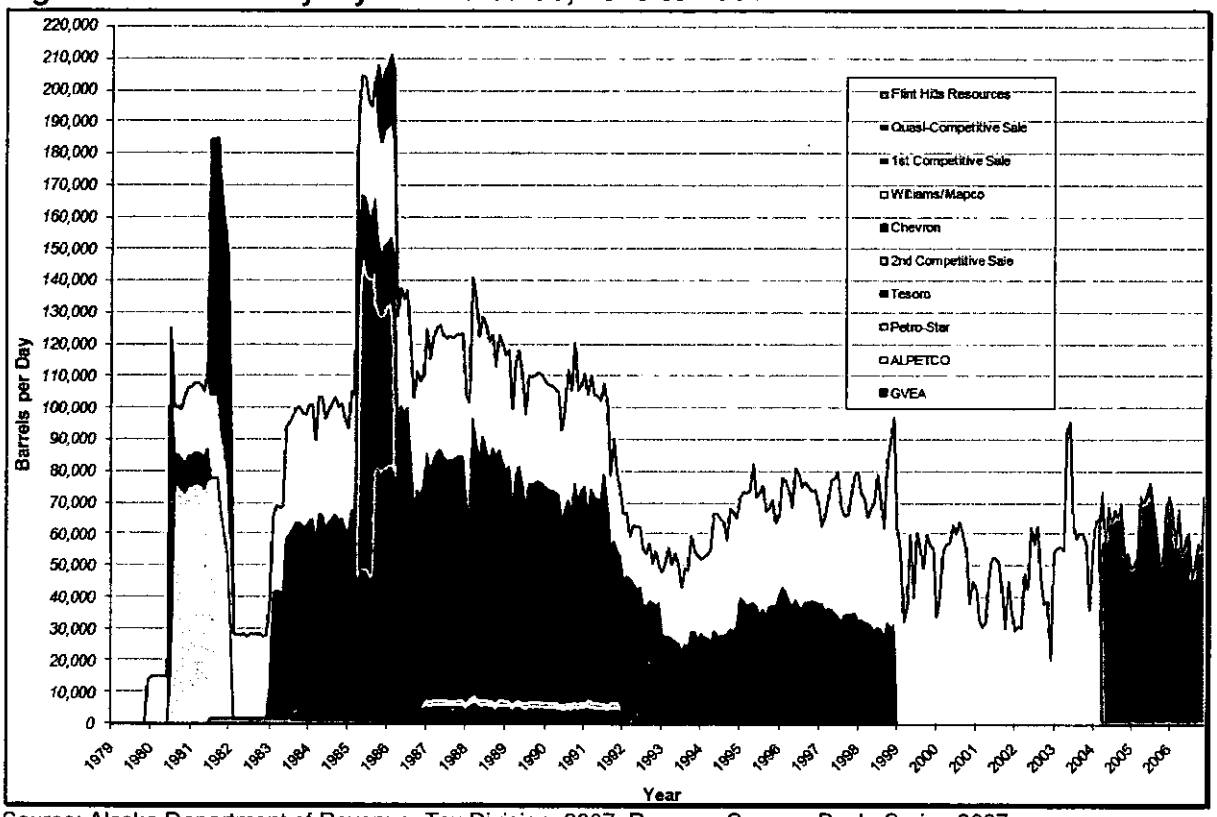
[39] Ibid, p. 29.

[40] Alaska Department of Natural Resources, Division of Oil and Gas, *2007 Annual Report*, p. 4-1.

What is significant for this study is that the State of Alaska has negotiated various terms into its royalty in-kind contract sales to Alaska refineries, including use of the Alaska Railroad to transport fuels and requirements to upgrade tank farms.

Figure 10. Alaska royalty In-kind sales, 1979 to 2006



Source: Alaska Department of Revenue, Tax Division, 2007, Revenue Sources Book, Spring 2007.

In addition to taxes collected to compensate the state for development of its publicly-owned oil resources, the state government also collects other oil-related taxes to offset the costs of specific programs. These include the Hazardous Release Surcharge assessed on crude oil production and motor fuel taxes assessed on refined products.

Hazardous release surcharge

The Oil and Hazardous Substance Release Prevention and Response Fund was created by the legislature in 1986 to provide a "readily available funding source to investigate, contain, and clean up oil and hazardous releases." An amendment in 1994 divided the fund into two separate accounts comprised of: (1) the Response Account, which is a surcharge on all oil production, except federal and state royalty barrels, that may be used to finance the state's response to an oil or hazardous substance release declared a disaster by the governor; (2) the Prevention Account, which is an additional surcharge on all oil production, except federal and state royalty barrels, that may be used for cleaning up oil and hazardous substance releases not declared a disaster by the governor; it can also be used to fund oil and hazardous substance release prevention programs in Alaska.

When the PPT was passed, the Response surcharge (AS 43.55.201) was changed from $.02 to $.01 and the Prevention surcharge (AS 43.55.300) was increased from $.03 to $.04. Both of these changes took effect April 1, 2006. The Response surcharge is suspended when the balance of the Response account is equal to or exceeds $50 million. As of February 28, 2007, the cumulative balance of the account was $42.4 million. The Response Surcharge was re-imposed effective April 1, 2007, by the Department of Revenue.[41]

Motor fuel taxes

For many years, fuel taxes and other revenues from highway users levied by the federal government and states have been a primary source of funds for federal and state highway programs. Nationally, a relatively small number of counties and municipalities also levy fuel taxes to finance road improvements, but these local governments rely primarily on general funds, property taxes, sales taxes, and other revenues unrelated to highway users to finance local road and street construction, maintenance, and operation.[42]

Federal fuel taxes, for the most part, are deposited in the Highway Trust Fund (HTF), which is used to fund highway construction projects. Alaska receives funds annually, and in excess of what Alaskans contribute to the fund, for road projects (Table 12). The Alaska fuel tax primarily pays for road operation and maintenance costs.

Historically, states and the federal government have viewed fuel taxes as an attractive revenue source for highway construction and maintenance programs for several reasons. First, the revenues from fuel taxes are linked, although imperfectly, with road use. In addition, fuel tax revenues historically have been relatively stable and predictable. Legislators or the electorate, in states other than Alaska, have been willing to increase the fuel tax rates when necessary to meet highway improvement needs. Fuel taxes are attractive revenue sources also because costs of administering the programs to collect fuel taxes are relatively low.

The Alaska motor fuel tax dates back to 1945, when the legislature imposed a tax of 1cent per gallon on all motor fuel. Over time, the legislature enacted separate tax rates for each of the fuel categories as they exist today.

Alaska levies the motor fuel tax on motor fuel sold, transferred, or used within Alaska. The Alaska Department of Revenue's Tax Division collects motor fuel taxes primarily from wholesalers and distributors who hold "qualified dealer" licenses. Current per gallon rates are 8 cents for highway use, 5 cents for marine fuel, 4.7 cents for aviation gasoline, 3.2 cents for jet fuel, and a rate of 8 cents or 2 cents for gasohol, depending on the season, location, and EPA mandate.

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[41] Ibid, p. 29.

[42] March, Jim, *The Future of Highway Financing*, Innovative Financing Series: Article 3, Federal Highway Administration, Turner-Fairbank Highway Research Center, Public Roads Magazine, November/December 2005.

In addition to sales between qualified dealers, the following sales and uses are exempt from motor fuel tax:

- Heating
- Federal, state, and local government agencies
- Foreign flights (jet fuel)
- Exports
- Power plants/utilities
- Charitable institutions
- Gasohol (only fuel containing at least 10% alcohol, derived from wood or seafood waste)
- Bunker fuel (residual fuel oil or #6 fuel oil)

Consumers may claim refunds for the full Alaska tax rate if they used the fuel for exempt purposes; or for the difference between the tax rate and 2 cents per gallon, if they used the fuel off-highway. Resellers, usually retailers, may claim refunds for the full tax if they paid the tax and then sold the fuel for exempt use and did not collect the tax.

Most of the excise taxes credited to the HTF are not collected directly from the consumer by the federal government. They are, instead, paid to the Internal Revenue Service by the producer or importer of the taxable product (except for the tax on trucks and trailers, which is paid by the retailer, and the heavy-vehicle use tax, which is paid by the heavy-vehicle owner). As a result, most of the federal fuel taxes come from a handful of states—those where major oil companies are headquartered—and most tire taxes are paid from Ohio, the home of the U.S. tire industry. These taxes become part of the price of the product and are ultimately paid by the highway user.[43]

Table 12. Federal highway user taxes

Fuel Type	Effective Date	Tax Rate (cents per gallon)	Distribution of Tax		
			Highway Trust Fund		Leaking Underground Storage Tank Trust Fund
			Highway Account	Mass Transit Account	
Gasoline	10/1/1997	18.4	15.44	2.86	0.1
Diesel	10/1/1997	24.4	21.44	2.86	0.1
Gasohol	1/1/2005	18.4	15.44	2.86	0.1

Source: Federal Highway Administration, 2007.

In some cases, the federal motor-fuel tax has already been paid by the producer/ distributor or retailer on motor fuel that will ultimately be used by an exempt user or for an exempt purpose. In such cases, the end user may purchases fuel at a price that includes

[43] Federal Highway Administration, Financing Federal-Aid Highways, The Highway Trust Fund, www.fhwa.dot.gov/reports/fifahiwy/fifahi05.htm

the tax and must apply for a refund of the tax. For sales of diesel fuel to state and local governments, and for tax exempt purposes such as heating, the wholesaler or retailer (the ultimate vendor) sells the fuel to the end user at a price excluding the tax and applies for the refund. The federal fuel tax refund is primarily done through the federal income tax process.[44]

Although fuel oil is not subject to state or federal taxes, diesel for motor fuel—a virtually identical product—is taxed. In other states, fuel oil is dyed to distinguish it from the taxable motor fuel. But because Alaska markets are so small, Alaska is not required to dye fuel oil, and the two products can be shipped together. Because the taxable and non-taxable fuels are typically mixed for shipment, it is possible that at times households may in fact pay taxes on fuel oil—because the taxes have been levied at some earlier point. In that case, households can apply for refunds on those taxes. But our research indicates that in most cases households do not pay federal and state taxes on fuel oil. Instead, wholesale or retail sellers (depending on the circumstances of the sale) determine which sales are exempt from federal and state taxes, and apply for refunds of any such taxes they paid on fuel ultimately sold for home heating.

Local Taxes

In addition to state and federal fuel taxes, some Alaska communities charge local sales taxes, and fuel taxes on a percentage or cents per gallon basis. Communities with these types of taxes are shown in Table 13 below. Specific sales tax revenues attributable to fuel sales are not reported or broken out.[45] According to Steve Van Sant, Alaska's state assessor, when a city or borough has a general sales tax, it is typically applied to all sales, including fuel, unless specifically exempted. He is not aware of any communities that have exempted fuel from their general sales tax.

Specific fuel taxes (note for example Bettles, Cold Bay, and Sitka in Table 13) are usually a fuel transfer tax that occurs when the fuel is transferred into or out of a city. The fuel transfer tax is not linked to final sales to households. Any new community fuel taxes would most likely be on bulk sales and are unlikely to be added in communities that already have a general sales tax on the books.[46] The places with specific fuel taxes appear to primarily be those that have large commercial users of fuel such as fishing boats or cruise ships . In addition to local sales taxes and fuel taxes, some communities may charge wharfage fees for port deliveries, including fuel deliveries. These charges most likely are included in the final retail prices charged to consumers and are not a tax per se. Fuel transfer taxes would be included in the final sales price charged to consumers by the retailer who paid the fuel transfer tax.

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[44] Generally, diesel fuel and kerosene are taxed in the same manner as gasoline. However, special rules (discussed later) apply to dyed diesel fuel and dyed kerosene, and to undyed diesel fuel and undyed kerosene sold or used in Alaska for certain nontaxable uses and undyed kerosene used for a feedstock purpose.
Internal Revenue Service, Publication 510. http://www.irs.gov/publications/p510/ch01.html#d0e1299

[45] Van Sant, Steve, 2007, Alaska Department of Commerce, Community and Economic Development, Division of Community Advocacy, Alaska Taxable 2006, Table 2.

[46] Van Sant, Steve, State Assessor, personal communication, November 19, 2007.

Table 13. Local sales and special taxes and tax revenues

Municipality	Sales Tax	Revenues	Special Tax	Revenues
Alakanuk	4%	$92,532	No	
Aleknagik	5%	$80,358	5% Bed Tax	$3,390
Anderson	No		8% Utility Tax	$43,141
Aniak	2%	$47,465	No	
Bettles	No		$.02/gal. Fuel Transfer Tax	$3,416
Brevig Mission	3%	$29,000	No	
Buckland	6%	$71,469	No	
Chefornak	2%	52,788	2% Raw Fish Tax	
Cold Bay	No		10% Bed Tax/$.04/gal. Fuel Tax	$20,150/$46,735
Cordova	6%	$2,469,977	6% Bed Tax/6% Vehicle Rental Tax	$84,091/$17,080
Craig	5%	$1,394,532	6% Liquor Tax	$96,067
Deering	3%	$13,396	No	
Denali Borough	No		Sev.Tax $.05/yd grvl-$.05 ton-coal; Bed Tax 7%	$87,958/$2082882
Dillingham	6%	$2,206,634	10% Bed & Liquor Tax/6% Gaming Tax	$249,839/$111,160
Diomede	3%	$9,015	No	
Eek	2%	$24,000	No	
Elim	2%	$28,738	No	
Emmonak	3%	$148,000	NR	
False Pass	3%	$22,382	6% Bed Tax	
Fort Yukon	3%		No	
Gambell	3%	$68,810	No	
Gustavus	2%	$188,537	4% Bed Tax	$52,091
Haines Borough	5.5%	$1,973,088	4% Bed Tax	$56,650
Homer	4.50%	$5,809,399	No	
Hooper Bay	4%	$200,679	No	
Houston	2%	$172,484	No	
Hydaburg	4%	$25,856	No	
Juneau, City & Borough of	5%	$34,587,598	7% Bed Tax/ 3% Liquor Tax/ $.30/pack Tobacco	$955,000/$715,000/$473,922
Kake	5%	$167,354	No	$5,686
Kenai	3%	$4,404,148	No	
Kenai Peninsula Borough	2%	$16,701,322	No	
Ketchikan	3.5%	$9,101,177	7% Bed Tax	$395,074
Ketchikan Gateway Borough	2.5%	$6,412,198	4% Bed Tax	$42,834
King Cove	4%	$1,636,507	2% Fisheries Tax/Business impact tax-flat rate	Fisheries tax incld in sales tax
Klawock	5.5%	$555,074	6% Bed Tax	$7,690
Kodiak	6%	$7,814,820	5% Bed Tax	$105,992
Kodiak Island Borough	No		10.25 mill Severance Tax/5% Bed Tax	$1,186,908/$47,645
Kotlik	3%	$78,313	No	
Kotzebue	6%	$2,727,047	6% Bed Tax/ 6% Alcohol Tax	$37,514/$43,574
Koyuk	2%	$25,776	NR	
Kwethluk	5%	$111,456	No	
Lake & Peninsula Borough	No		2% Raw Fish Tax/Guide Fees/6% Bed Tax	$943,747/$22,473/$165,883
Larsen Bay	3%	$6,163	No	
Manokotak	2%	$6,938	No	
Marshall	4%	$54,006	No	

Table 13. Local sales and special taxes and tax revenues, continued

Municipality	Sales Tax	Revenues	Special Tax	Revenues
Mekoryuk	2%	$170,502	No	
Mountain Village	3%	$120,172	No	
Napakiak	3%	$42,147	No	
Nenana	4%	$129,687	Motor Vehicle Tax	$7,225
Newhalen	2%		The City does not collect any sales tax	
Nome	5%	$3,669,606	4% Bed Tax	$83,310
North Pole	4%	$218,282	No	
Nunam Iqua (Sheldon Point)	4%	$1,364	No	
Nunapitchuk	3%	$100,384	No	
Old Harbor	3%	$19,904	5 %Bed Tax	$729
Ouzinkie	3%	$10,108	No	
Palmer	3%	$3,829,234	No	
Pelican	4%	$58,501	10% Bed Tax	$4,537
Petersburg	6%	$2,431,614	4% Bed Tax	$40,489
Pilot Station	4%	$60,420	No	
Point Hope	3%	$104,421	No	
Port Alexander	4%	$24,683	6% Bed Tax	No revenue reported
Quinhagak	3%	$79,618	No	
St. Mary's	3%	$100,997	NR	
Saint Paul	3%	$366,581	Fish Tax 3%	$562,490
Sand Point	3%	$633,862	7% Bed Tax/2% Raw Fish Tax	$17,003/$605,291
Savoonga	3%	$40,925	No	
Saxman	3.50%	$50,914	No	
Scammon Bay	2%	$30,034	No	
Selawik	5%	$114,833	No	
Seldovia	2%/4.5%	$122,090	No	
Seward	4%	$3,413,087	4% Bed Tax	$284,656
Shungnak	2%	$11,522	No	
Sitka, City & Borough of	5%/6%	$9,277,571	6% Bed Tax/ $.02/gal Fuel Tax	$355,870/$5,121
Skagway	4%	$4,866,950	8% Bed Tax	$157,691
Soldotna	3%	$6,348,529	No	
Stebbins	3%	$47,190	No	
Tanana	2%	$21,461	No	
Teller	3%	$15,211	No	
Tenakee Springs	2%	$13,092	Bed Tax 6%	$521
Thorne Bay	5%	$226,917	No	
Togiak	2%	$98,069	2% Raw Fish Tax	$35,396
Toksook Bay	2%	$37,566	No	
Unalakleet	3%	$143,988	5% Bed Tax/5% Alcohol Tax/Baler 2%	$5,106/$5,381/$95,200
Unalaska	3%	$6,049,831	2% Raw Fish Tax/1% Capitol Sales Tax/ 5% Bed	$4,193,082/$3,004,035/$162,072
Wasilla	2.5%	$10,433,805	Alcohol tax, Aviation fuel tax	$100,725/$17,500
White Mountain	1%	$14,176	No	
Whittier	3%	$248,256	3% Passenger Trans. Tax/3% Fuel Tax	$126,181/$17,147
Wrangell	7%	$2,104,741	$4 per night Bed Tax	$24,380
Yakutat, City & Borough of	4%	$748,490	1% Raw Fish Tax/8% Bed & Car Rental Tx	$20,540/$165,477

Source: Van Sant, Steve, 2007, Alaska Department of Commerce, Community and Economic Development, Division of Community Advocacy, *Alaska Taxable 2006*.

VI. Subsidies and Assistance Programs

The cost of living is higher in Alaska, according to conventional wisdom. In fact, a report in the October 2007 issue of *Alaska Economic Trends* found that energy costs in Alaska posted one of the sharpest increases in 2006, at 13.9 percent. From 2002 to 2006, energy prices rose 51 percent.[47] In response to the increased cost of energy (including fuel prices), the State of Alaska created or increased funding for a number of energy financial assistance programs. These programs were developed to help communities and individuals pay for mounting fuel and energy costs. This includes the following energy assistance programs:

- Municipal Energy Assistance Program
- Bulk Fuel Revolving Loan Fund
- Power Cost Equalization (PCE)
- Low Income Energy Assistance Program
- Bulk Fuel Upgrades
- Rural Alaska Fuel Services (RAFS) program
- Citgo Program

These programs are discussed below.

Municipal Energy Assistance Program

Funding for the Small Municipality Energy Assistance Program[48] is a result of a special appropriation request by then-Governor Murkowski to address historically high fuel costs that created significant financial hardship for small municipalities and their residents. During the fiscal years 2006, 2007, and 2008, the program administered funds to numerous communities across Alaska. Funds are distributed to small villages, municipalities of various sizes, boroughs, and village and tribal councils. The grant funds must be used in the following order:

1. To repay any indebtedness of the city or borough to the Bulk Fuel Revolving Loan Fund, administered by the Alaska Energy Authority
2. To repay any indebtedness of the city or borough to a fuel company or fuel vendor
3. For the purchase of fuel by the city or borough.

Over $6.5 million was distributed among communities in fiscal year 2006, $48 million in 2007, and $48.7 million in 2008. Energy Assistance distributions to the ten case study communities are shown in Table 14.

[47] Fried, Neal and Dan Robinson, "The Cost of Living in Alaska," *Alaska Economic Trends*, October 2007.
[48] For more information about the Small Municipality Energy Assistance Program please see website: http://www.commerce.state.ak.us/dca/energy_assist.htm

Table 14. Small Municipality Energy Assistance Program Payments, FY 06 to FY08

Community Name	FY 06 Funds	FY 07 Funds	FY 08 Funds
Allakaket/Alatna	$44,791	$36,944	$79,416
Angoon	$44,791	$43,326	$97,644
Bethel	$0	$223,971	$348,039
Chitina	$0	$0	$31,152
False Pass	$22,395	$40,000	$77,537
Fort Yukon	$44,791	$25,309	$102,999
Lime Village	$0	$0	$26,326
Mountain Village	$67,187	$66,053	$112,395
Unalakleet	$67,187	$50,253	$109,153
Yakuat	$67,187	$17,496	$279,784

Source: Bill Rolfzen, Program Administrator, Small Municipality Energy Assistance Program.

Bulk Fuel Revolving Loan Fund

The Bulk Fuel Revolving Loan Program is administered by the Alaska Energy Authority. The fund was created to "assist communities, utilities or fuel retailers in small rural communities in Alaska in purchasing emergency, semi-annual or annual bulk fuel supplies." Loans are for the purchase of new fuel and are not provided for fuel already purchased, in the process of being used, or already consumed. An organized municipality or unincorporated village with a population under 2,000, or private individuals, corporations, or cooperatives, are eligible to apply as long as the applicant does not have any outstanding AEA bulk fuel loans. The bulk fuel loan may be used for:

- Municipal electrical power generators; municipal heavy equipment
- Heating fuel for the municipality, residents, and businesses
- Municipal, business and residential motor vehicles and for subsistence purposes

The fund does not cover the purchase of aviation fuel or other non-fuel related supplies. The loan is expected to be repaid within one year, and the terms of the loan are generally nine equal monthly installments. No interest is charged on the first bulk fuel loan and 5% interest is charged on the second loan. The third or subsequent loans are charged an interest rate equal to the average weekly yield of municipal bonds for the proceeding year.

Bulk fuel loans funded from 2006 to 2007 covered the purchase of diesel #1, diesel #2, and gasoline in various communities. Mountain Village was the only one of the ten case study communities to receive a bulk fuel revolving loan during fiscal year 2006 or 2007.

Power Cost Equalization (PCE)

The Power Cost Equalization program (PCE) was created to provide economic assistance to customers in rural areas of Alaska where the kilowatt-hour charge for electricity can be three to five times higher than the charge in more urban areas of the state. The program attemptss to equalize the power cost per kilowatt-hour statewide.

The PCE program is administered by the Alaska Energy Authority. Participating utilities must register with the Regulatory Commission of Alaska (RCA). The RCA sets the PCE level for each utility, based on cost of electric generation. An eligible residential customer may receive PCE credit on the first 500 kWh consumed each month. The community also receives credit toward electricity used in community facilities, based on the population of the community.

Low Income Energy Assistance Program

The Low Income Energy Assistance Program was created with funds from the State of Alaska to help low-income households offset the high price of home heating. The grant program is administered by the Division of Public Assistance in the Department of Health and Social Services, and it's known as the Heating Assistance Program (HAP). The funds are available to any residents or households with incomes below the poverty level. The funds may be used to:

- Conduct outreach activities and provide assistance to low income households in meeting their home energy costs—"heating assistance"
- Intervene in energy crises—"crisis assistance"
- Provide low-cost residential weatherization and other cost-effective, energy-related home repair—"weatherization assistance"

The program provides funds on a household basis rather than on a community basis. Households in all ten case study communities received assistance in fiscal year 2007.

Bulk Fuel Upgrades

The Denali Commission and the Alaska Energy Authority (AEA) are working together to reduce the cost of energy by funding bulk fuel upgrades across Alaska. The Denali Commission funds the Bulk Fuel Upgrade while AEA does the planning and construction of the storage facilities. This benefits communities, because they then have more storage capacity and can order more fuel in bulk. And because the facilities are made compliant with environmental standards, they are more reliable and less prone to spills or leaks—which helps reduce the cost of fuel in rural villages.

The bulk fuel program does not provide funds to communities which are part of the Alaska Village Electric Cooperative (AVEC), are within the North Slope Borough, or are connected by roads. Among the ten case study communities, five are currently receiving or have received funds in the past for bulk fuel upgrades. The communities of Yakutat, Chitina, Bethel, Mountain Village, and Fort Yukon did not receive funds for bulk fuel upgrades. Mountain Village is an AVEC community; Chitina is on the road system; and Yakutat, Bethel, and Fort Yukon have bulk fuel facilities provided by large distribution companies such as Crowley or Delta Western. The communities of Allakaket/Alatna,

Lime Village, False Pass, and Angoon have completed bulk fuel upgrades through this program. Unalakleet is currently in the final construction phase of its bulk fuel facility.

Rural Alaska Fuel Services Program

Rural Alaska Fuel Services (RAFS) was created in 2004 as a non-profit corporation, organized to contract for operating and maintaining rural Alaska bulk fuel storage facilities construct by the Denali Commission and the Alaska Energy Authority. All bulk fuel facilities in Alaska must be maintained and operated in accordance with all applicable state and federal regulations. RAFS also offers the following services to rural communities in Alaska:

- Business planning
- Operations and management services
- Testing and inspections
- Operational training for employees
- Facility oversight
- Record-keeping and reporting
- Sustainability

One of the most important roles RAFS plays is advising communities on developing fuel pricing structures. RAFS helps communities determine the correct price, so they can recover their costs and avoid financial crises. RAFS has found that meeting with community residents to explain the components of fuel costs makes them more understanding about why they need to pay higher prices.

In the three years since RAFS was established, it has helped 30 Alaska communities. Of the ten case study communities, none of them have so far worked with RAFS.

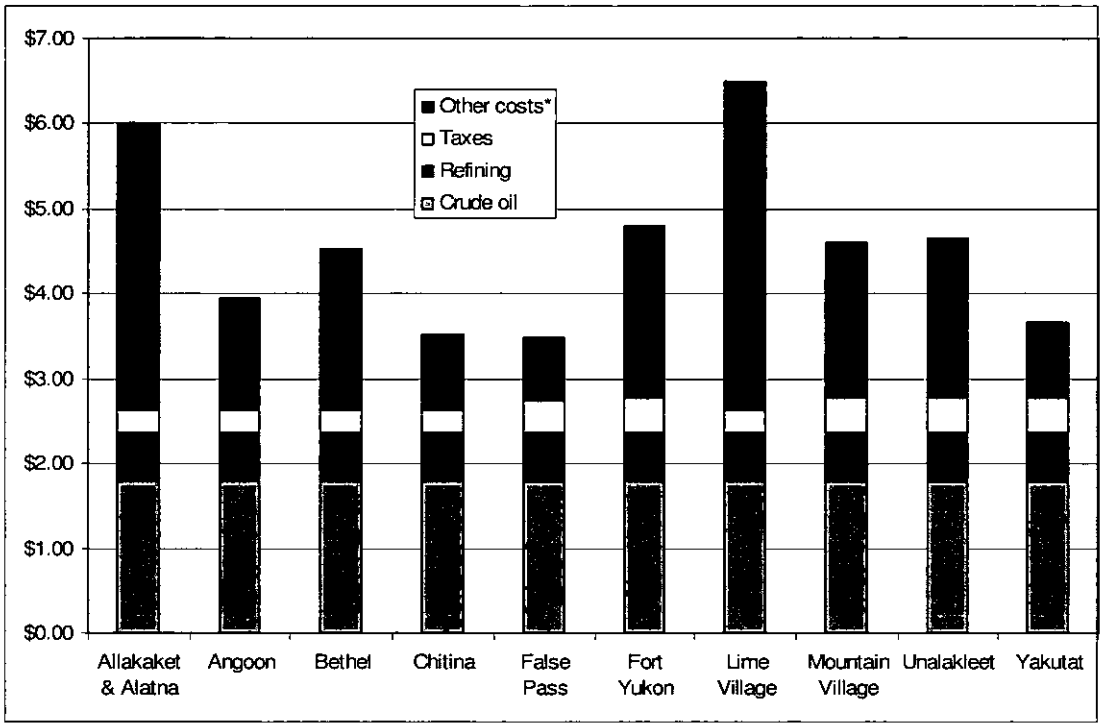
Citgo

A Venezuelan owned oil company, Citgo, donated fuel to many rural Alaska villages during the winters of 2006 and 2007. The company paid for 100 gallons of fuel for every household in 151 villages in Alaska. This fuel was worth roughly $5 million—equating to a savings of more than $700 in fuel costs for each recipient household during the 2006 and 2007 winters.

VII. Comparative Case Study Results

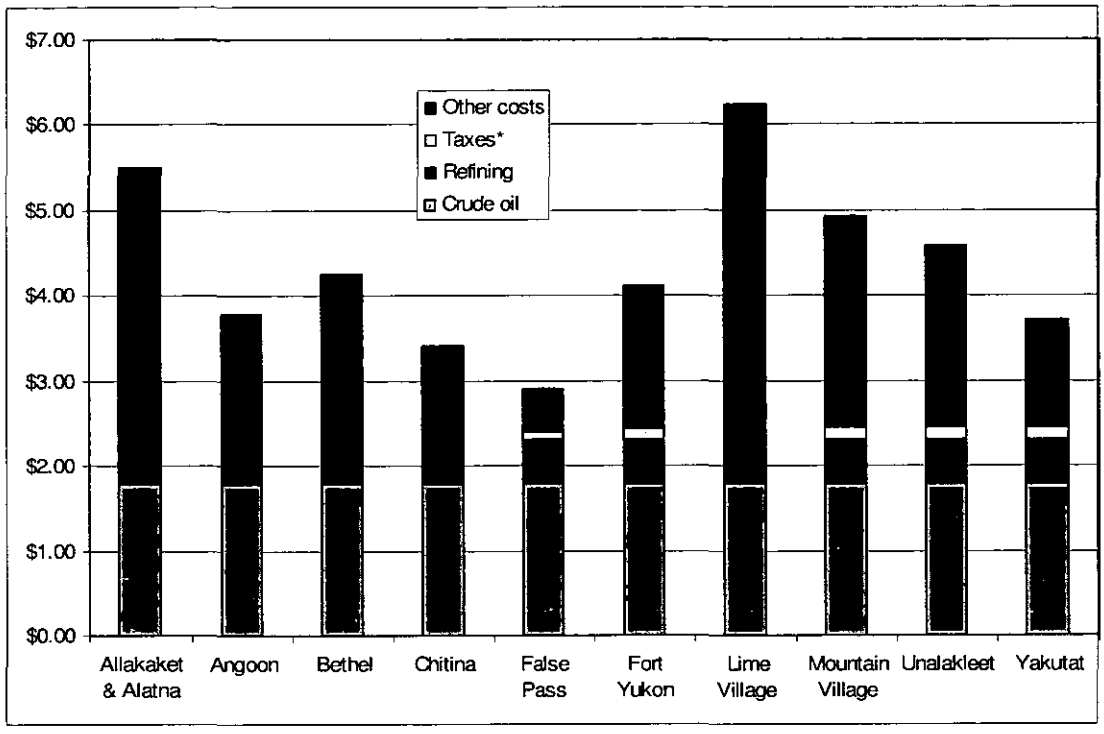
Figures 11 and 12 summarize the components of gasoline and heating fuel prices in our ten case study communities. After that we look at the communities individually.

Figure 11. Components of gasoline prices in case study communities



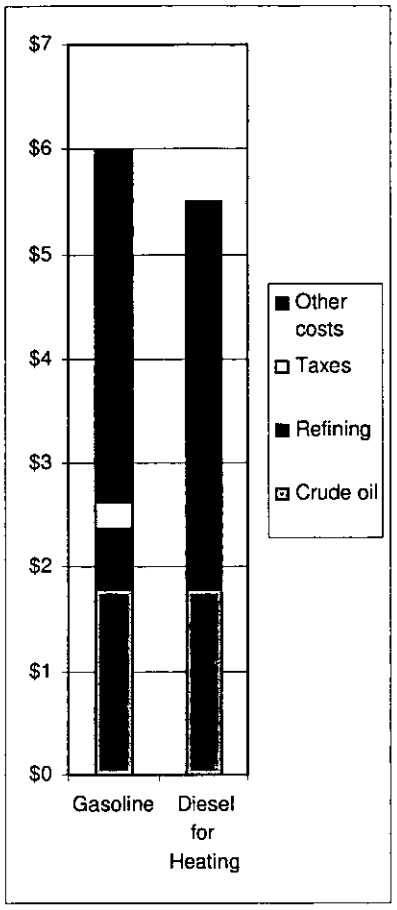
* Other costs include transportation, storage, and retailer markup
Crude oil: EIA's Refiner Acquisition Cost of Crude Oil, PADD 5 (West Coast), Sept. 2007, composite (domestic & international)
Not available for Alaska alone, http://tonto.eia.doe.gov/dnav/pet/pet_pri_rac2_dcu_r50_m.htm
Refined price: EIA's Refiner Petroleum Product Prices by Sales Type, Alaska, Sales for Resale, Sept. 2007
http://tonto.eia.doe.gov/dnav/pet/pet_pri_refoth_dcu_SAK_m.htm

Figure 12. Components of diesel for heating prices in case study communities**



* Taxes include only local sales tax.
** Communities identified their heating fuel as #1, but Alaska refinery prices from EIA were only available for #2.

Allakaket/Alatna



Together, the neighbor communities of Allakaket and Alatna (across the Koyukuk River from each other) have a total population of about 125. They are in northern Alaska, above the Arctic Circle. They receive their fuel by airplane, because fuel barges can't navigate the upper Koyukuk River.

In November 2007 gasoline retailed for $6.00 per gallon and diesel for heating was $5.50 per gallon in Allakaket/Alatna. There is no local sales tax in either community. The "other" costs" for fuel in Allakaket/Alatna amounted to roughly $3.37 per gallon for gasoline and $2.95 for fuel oil in late 2007. Several factors tend to increase or ameliorate the "other" fuel prices in these places:

⇧ Only method of transportation is by air.

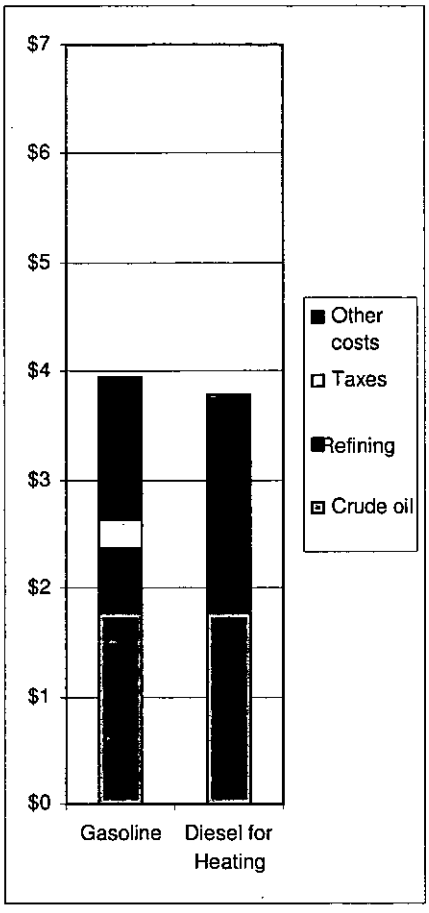
⇩ Long runway that could support larger airplanes carrying more fuel. However, because of small population, delivered quantities are small and so delivery charge is higher per gallon.

⇧ Storage capacity is only 16,000 gallons, but this does not seem to be a constraint on deliveries, because quantity delivered in 2007 was only 7,500 gallons.

⇔

⇩ There are at least two suppliers to the community, and barriers to entry in air transportation are low compared with those in barging—so there is potential for competition.

Angoon



Angoon is located on Admiralty Island in Southeast Alaska; south of the capital city of Juneau. Angoon has a current population of 497; the population has decreased over the past few years. All fuel is barged to Angoon by Petro Marine.

In November 2007, gasoline retailed for $3.96 per gallon and fuel oil for $3.79 per gallon. There is no local sales tax in the community. The "other" components of fuel prices in Angoon were roughly $1.33 for gasoline and $1.24 for fuel oil. Factors tending to increase or ameliorate these "other" costs include:

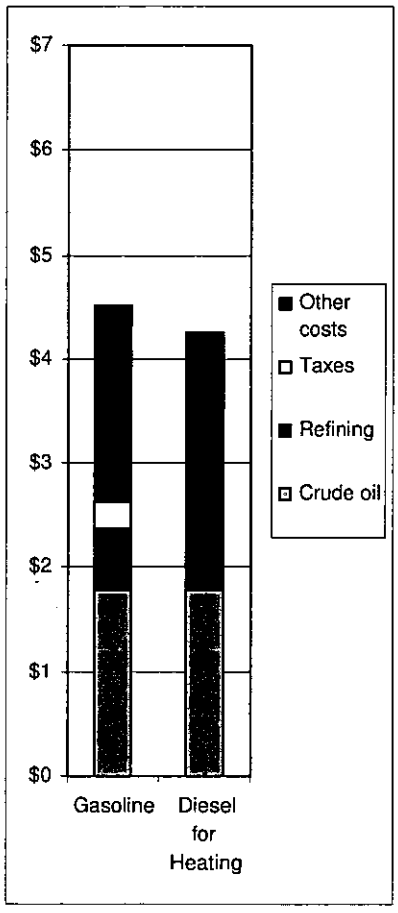
⇧ Only fuel delivery method is by barge.

⇩ Ice-free port in Southeast Alaska, roughly 900 miles from both Anacortes and Anchorage.

⇧ Fuel has to be lightered to community, typically from Ketchikan.

⇩ Fuel can be delivered any time; typically there are eight deliveries per year.

Bethel



Bethel is located at the mouth of the Kuskokwim River and has a population of 5,812. All fuel for Bethel is barged on the Kuskokwim River. It is a regional fuel distribution hub and has a storage capacity of 14 million gallons.

In November 2007 gasoline retailed for $4.52 per gallon and diesel for heating for $4.25 per gallon. There is no local tax on fuel in the community. The "other" costs for fuel in Bethel in late 2007 were roughly $1.89 for gasoline and $1.70 for fuel for heating. Factors affecting those extra costs include:

⇧ Only method of transportation is barge.

⇩ Large fuel hub community.

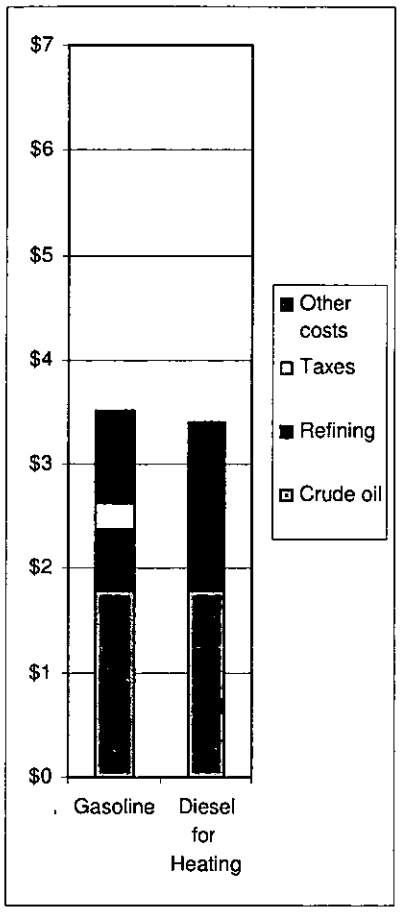
⇧ Port and river both freeze up in winter.

⇧ Fuel has to be lightered into community.

⇩ Can receive multiple shipments (10+) per year when river is not frozen.

⇧ Large storage facility owned by Crowley Marine. We don't know how much fuel stored in the community is distributed to other regional communities and how much goes to Bethel residents.

Chitina



Chitina is on the road system in southcentral Alaska. Chitina and has a population of 110. All fuel in Chitina is transported by road from Anchorage.

Gasoline retailed for $3.52 per gallon and diesel for heating is $3.41 per gallon in November 2007. There is no local tax on fuel in the community. The "other" costs contributing to fuel prices in Chitina in late 2007 were roughly $0.89 for gasoline and $0.86 for fuel for heating. Various factors tend to increase or decrease those other costs:

⇩ On the road system only 247 miles from Anchorage.

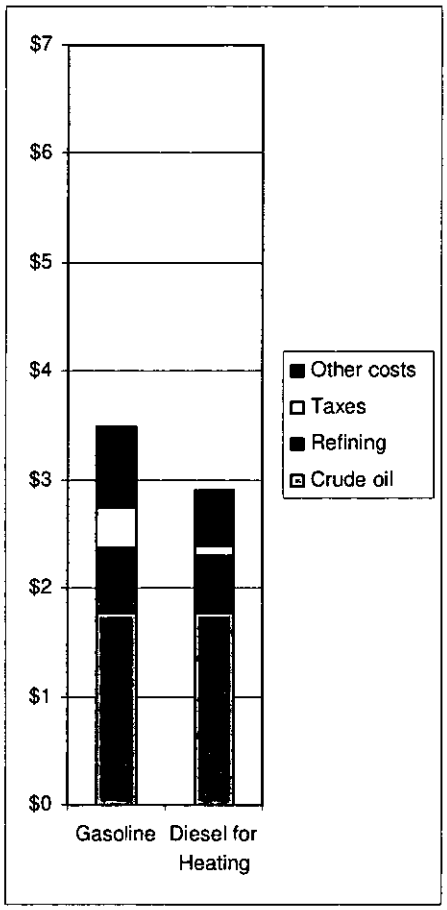
⇩ Can receive fuel any time; not weather dependent.

⇩ Fuel usually comes by truck.

⇩ Storage facility is publically owned;

⇩ There are many companies that could potentially deliver fuel, with relatively low cost of capital, skill and experience.

False Pass



False Pass is on Unimak Island in the Aleutian Chain. It has a year-round population of about 54, the population increases when fishermen and fish processors arrive for the fishing season. All fuel for False Pass is barged in.

In November 2007 gasoline retailed for $3.49 per gallon and fuel oil for $2.90 per gallon. The community has a 3% sales tax that applies to fuel sales. The "other" fuel costs in late 2007 were roughly $0.75 for gasoline and $0.26 for fuel oil. Several factors tend to increase or hold down those other costs:

⇧ Can only receive fuel by barge.

⇩ Relatively close to large ports (Dutch Harbor and Anchorage).

⇧ Ice-free port.

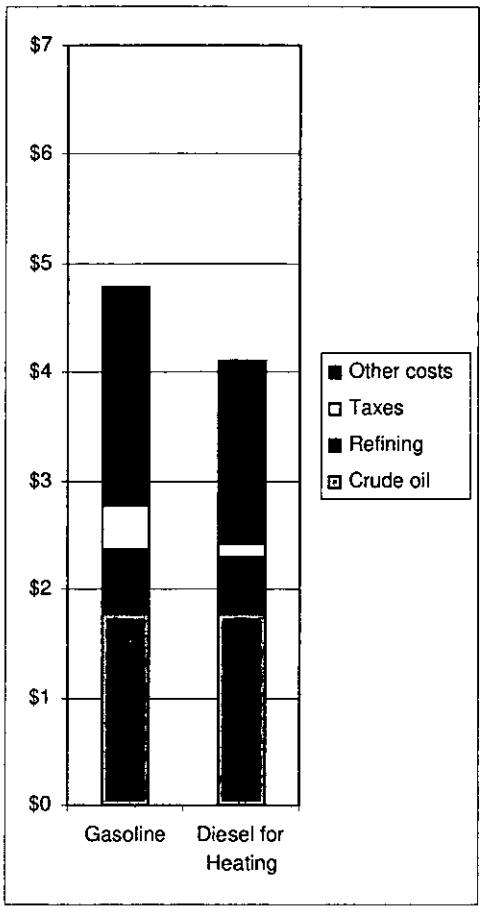
⇧ Fuel has to be lightered to community.

⇩ Small marine distance from larger facilities.

⇩ Only receives one delivery per year but has a large storage capacity to serve many commercial fisherman and fish processors in the area.

⇩ Storage Facility is owned by Peter Pan Seafood, a private company. Large throughput due to fishing fleet and location near multiple fishing grounds.

Fort Yukon

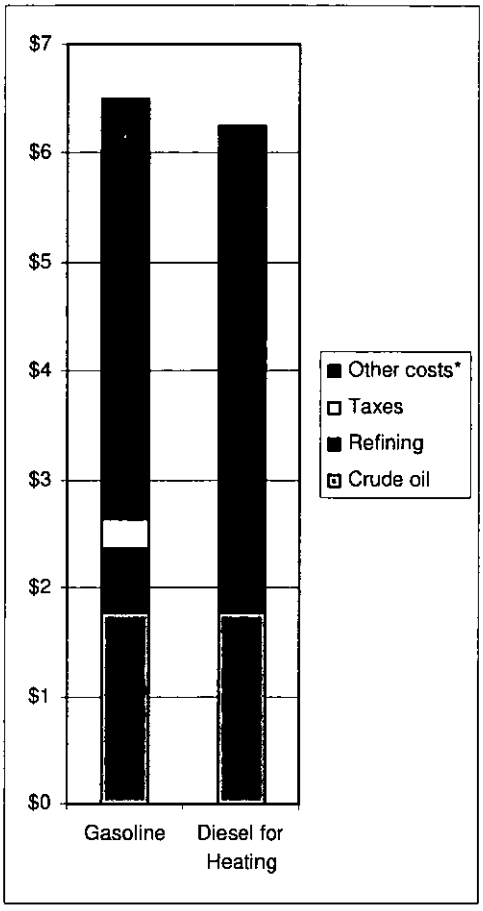


Fort Yukon is on the upper Yukon River northeast of Fairbanks and has a population of about 570. All fuel for Fort Yukon is barged upriver from Nenana by Crowley Marine.

Gasoline retailed for $4.79 per gallon and fuel oil for $4.12 per gallon in November 2007. Ft. Yukon has a 3% local sales tax that applies to fuel sales. Other costs adding to fuel prices, in addition to costs of crude oil and refining, were roughly $2.01 for gasoline and $1.44 for fuel oil in late 2007. Those other costs can largely be attributed to several factors:

- Fuel barged 400 river miles upriver from Nenana.
- River and port freeze up during winter.
- Fuel has to be lightered to community.

Lime Village



Lime Village is on the Stony River in the Kuskokwim Delta of western Alaska. It has a total population of just about 25; the population has declined over the past few years due to lack of jobs and the school closing. All fuel for Lime Village is shipped by air.

In November 2007 gasoline retailed for $6.50 per gallon and fuel oil for $6.25 per gallon. There is no local tax on fuel in the community. The "other" costs adding to the price of fuel in Lime Village in late 2007 were roughly $3.87 per gallon for gasoline and $3.70 for fuel oil. Several things make those other costs high:

⇧ All fuel has to come by air, because barges can't navigate the Stony River to Lime Village

⇧ Very short runway for airplanes; can only handle small shipments per trip.

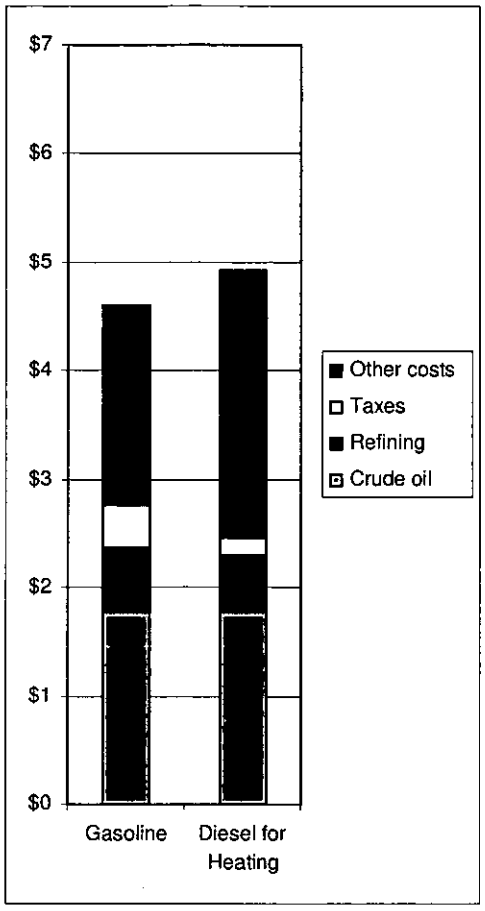
⇧ Fuel is barged from Bethel to Sleetmute and then transferred to planes for delivery to Lime Village.

⇧ Can receive fuel shipments any time of the year but is very expensive.

⇧ Storage facility is publicly owned, but is very small (only 1,800 gallon capacity for the community).

⇧ Small population means delivery charges are spread over fewer gallons.

Mountain Village



Mountain Village is on the Yukon River in Northwest Alaska, close to Norton Sound and the Bering Sea. About 786 people live there. Most fuel for Mountain Village is barged down the Yukon River from Nenana, but occasionally deliveries are lightered from ocean-going vessels at the mouth of the Yukon and shipped upstream.

In November 2007 gasoline retailed for $4.60 per gallon and fule oil for $4.92 per gallon. The community has a 3% sales tax. The "other" costs of fuel in Mountain Village in late 2007 were roughly $1.83 for gasoline and $2.22 for fuel oil. Several things tend to increase or hold down those other costs:

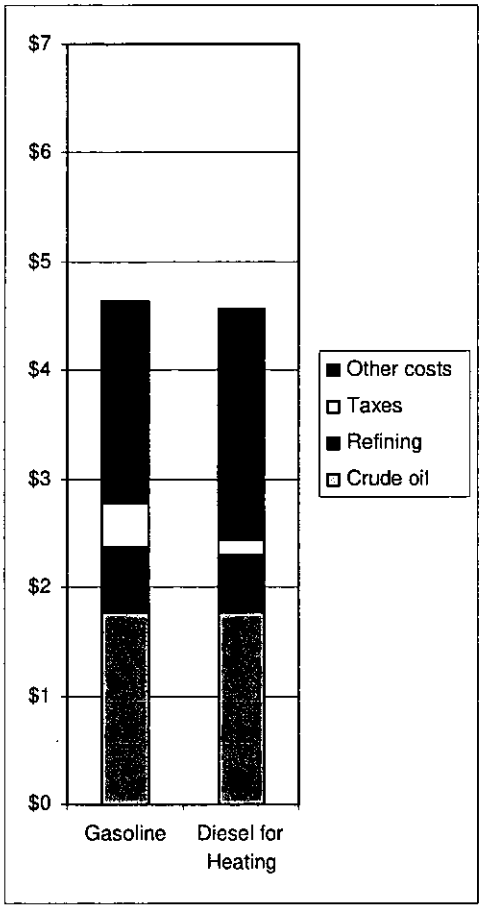
⇧ Barging on the lower Yukon River is the only method of transportation.

⇧ Can only deliver during times of the year when river is not frozen.

Fuel has to be transported in a shallow draft barge; Nenana is main hub port, roughly 1,200 miles upriver.

⇩ Publicly owned storage facility, with a capacity of 200,000 gallons.

Unalakleet



Unalakleet is in northwestern Alaska, on Norton Sound. Unalakleet has about 710 residents. All fuel is first barged to Nome in a line-haul vessel and then transported to Unalakleet in a shallow draft lighterage vessel.

Gasoline retailed for $4.65 per gallon and fuel oil for $4.58 per gallon in November 2007. There is a 3% local sales tax that applies to fuel. The "other" costs, beyond crude oil and refining costs, for fuel in Unalakleet in late 2007 were roughly $1.88 for gasoline and $1.89 for diesel fuel. Several things tend to add to or hold down those other costs:

⇧ Barge is the only method of fuel delivery.

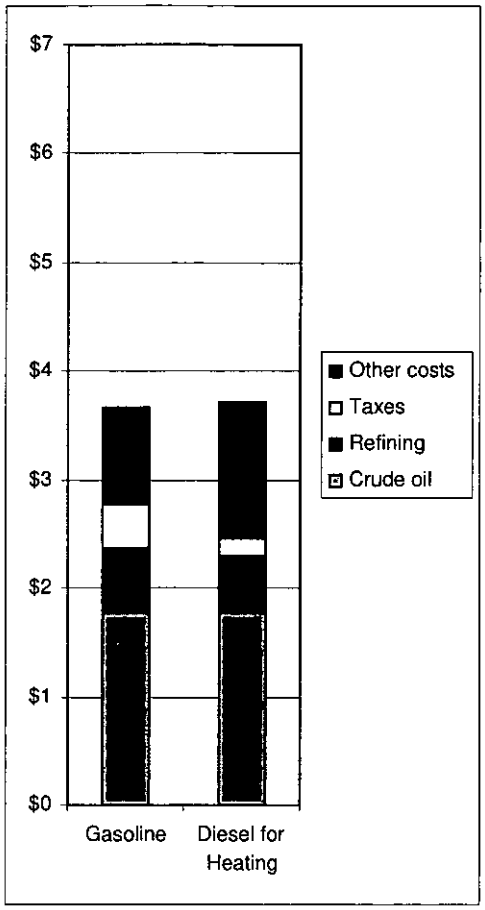
⇧ Norton Sound freezes in winter; deliveries only during certain months.

⇧ Fuel is transported from Nome in a lighterage vessel and pumped directly to a storage facility.

⇩ Community receives three or more shipments per year during ice-free months.

⇩ Publicly owned storage facility with a capacity of 420,000 gallons.

Yakutat



Yakutat is in Southeast Alaska, on the Gulf of Alaska north of the capital city of Juneau. Yakutat has about 619 residents. All fuel is barged to Yakutat by Delta Western, which also owns a 6.5 million gallon storage facility in the community.

In November 2007 gasoline retailed for $3.67 per gallon and fuel oil for $3.72 per gallon. There is a 4% local sales tax on fuel. The "other" costs in Yakutat are roughly $0.89 for gasoline and $1.02 for fuel oil. Fuel is less expensive in Yakutat than in many other places in Alaska because:

⇩ Fuel transportation method is by barge, but no river barging is required and Yakutat can receive shipments from Anchorage and Seattle.

⇩ Ice-free port and fuel deliveries can be made year round.

⇩ Deeper harbor accessible by larger shipments.

⇧ Work on the dock limited shipments to only four in 2007. As a result, fuel in late 2007 was priced higher than it would have been otherwise.

⇩ Large storage facility maintained by one transportation company. Large volume of fuel throughput due to Alaska Airlines' twice daily service to the community.

VIII. Summary and Policy Implications

Table 15 provides a summary matrix of the factors affecting fuel prices in the ten case study communities. The table makes it clear that many factors contribute to widely varying fuel prices.

Table 15. Summary matrix of community case study results

	Community									
	Allakakat & Alatna	Angoon	Bethel	Chitina	False Pass	Fort Yukon	Lime Village	Mountain Village	Unalakleet	Yakutat
Population	87	497	5812	110	54	570	25	786	710	619
Retail Price										
gasoline	6.00	3.96	4.52	3.52	3.49	4.79	6.50	4.60	4.65	3.67
diesel # 1	5.50	3.79	4.25	3.41	2.90	4.12	6.25	4.92	4.58	3.72
Crude price	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78
Refinery										
gasoline	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
#2 diesel	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
Taxes										
Federal/gal.										
gasoline	0.184	0.184	0.184	0.184	0.184	0.184	0.184	0.184	0.184	0.184
#2 diesel										
State/gal.										
gasoline	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
#2 diesel										
Local (%)	0%	0%	0%	0%	3%	3%	0%	3%	3%	4%
All transportation										
State contract delivery price	0.57	**0.21**		0.04		**0.40**			**0.63**	0.53
Transfer points	4	4	4	2.5	4	4	8	4	5	2.5
Deliveries per year	2	8	10+	52	1	2		2	3	4
Quantity per year	7500	88,000		132,600	300,000		1,800	200,000	270,205	
Number of suppliers	2+	1	2	2	1	1	2	2	2+	1
Market contestability	*y*	*y*	*y*	*y*	*y*	*n*	*y*	*y*	*y*	*y*
Storage										
Capacity	16000	34,000	14,830,000	100,000	330,000	660,000	5,000	200,000	421,200	6,468,000
Owner	public	public	private	public	private	private	public	public	public	private
Financing	y	n	n	n	n	n	y	y	y	n
Annual O&M + R&R costs	*4,150*	*8,820*	*3,846,902*	*25,940*	*85,602*	*171,204*	*1,297*	*51,880*	*109,259*	*1,677,799*
per gallon throughput	*0.55*	*0.10*		*0.20*	*0.29*		*0.72*	*0.26*	*0.40*	
Construction cost	*$326,583*	*$693,989*	*$42,041,925*	*$1,360,764*	*$3,180,785*	*$4,864,730*	*$102,057*	*$2,154,542*	*$3,582,210*	*$18,336,289*
Transportation Method	Air	Barge	Barge	Road	Barge	Barge	Barge/Air	Barge	Barge	Barge
Air										
Runway	Long						Short			
Flight time (hours)	2						2			
Price/gal	1.5						1			
Barge										
Ice-free	n/a	y	n	n/a	y	n	n	n	n	y
Moorage/header	n/a	y	y	n/a	y	y	n/a	y	y	y
Tides	n	n	n	n	n	n	n	n	n	n
Lighterage	n/a	y	y	n/a	y	y	y	n	y	n
Navigational risk	n	n	n	n	n	n	n	n	n	n
Wharfage fee	n	y	y	n	y	n	y	n	y	y
Barge distance		990	1,800		850	440		750	1,880	680
Road distance				247		415		415		
Road+Barge distance		990	1,800	247	850	855		1,165	1,880	680
Reported markup				0.05			0	1.06	0.85	0

Notes: Italic = estimate

Bold = proxy from similar communities with state fuel contracts

Businesses consider a number of the costs that contribute to the final retail price of fuel proprietary, making it difficult to accurately quantify the components of fuel costs. In addition, there is limited competition is some markets; more competition tends to push prices down. And the number of businesses getting into the market may be limited due to the costs involved and skills required, or because the market size can only support a limited number of suppliers. Despite these limits, our analysis tells us a number of useful things about fuel prices.

- World and Alaska crude oil prices are set in the global market and reflect both crude oil supply and demand and international global events that influence the real and perceived stability of oil supplies.
- Alaska can do little (or nothing) to influence world crude oil prices. Therefore, these are a relative fixed component of overall fuel costs. In late 2007, costs of crude oil made up approximately $1.78 per gallon of final fuel prices.
- A significant portion of fuels used in Alaska are refined by in-state refineries. The balance is refined mostly in Washington.
- While the costs of fuel from Alaska refineries might be somewhat higher than from West Coast refineries, the additional transportation costs from West Coast refineries to Alaska appear to balance out the costs of in-state feedstock. As a result, the combined crude oil and refinery components tend to total the same amount, regardless of fuel refinery source.
- Refinery wholesale prices tend to closely track crude oil prices. The difference tends to be constant rather than a percentage, which suggests it is based on actual costs.
- The average refinery component for gasoline in September 2007 was about $0.59 and for #2 diesel was $0.53.
- State and federal taxes are a relatively constant component of fuel prices. Some communities charge local sales taxes, which increase final consumer prices.
- The mechanisms for charging federal fuel taxes are complex and obtaining refunds for federal taxes on exempt fuels is cumbersome for consumers.
- The "other costs" component of Alaska fuel prices is the most variable and reflects the wide variations among Alaska communities in distance from refineries, delivery methods, and many other factors.
- Communities closer to refineries and with road, pipeline, or railroad access enjoy the lowest fuel prices. Variations in prices in those locations tend to reflect market competition.
- Communities that rely on air delivery of fuel face the highest prices, with fuel delivery charges of $1.00 to $2.00 per gallon of fuel, depending on the community's population and runway length—which determines the gallons flown in per delivery.
- In general, distance and population are major factors in final fuel prices, because a number of the costs of delivering fuel are relatively fixed. Larger deliveries mean that fixed costs can be spread across more gallons.

- Communities that effectively enlarge their populations or increase their market size through fishing fleets or airline traffic offset the higher prices caused by

small market sizes. Case study communities that strongly illustrate that point are False Pass and Yakutat.

- Barge fuel delivery tends to cause the most variability in fuel prices and reflects in part the complexities of delivery, with seasonal ice being a major component.
- Seasonal ice that limits deliveries also increases the need for storage capacity and the costs of maintaining inventories.
- In addition to seasonal ice that limits the number and timing of deliveries, the depth and characteristics of ports dictate the type of barge that can deliver to communities. The need for custom-built barges for deliveries to communities on shallow stretches of river that freeze up in the winter also increases delivery costs. The short season during which transporters need to recover the capital costs of these barges also increases fuel costs.
- It is unclear whether the lack of competition in fuel delivery shows that markets are too limited to support addition suppliers or that the cost of entry—in capital and skills—is too high. The information we would need to distinguish costs from profits is proprietary.
- The wide variation in final prices to communities suggests that prices at least in part reflect the differing costs of delivering and storing fuel.

Policy implications

Policy can't influence many of the components that go into final fuel prices. Butthere are a number of actions that may be able to influence prices. These include:

- The State of Alaska could provide crude oil feedstock to Alaska refineries through royalty oil sales at reduced prices, to lower the crude oil component of fuel prices. But without continued control of "downstream" cost components, it is not clear whether the lower crude oil feedstock prices would be passed on to final consumers or be taken in higher profits by all the "handlers" between the refinery and the end user. It is also unclear whether direct assistance to the communities and households with the highest fuel costs would be a more efficient and fairer practice, since state revenues to fund such programs also increase with the price of crude oil.
- Fuel prices tend to reflect market size, so cooperative buying to increase deliveries should reduce prices. It is unclear the extent to which communities coordinate deliveries, or whether entities within communities—such as electric utilities, schools, and others—coordinate their fuel purchases.
- The availability of cash to purchase fuels tends to be a limiting factor. The ability of a non-profit broker to coordinate and fund collective fuel purchases could further reduce prices.
- The equipment and infrastructure for fuel delivery—such as docks, moorages, and marine headers—influence the costs of delivery. Ownership of these facilities links a responsible party to fuel spills. Facilities tend to be lacking in some communities, in order to limit liability—but that results in higher delivery costs and inceased risks of spills. Addressing this issue could lower both prices and environmental risks.

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Appendix. Community Case Study Summaries

Allakaket/Alatna

Alatna and Allakaket are located directly across from each other on the Koyukuk River. The two have a combined population of about 125. A state-owned 3,500 foot runway is accessible year-round in Allakaket. There is no barge service due to shallow water. The Koyukuk River is ice-free from June through October.

Fuel is delivered only by air to Allakaket. Both communities have fuel storage capabilities. Fuel is pumped directly from the plane into the communities' fuel tanks. Fuel is flown to the communities as needed year-round. Brooks Air is capable of flying 3,000 gallons of heating fuel, or 3,300 gallons of gasoline, at a rate of $2,400 per hour. Both Brooks Fuel and Everts Air compete to deliver fuel to these communities.

Brooks Fuel purchases its fuel from Alaska Aero Fuel in Fairbanks. As of November 2007, the company paid $3.01 per gallon for #1 heating fuel. On November 13, 2007 Brooks Fuel delivered 3,000 gallons of heating fuel at a landed price of $4.51 per gallon. The retail price for this fuel was $5.50, with a reported $40 per barrel, or $0.95 per gallon, charge for fuel delivery. Everts Air delivered 4,462 gallons of gasoline on November 6 at a landed price of $4.52 per gallon. This gasoline retailed at $6.00 per gallon. The price at which Everts Air purchased its gasoline is not known, but Brooks Fuel reports purchasing its gasoline from Alaska Aero fuel at $2.99 per gallon.

Angoon

Petro Marine Fuel Services delivers fuel to Angoon by barge. Angoon receives deliveries about every one and a half months. Angoon is in Southeast Alaska, and its port is ice-free year round. This allows year-round fuel delivery—which can be in smaller quantities, so Angoon requires fuel storage capacity.

Fuel is delivered to Angoon from two sources. Some fuel is loaded on a barge in Vancouver, British Columbia or Anacortes, Washington and transported to Petro Marine's storage tanks in Ketchikan. It is stored there until it is unloaded into smaller barges that take the fuel to Angoon. Petro Marine also purchases and transports fuel out of the Nikiski Tesoro refinery on the Kenai Peninsula. This fuel is generally carried directly to the Ketchikan fuel tanks. Occasionally it is unloaded from the barge out of Nikiski into smaller barges and delivered directly to Angoon. The path of fuel depends on refinery rack prices and the location of barges with the cheapest and easiest supply route being used.

In November 2007, heating fuel retailed for $3.40 per gallon in Ketchikan and $3.79 per gallon in Angoon. The $0.39 difference in price consisted primarily of the cost of transporting fuel from the tank farms in Ketchikan in small barges to Angoon. Lesser but significant costs are attributable to an increased proportion of overhead costs associated with selling smaller amounts of fuel.

Angoon Oil and Gas is the primary distributor of fuel in Angoon. It has capacity to store approximately 15,000 to 20,000 gallons of #1 heating fuel and 12,000 to 14,000 gallons

of unleaded gasoline. The fuel tanks are owned by Angoon Oil and Gas. The Denali Commission had planned to finance a bulk fuel upgrade in Angoon, but during the initial phases of the project Angoon Oil and Gas decided to independently upgrade.

Gasoline is available for purchase directly at the Angoon Oil and Gas facility, and #1 heating fuel can be delivered by fuel trucks directly to the end users' tanks. Fuel delivery costs $0.10 per gallon. Angoon does not use a significant amount of diesel #2 for heating, because the Tlingit and Haida Central Council upgraded most households to high-efficiency furnaces that burn only #1 fuel oil.

Angoon faces higher delivered fuel prices than neighboring communities because of its small size, which prevents it from purchasing large amounts of fuel at a time. The lack of a "bulk discount" is increasing because Angoon's population has declined in recent years.

Angoon was selected to participate in the Citgo heating fuel program. Each household was given 100 gallons of heating fuel by the state-owned Venezuelan oil company. The fuel was purchased by the household and rebates were distributed by the Tlingit and Haida Central Council.

Bethel

Bethel is at the mouth of the Kuskokwim River, 40 miles inland from the Bering Sea. It has a population of 5,812 and is the regional fuel hub for communities along the Kuskokwim River and coastal communities near the outlet of the Kuskokwim River.

Crowley is the primary fuel supplier in Bethel. Crowley's Bethel tank farm holds a combined 14,830,000 gallons of petroleum products. Bethel serves as Crowley's fuel terminal for the Kuskokwim River region. In 2005 Crowley purchased Yukon Fuel, its major competitor in Bethel. This purchase doubled Crowley's presence in the region and allowed it to take advantage of increased economies of scale, but also raising concerns about potential monopoly market power.[49]

Fuel for the entire region usually goes into Bethel's tanks before being delivered to individual communities. It must be lightered off larger ocean-going barges in order to travel up the Kuskokwim River. Fuel is pumped directly from lighter barges into Bethel's two tank farms. The Port of Bethel levies a $0.04 wharfage fee per gallon on all fuel that enters its port. This wharfage fee increases the cost of fuel in Bethel and surrounding communities.

In November 2007 Crowley sold gasoline from its tanks at $4.52 per gallon and #1 heating fuel at $4.25. There are also multiple fuel truck companies in Bethel that transport fuel from Crowley's tanks for $0.25 to $0.35 per gallon. Crowley both transports the fuel and sells it in the community. It is not possible to break out the transportation and distribution component of fuel to Bethel, because the fuel does not change hands after transportation.

[49] Alaska Journal of Commerce, Alaska Utilities Question Merger Plans. December 7, 2003. http://www.highbeam.com/doc/1G1-119546085.html

Chitina

Chitina is at the confluence of the Copper and Chitina rivers. Most important for fuel transportation costs, Chitina is located on the Edgerton Highway. Its 2006 population was 106. Chitina is the only one of our ten case study communities that is on the road system. Transporting fuel to Chitina on the highway via fuel truck is inexpensive, when compared with fuel transportation costs to the more remote case study communities.

Chitina 1 Stop is the primary seller of gasoline in Chitina. In the past it purchased fuel from Service Oil and Gas in Glennallen. Service Oil and Gas has since been purchased by Crowley. Most services have remained the same since the purchase. Chitina 1 Stop receives one delivery of gasoline per week and purchases as much as 2,500 gallons a week during the peak of the summer season. As of November 2007, Chitina 1 Stop was selling unleaded gasoline for $3.52 per gallon and reports a $0.05 mark up per gallon of gasoline that remains the same regardless of time of year.

Heating fuel is delivered to Chitina by Crowley and Fisher Fuel. Heating fuel #1 is delivered directly to homes in Chitina from fuel trucks. There is no heating fuel company in Chitina. Fisher Fuel operates out of Big Lake and Crowley out of Glennallen. Both companies deliver fuel to communities throughout the region. As of November 2007 Fisher fuel reported selling #1 heating fuel for $3.41 a gallon. This price includes a $0.25 to $0.30 a gallon delivery charge from the fuel's source in Anchorage. Communication with Crowley indicates it charges similar amounts.

Both companies primarily purchase fuel in Anchorage and truck it throughout the region. Chitina tends to face higher delivered fuel costs than other road-connected communities in the region, because its small size means fuel deliveries are also small, raising the fixed overhead costs per unit of fuel.

False Pass

False Pass is in the Aleutians, on the eastern shore of Unimak Island on the straight connecting the Pacific Ocean to the Bering Sea. It has a population of 54. It gets its name from the shallow waters on the Bering Sea side of the straight that prohibit large ships from passing.

This shallow water means large fuel barges can't deliver directly to False Pass. Instead fuel must be lightered onto smaller barges for delivery. Peter Pan Seafoods has a fish processing plant in False Pass that purchases and distributes fuel directly to local residents. Peter Pan generally sells 20,000 gallons of gasoline, 30,000 gallons of #1 heating fuel, and 200,000 gallons of #2 diesel annually. The #2 diesel is sold primarily to the commercial fishing fleet.

Fuel is pumped directly from the fuel barge into Peter Pan's fuel tanks via marine header. Fuel is delivered once a year, in September. Community residents purchase their fuel directly from the pump at the fuel tanks. There is no fuel delivery service within the community. Our contact with Peter Pan Seafoods was not able to reveal the retail markup on the delivered fuel price, other than to say it was determined by the home office in

Seattle. In November 2007 gasoline was selling for $3.49 in False Pass and #1 heating fuel for $2.90.

Fuel is delivered by Crowley barges once a year to Peter Pan. Crowley also delivers about 30,000 gallons of #2 diesel to the City of False Pass for use in its electric generation plant. The Denali Commission built 60,000 gallons of bulk fuel storage for the electric generation plant. A stipulation of the Denali Commission's project is that the bulk fuel farm cannot be a retailer of fuel as long as private competition exists in the market. This prevents the city from entering the market as a seller of heating fuel or gasoline.

Fort Yukon

Fort Yukon is at the confluence of the Yukon and Porcupine rivers, about 145 air miles northeast of Fairbanks. It has a population of 596, and is accessible by barge during the summer months. There is a barge off-loading area, but no dock. Fort Yukon serves as a fuel terminal for Crowley.

Crowley delivers fuel during the summer months. It is barged from Crowley's fuel terminal in Nenana. Crowley owns 660,000 gallons of fuel storage capacity in Fort Yukon that is used to supply the community of Fort Yukon as well as other upper Yukon communities.

Number 1 heating fuel is delivered via truck to households. During November 2007, heating fuel sold for $4.12 per gallon, including the cost of delivery. Diesel #2 sold to the Gwitchyaa Zhee Utility for $3.65 per gallon. Gasoline is only sold by the barrel; the price was $4.79 per gallon in late 2007. The Gwitchyaa Zhee Utility also sells gasoline, with the November 2007 price at $5.10 per gallon. A local tax of 3% is also added to the price of fuel.

Breaking the cost of fuel into components is difficult for Fort Yukon, because Crowley is the transporter and seller of fuel and does not sell the fuel to itself at a "landed price". This lack of a landed price leaves us with only the retail price.

Lime Village

Lime Village is on the Stony River, 50 miles from its junction with the Kuskokwim River. Lime Village's estimated 2006 population was 25, but local residents indicate the number spending the winter in Lime Village was about 6. The population decline is attributed to the closing of the local school and the increasing cost of living—due primarily to rising energy costs.

Lime Village faces the highest fuel costs of the ten case study communities. As a result, wood has become the primary energy source for home heating. Lime Village has the highest fuel prices because it is not accessible by barge, its airstrip is too short to allow large planes to land, and its small population means it makes small fuel purchases.

Fuel is flown into Lime Village in two ways. In the past, almost all fuel was flown in by Henry Hill, a private fuel transporter in Sleetmute. That community gets fuel by barge

from Bethel. Henry Hill would then fly fuel from Sleetmute into Lime Village, in a Cessna 206 with the capacity to carry four barrels of fuel (200 gallons) at a time. Henry Hill charges $425 an hour for flying fuel—so there is a $425 charge to transport 200 gallons of fuel, at a cost of $2.125 per gallon.

Last year Henry Hill was unable to deliver fuel to Lime Village because he was out of compliance with environmental fuel transport regulations. Lime Village's alternative was to contract Everts Air to fly fuel in from the Tesoro refinery in Kenai to the nearby Osprey Lodge. The Osprey Lodge airstrip is able to accommodate larger fuel planes. After the fuel was unloaded at the hunting lodge, the lodge owner, Gary Pogany, flew the fuel 200 gallons at a time the 15 miles into Lime Village. Pogany charged $1.00 a gallon and delivered his fuel for $5.90 per gallon during fall 2007.

Lime Village recently received a bulk fuel storage upgrade from the Denali Commission. It received two new fuel tanks and had old fuel tanks refurbished. These tanks had been used by the school, but were moved to the powerhouse after the school closed. Fuel is unloaded at the airfield and pumped into a holding tank. From there it is pumped to the powerhouse.

In November 2007, Lime Village reported gasoline priced at $6.50 per gallon and #1 heating fuel at $6.25 per gallon.

Mountain Village

Mountain Village is on the Yukon River and has a population of 796. In the summer it is connected to St. Mary's, Andreafsky, and Pitka's Point by a road.

Crowley transports fuel in a shallow draft barge down the Yukon River into Mountain Village, from Crowley's tank farm in Nenana. Rarely will fuel be transported up the Yukon River to Mountain Village, despite the fact that Mountain Village is located much nearer the mouth of the Yukon than it is to Nenana. Nenana serves as Crowley's Yukon River hub, because it is close to North Pole refineries.

Mountain Village generally receives a spring and fall fuel shipment. Azachorak Village Corporation owns the fuel tanks and sells fuel to the community. The corporation reports purchasing 80,000 to 100,000 gallons of both #1 heating fuel and gasoline. Mountain Village's electric utility is operated by AVEC and purchases over 180,000 gallons of #1 diesel to power its generators. The #1 diesel used for electric generation is the same product as #1 heating fuel, but is referred to as #1 diesel by electric utilities.

The community has a 90,000 gallon capacity for #1 heating fuel and 100,000 gallon capacity for gasoline. Azachorak holds a moose-hunt fuel sale every August. This sale serves two purposes. It gives discounts for up to 110 gallons of heating fuel and 165 gallons of gasoline to subsidize fall moose hunts, and it frees up storage capacity before the final barge of the season delivers fuel. For the 2007 moose hunt sale, #1 heating fuel prices were dropped by $0.50 per gallon and gasoline prices were dropped by $0.60 per gallon.

Residents of Mountain Village can pay $0.25 per gallon to have fuel trucked to their homes. If they purchase over 100 gallons they receive a $0.05 discount on the delivery

price. In November 2007 Mountain Village reported a #1 heating fuel price of $4.92 and a gasoline price of $4.60. This includes a 30% mark-up on the delivered price.

Unalakleet

Unalakleet is a community of 727 on Norton Sound in Western Alaska. Its waters are generally ice free from May to October.

Unalakleet's fuel is usually delivered from Nome. Nome's deep-water port allows line haul barges to unload directly into the tank farms without lightering. The City of Nome charges $0.04 per gallon for fuel that passes through the Port of Nome. The fuel is pumped from Nome tank farms into lightering barges for delivery to Unalakleet. The fuel on the barge is pumped directly from the marine header into Unalakleet Native Corporation's tank farm.

Unalakleet Native Corporation is the primary fuel seller for the community. Two fuel deliveries were made to Unalakleet in 2007, totaling 155,696 gallons of #1 heating fuel and 104,509 gallons of gasoline. The landed price of #1 heating fuel was $2.83 per gallon and $3.08 for gasoline in November 2007, while the retail price for #1 heating fuel was $4.58 per gallon and $4.65 per gallon for gasoline. Fuel is not available for purchase at the tank farm. Instead it is trucked to households. The delivery charge is included in the retail price.

Fuel was delivered in 2007 by Delta Western and was financed through the Norton Sound Economic Development Corporation (NSEDC) as part of a project to supply fuel for communities in the area. NSEDC acts as an agent on behalf of the participants, to coordinate the order, issue a Request for Proposal (RFP) to fuel suppliers, evaluate the proposals, award a contract, and act as a single point of contact for the supplier and communities. No interest or fees are charged to the participants for administration of the program.

Yakutat

Yakutat is a community of 634 people on the Gulf of Alaska, 225 miles northwest of Juneau and 220 miles southeast of Cordova. It is at the mouth of Yakutat Bay, one of the few refuges for vessels along this stretch of coast. Yakutat is ice-free year round. It gets fuel from Delta Western. Fuel comes either from Tesoro's Nikiski refinery, through the hub community of Anchorage, or from refineries in Anacortes, Washington. Delta Western has 6,480,000 gallons of fuel storage capacity in the community; much of that is used for fueling Yakutat's twice daily jet service. Delta Western delivers fuel four times per year and owns a fuel delivery dock that is currently being rebuilt.

As of November 2007, the price before tax for a gallon of unleaded gasoline was $3.678, #1 heating fuel was $3.729, and #2 diesel was $3.599. If 50 gallons or more are purchased there is a $0.10 per gallon discount. Heating fuel is delivered to homes in trucks and is not available directly from the fuel tank. The delivery charge is included in the price of fuel.

DIVISION OF COMMUNITY AND REGIONAL AFFAIRS
REPORT TO THE DIRECTOR

CURRENT COMMUNITY CONDITIONS: FUEL PRICES ACROSS ALASKA

NOVEMBER 2007 UPDATE

INTRODUCTION

Retail fuel prices have remained high over the past year across Alaska. Increased energy prices have benefitted the State of Alaska through increased treasury revenues while simultaneously burdening households, small businesses, and communities – especially in remote locations. With harsh winter conditions and associated extreme low temperatures, rural Alaska communities and households reliant on fuel to heat their homes and buildings and to generate electricity are confronted with the challenge of paying high retail fuel prices to meet basic survival needs. The remote nature and limited size of the majority of Alaska's rural communities further compounds the issue due to increased transportation costs, limited storage capacity, and financial management considerations.

As a semi-annual update to the comprehensive fuel survey initiated during 2005 (*Community Conditions: Fuel Prices Across Alaska*), the Division of Community and Regional Affairs (DCRA) repeated a statewide survey of retail heating fuel and gasoline prices in a cross-section of 100 select Alaska communities during November 2007. This report, *Current Community Conditions: Fuel Prices Across Alaska, November 2007 Update* summarizes fuel survey findings, discusses changes in fuel prices during the past six months, and provides a national perspective of fluctuating fuel prices.

METHODOLOGY

The DCRA Research and Analysis Section, in consultation with the Local Government Assistance Section, developed the survey instrument and community sample frame during 2005. Communities were strategically selected to represent differing socioeconomic conditions and all Alaska regions including the Interior, North Slope, South Coastal, Southeast, and Western Regions. Selected communities had also generally been the recipient of an Alaska Energy Authority bulk fuel project

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during the recent past. Since a non-probability sampling method was utilized, this survey is considered a non-scientific study with results not generalizable to the entire population of rural Alaska communities. To accurately and consistently track longitudinal changes in fuel prices, the 2005 survey instrument and community sampling frame was used to collect 2006 and 2007 fuel information – the communities and questionnaire items remained the same from 2005 to 2007.

DCRA Research and Analysis staff implemented the survey instrument during November 26 – 30, 2007. In total, local fuel retailers from 100 communities were contacted (via telephone) and requested to provide current heating fuel (#1) and gasoline per gallon prices. Survey results are one-time measurements and representative of retail fuel prices on the particular day of contact. Heating fuel and gasoline prices may have changed between the time of contact and publishing of this report.

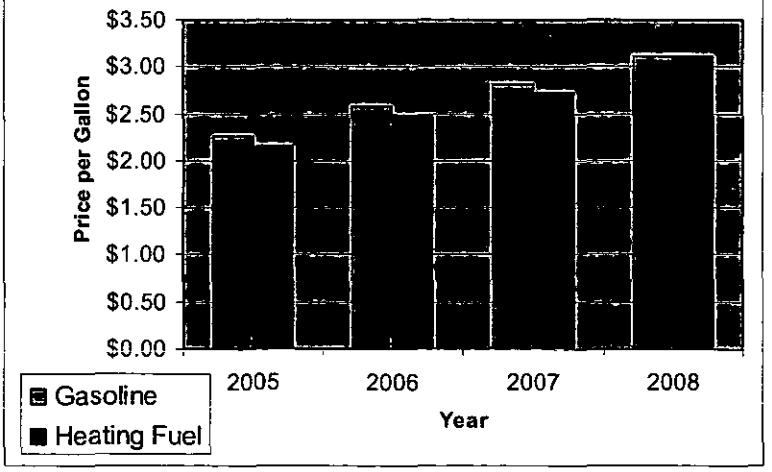
NATIONAL CONTEXT

The West Coast average spot price for a barrel of Alaska North Slope (ANS) crude oil climbed to a new record in November 2007 reaching $92.98, a robust 71% increase over November 2006 average ANS spot prices (Energy Information Administration, 2007). The State of Alaska's recently amended oil taxing structure combined with continuing record high ANS oil prices is projected to add an additional $1.5 billion to the State's General Fund in FY 2008. This estimate is not going unnoticed in struggling rural Alaska communities facing record gasoline and home heating fuel retail prices.

The high average price per barrel of crude oil is expected to result in continuing higher U.S. consumer prices for gasoline and home heating fuel (Figure 1).

During 2007, national gasoline prices averaged $2.81 per gallon compared with $2.58 per gallon in 2006, and reached a weekly peak of $3.11 during mid-November (Energy Information Administration, 2007). Since mid-November, a slight decline in crude oil prices has resulted in a ten cent per gallon decrease in gasoline prices. Nevertheless, energy analysts project by the middle of next spring gasoline prices will increase to over $3.40 per gallon as the driving season begins.

Figure 1. U.S. Energy Price Outlook (2005-2008)
Retail Gasoline and Residential Heating Fuel National Price Summary, Actual and Projected 2005 - 2008

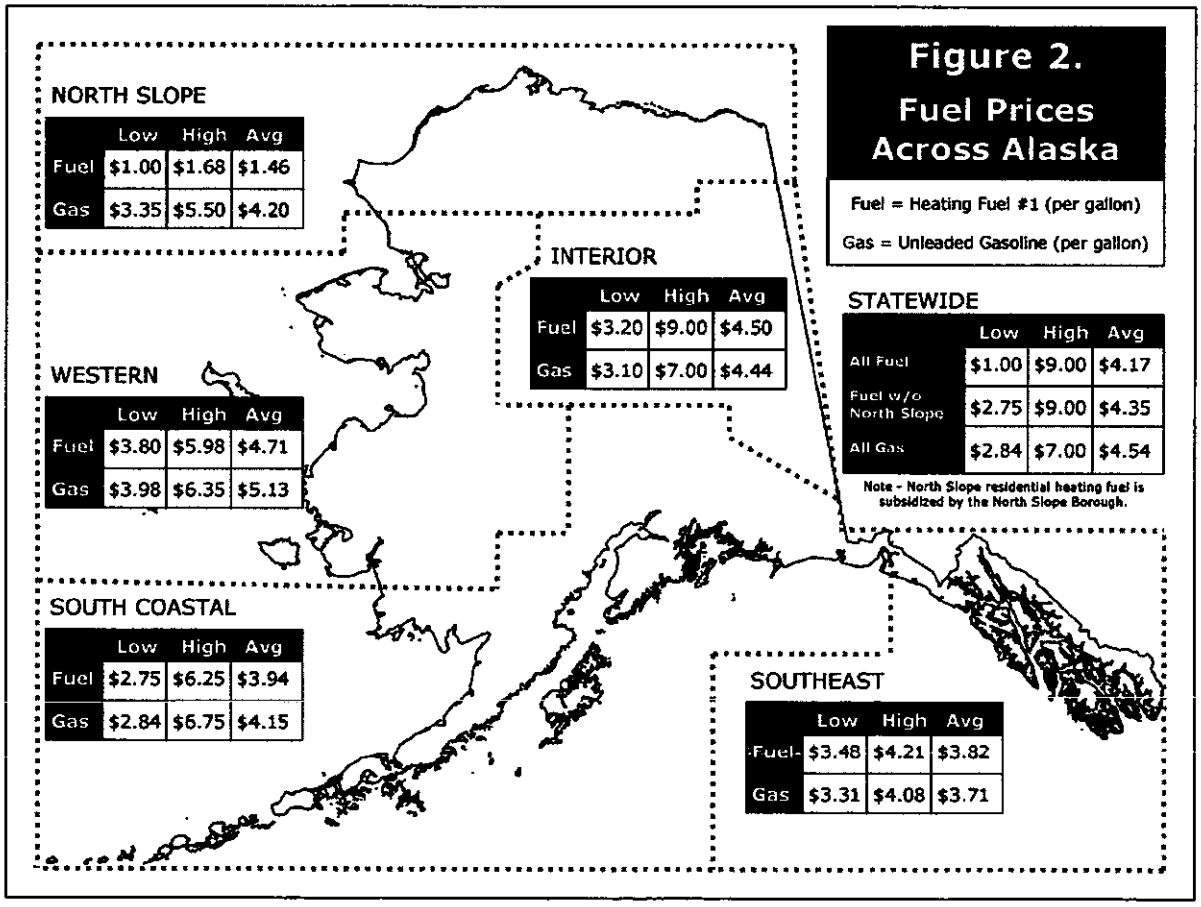


Source: Energy Information Administration, 2007

Residential heating fuel prices are projected to average $3.23 per gallon over the winter of 2007 (Energy Information Administration, 2007). This is approximately 19% above the current 2007 annual average residential heating fuel prices of $2.72 per gallon, and a 30% increase above the 2006 home heating season when prices averaged $2.48 per gallon.

Continuing tight supply and high demand is expected to keep crude oil prices elevated over the foreseeable future. For example, West Texas Intermediate (WTI) monthly crude oil prices averaged over $85 per barrel in October and $95 per barrel in November, reaching a record $98 per barrel before the month ended. These prices are up $27 and $36 per barrel respectively from the same time last year. By way of comparison, WTI prices averaged $66.02 per barrel in 2006, and $72.05 per barrel in 2007. Additionally, WTI monthly average prices are expected to exceed $80 per barrel through 2008 (Energy Information Administration, 2007).

CURRENT FUEL PRICES ACROSS ALASKA



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As Figure 2 illustrates, average heating fuel prices per gallon vary across Alaska by region. Western Alaska communities report the highest average heating fuel retail price at $4.71 per gallon while North Slope communities report the lowest average retail price at $1.46 per gallon. Of noteworthy importance, the North Slope Borough provides free heating fuel for residential use through village corporations who distribute fuel to residents throughout the Borough, charging only a delivery fee on a per gallon basis. The North Slope Borough does not subsidize heating fuel for commercial use. Consequently, heating fuel retail price for commercial entities is significantly higher than residential use heating fuel (see Table 1). Compared to other regions, and excluding the North Slope, Southeast Alaska communities experience relatively lower heating fuel prices indicated by an average of $3.82 per gallon.

Table 1. North Slope Heating Fuel (#1) and Gasoline Retail Prices

Community	Community Retailer	Heating Fuel Retail Price		Gasoline Retail Price
		Residential	Commercial	
Anaktuvuk Pass	Nunamiut Corporation	$1.00	$4.15	$5.50
Atqasuk	Atqasuk Corporation	$1.40	$4.10	$4.10
Barrow	BUEC, Inc.	Natural Gas	$4.90	$4.45
Kaktovik	Kaktovik Inupiat Corporation	$1.55	$4.95	$3.45
Nuiqsut	Kuukpik Corporation	$1.45	$4.90	$3.35
Point Hope	Tigara Corporation	$1.65	$5.05	$4.25
Wainwright	Olgoonik Corporation	$1.68	$5.11	$4.33

To accurately summarize statewide heating fuel prices, it is appropriate to exclude North Slope Borough communities due to the North Slope Borough subsidy for residential use heating fuel. When considering statewide heating fuel prices, the Arctic Village Traditional Council (Interior Region) reports the highest heating fuel retail price at $9.00 per gallon (see Appendix). In contrast, the City of Akutan in Akutan (South Coastal Region) reports the lowest heating fuel retail price at $2.75 per gallon. On average, heating fuel retail price is $4.35 per gallon across Alaska with 93 communities reporting heating fuel prices (excluding North Slope Region communities).

As Figure 2 illustrates, average gasoline prices per gallon also vary across Alaska by region. Western communities report the highest average gasoline retail price at $5.13 per gallon while Southeast communities report the lowest average retail price at $3.71 per gallon. Statewide retail prices indicate significant variation in gasoline retail price. Specifically, the Arctic Village Traditional Council in Arctic Village (Interior Region) reports the highest gasoline price at $7.00 per gallon. In contrast, City of Chignik in Chignik reports the lowest gasoline retail price at $2.84 per gallon. On average, gasoline retail price is $4.54 per gallon across Alaska with 100 communities reporting.

Method of transporting heating fuel and gasoline varies across Alaska with fuel retailers using barge, air, truck, or a combination to transport fuel into the community (Table 2). With 100 communities reporting, the wide majority (83%) report barging fuel into the community. In contrast, nine communities (9%) report trucking fuel into the community, four communities (4%) report air freighting fuel into the community, and four communities (4%) utilize multiple methods of transporting fuel into the community (i.e., barge/truck, barge/air, or truck/air). Fairbanks and Valdez do not transport heating fuel because of a local on-site refinery; gasoline is transported by truck and barge respectively.

Table 2. Fuel Transportation Method

Transportation Method	Statewide	Interior Region	North Slope Region	South Coastal Region	Southeast Region	Western Region
Barge Only	83	4	5	23*	11	40
Truck Only	9	8*	0	1	0	0
Air Only	4	3	0	1	0	0
Barge/Truck	2	0	0	2	0	0
Barge/Air	1	0	1	0	0	0
Truck/Air	1	0	1	0	0	0
Total Communities Reporting	100	15	7	27	11	40

*Heating fuel is refined in Fairbanks and Valdez; gasoline is transported by truck and barge respectively.

CHANGE IN FUEL PRICES ACROSS ALASKA (6/2007 TO 11/2007)

During the past six months, heating fuel and gasoline retail prices have remained relatively stable with both experiencing only minor increases from June 2007 to November 2007. With 93 communities reporting (excluding North Slope Region communities), the statewide average heating fuel price increased from $4.14 to $4.35 per gallon (Table 3). The $0.21 per gallon average price increase represents a 5% increase in statewide average heating fuel per gallon price. With the exception of the Western Region, all Alaska regions experienced price increases ranging from 6% (North Slope Region) to 14% (Interior Region). Although the Western Region has the highest average heating fuel price ($4.71), it has remained stable during the past six months, actually dropping by two cents per gallon. During the June 2007 to November 2007 time period, no other region experienced an overall decrease in heating fuel per gallon average price.

Table 3. Regional Change in Heating Fuel (#1) Price (6/07 to 11/07)

Region	Communities Reporting	11/07 HF Average	Percent +/- 11/07 Statewide Average ($4.35)*	6/07 HF Average	Percent +/- 6/07 - 11/07
Interior	15	$4.50	3%	$3.94	14%
North Slope	6**	$1.46	-66%	$1.38	6%
South Coastal	27	$3.94	-9%	$3.67	7%
Southeast	11	$3.82	-12%	$3.46	10%
Western	40	$4.71	8%	$4.73	0%***
Statewide	**93***	**$4.35***	**n/a**	**$4.14***	**5%**

* Statewide heating fuel average excluding North Slope Region communities.
** Seven North Slope communities surveyed; one (Barrow) does not use heating fuel and is consequently excluded.
*** Western Region heating fuel prices declined by $0.02, which represents a 0% change due to mathematical rounding.

With 100 communities reporting, the statewide average gasoline price increased from $4.49 to $4.54 per gallon from June 2007 to November 2007 (Table 4). The $0.06 per gallon average price increase represents a 1% increase in statewide average gasoline per gallon price. Interior, South Coastal, and Western Regions experienced a price increase of 2%. In contrast, North Slope and Southeast Regions experienced gasoline per gallon price decreases of 6% and 1% respectively.

Table 4. Regional Change in Gasoline Price (6/07 to 11/07)

Region	Communities Reporting	11/07 Gas Average	Percent +/- 11/07 Statewide Average ($4.54)	6/07 Gas Average	Percent +/- 6/07 - 11/07
Interior	15	$4.44	-2%	$4.36	2%
North Slope	7	$4.20	-7%	$4.47	-6%
South Coastal	27	$4.15	-9%	$4.06	2%
Southeast	11	$3.71	-18%	$3.75	-1%
Western	40	$5.13	13%	$5.04	2%
Statewide	**100**	**$4.54**	**n/a**	**$4.49**	**1%**

Retailers were queried regarding whether market demand for heating fuel or gasoline had increased, decreased, or remained the same during the past 12 months. Retailers across the state report the same experience; despite record high prices, change in demand for heating fuel and gasoline has largely not changed during the past 12 months. In particular, demand for heating fuel and gasoline has decreased in

only 21% and 11% of communities respectively during the past 12 months (Table 5). In contrast, three-quarters or more of communities suggest there has been no change in consumer demand for either heating fuel (71%) or gasoline (82%). Stable market demand for both heating fuel and gasoline despite record high prices is likely indicative of rural communities needing a consistent minimum quantity of both resources simply to meet basic survival needs.

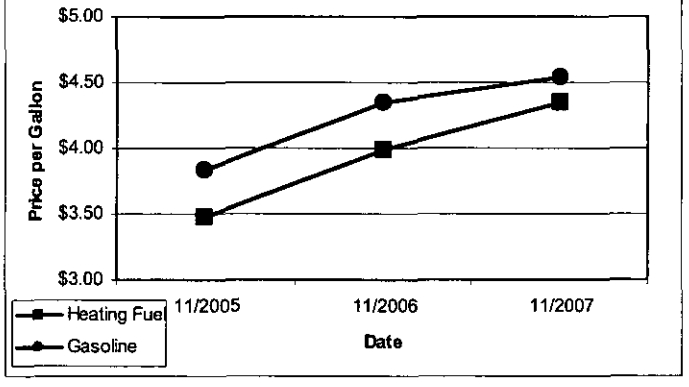
Table 5. Change in Demand for Heating Fuel (#1) and Gasoline (past 12 months)

Region	Heating Fuel			Gasoline		
	Increased	Decreased	No Change	Increased	Decreased	No Change
Interior	13%	40%	47%	13%	27%	60%
North Slope	0%	0%	100%	0%	0%	100%
South Central	4%	15%	81%	4%	7%	89%
Southeast	0%	55%	45%	0%	9%	91%
Western	14%	11%	75%	11%	8%	81%
Statewide*	**8%**	**21%**	**71%**	**7%**	**11%**	**82%**

* Ninety-six communities reporting.

Since November 2005, DCRA has conducted the statewide bulk fuel survey of 100 communities on a bi-annual schedule. Over the past two years, statewide heating fuel and gasoline retail per gallon prices have steadily increased (Figure 3). Specifically, statewide average heating fuel retail price has increased from $3.48 (November 2005) to $4.35 (November 2007). This $0.87 per gallon price increase represents an overall increase of 25%. Statewide average gasoline retail prices have also increased from $3.83 (November 2005) to $4.54 (November 2007), which represents an overall increase of 19% ($0.71).

Figure 3. Change in Heating Fuel and Gasoline Prices (11/2005) to 11/2007)



Regional analysis suggests heating fuel and gasoline prices have increased in every region except the North Slope Region since 2005. In the North Slope Region, heating fuel decreased by 11% ($0.18) from $1.64 per gallon (November 2005) to $1.46 per gallon (November 2007) and gasoline decreased by 1% ($0.06) from $4.26 (November 2005) to $4.20 (November 2007).

Aside from the North Slope Region, from November 2005 to November 2007 the price of heating fuel has increased by at least 18% and the price of gasoline by at least 13% in every region. The Interior Region has experienced the most significant increase in heating fuel where the average price has increased from $3.34 (November 2005) to $4.50 (November 2007), which represents an overall increase of 35% ($1.16). The Western Region experienced the greatest increase in gasoline prices from $4.09 (November 2005) to $5.13 (November 2007), which represents an overall increase of 25% ($1.04).

SUMMARY

During November 2007, current retail heating fuel (#1) and gasoline prices were collected from 100 select communities located across rural Alaska. Heating fuel retail prices per gallon ranged from $2.75 (Akutan) to $9.00 (Arctic Village); statewide average price was $4.35 per gallon. Gasoline retail prices per gallon ranged from $2.84 (Chignik) to $7.00 (Arctic Village); statewide average price was $4.54. In general, heating fuel and gasoline retail prices have remained relatively stable during the past six months with statewide average prices of heating fuel increasing by 5% and gasoline increasing by 1%. Significantly increased fuel and energy costs combined with high unemployment rates, limited local economies, and local governments struggling to provide basic local services continue to present rural Alaska communities and households with challenging circumstances with no long-term solution in sight.

In response to current rural Alaska energy challenges, the State of Alaska has implemented a variety of assistance programs to meet rising fuel costs, provide emergency assistance for municipalities, and provide a state contribution to a federal program that helps low-income households pay for energy. The State of Alaska administers a variety of specific assistance programs focused on alleviating community and household impacts of increased retail fuel prices including: 1) Community Energy Assistance Program; 2) Bulk Fuel Revolving Loan Fund; 3) Fuel Bridge Loan Program; 4) Power Cost Equalization; 5) Low Income Home Energy Assistance Program; 6) Power Project Loan Fund; 7) Power, Fuel, and Hydro Training; and 8) Bulk Fuel Upgrades.

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Appendix: Community Heating Fuel and Gasoline Survey - November 2007 Update

Community	Region	Community Retailer: (entity selling fuel)	Heating Fuel #1 11/2007 Retail: (selling price per gallon)	Percent +/- Statewide HF Average ($4.35)*	Percent +/- 8/2007 Retail: (selling price per gallon)	Gasoline 11/2007 Retail Price: (selling price per gallon)	Percent +/- Statewide Gas Average ($4.64)*	Percent +/- 8/2007 Retail: (selling price per gallon)	Transport Method:			Change in HF Demand? (increase, decrease, remain same)	Change in Gas Demand? (increase, decrease, remain same)
Alatna	Interior	Alatna Traditional Council	$6.00	38%	9%	$6.00	32%	0%		Air		Same	Same
Anderson	Interior	Nenana Heating	$3.44	-21%	30%	$3.53	-22%	12%			Truck	Decrease	Same
Arctic Village	Interior	Arctic Village Traditional Council	$9.00	107%	42%	$7.00	54%	0%		Air		Decrease	Decrease
Circle	Interior	(HF#1) Steve's (Gas) HC Company Store	$3.50	-20%	0%	$3.64	-20%	-4%			Truck	Same	Same
Delta Junction	Interior	Delta Fuel Company	$3.29	-24%	28%	$3.24	-29%	8%			Truck	Decrease	Same
Eagle	Interior	Telegraph Hill Services	$3.50	-20%	28%	$3.75	-17%	0%			Truck	Decrease	Decrease
Fairbanks	Interior	Petro Star - Flint Hill	$3.20	-26%	30%	$3.10	-32%	7%			Truck	Increase	Increase
Galena	Interior	Crowley Marine Services	$4.31	-1%	1%	$4.69	3%	-1%	Barge			Decrease	Decrease
Healy	Interior	Keith's Healy Service	$3.49	-20%	9%	$3.57	-21%	6%			Truck	Decrease	Decrease
Hughes	Interior	Hughes City Council	$7.50	72%	25%	$6.00	32%	0%		Air		Increase	Increase
Huslia	Interior	Huslia Gas & Oil	$4.50	3%	-10%	$5.00	10%	0%	Barge			Same	Same
Minto	Interior	North Fork Store	$4.10	-6%	28%	$4.05	-11%	4%			Truck	Same	Same
Nenana	Interior	Nenana Heating	$3.43	-21%	30%	$3.51	-23%	11%			Truck	Same	Same
Ruby	Interior	Dinega Fuel Corporation	$4.30	-1%	-5%	$4.50	-1%	-3%	Barge			Same	Same
Tanana	Interior	Tanacon Fuel	$3.95	-9%	-10%	$4.99	10%	2%	Barge			Same	Same
Anaktuvuk Pass	North Slope	Nunamiut Corporation	$1.00	-77%	-23%	$5.50	21%	-14%	Barge			Same	Same

Appendix: Community Heating Fuel and Gasoline Survey - November 2007 Update

Community	Region	Community Retailer (utility selling fuel)	Heating Fuel 11/2007 Retail (selling price per gallon)	Percent +/- Statewide HF Average ($4.36)	Percent +/- 6/2007 Retail (selling price per gallon)	Gasoline 11/2007 Retail Price (selling price per gallon)	Percent +/- Statewide Gas Average ($4.54)	Percent +/- 6/2007 Retail (selling price per gallon)	Transport Method			Change in HF Demand? (increase, decrease, remain same)	Change in Gas Demand? (increase, decrease, remain same)
Atqasuk	North Slope	Atqasuk Corporation	$1.40	-68%	0%	$4.10	-10%	0%	Barge	Air		Same	Same
Barrow	North Slope	Eskimo Inc.	Nat Gas	n/a	n/a	$4.45	-2%	-2%	Barge			Same	Same
Kaktovik	North Slope	Kaktovik Inupiat Corporation	$1.55	-64%	3%	$3.45	-24%	0%	Barge			Same	Same
Nuiqsut	North Slope	Kuukpik Corporation	$1.45	-67%	16%	$3.35	-26%	-11%		Air	Truck	Same	Same
Point Hope	North Slope	Tigara Corporation	$1.65	-62%	22%	$4.25	-6%	6%	Barge			Same	Same
Wainwright	North Slope	Olgoonik Corporation	$1.68	-61%	16%	$4.33	-5%	-14%	Barge			Same	Same
Akutan	South Coastal	City of Akutan	$2.75	-37%	0%	$3.25	-28%	16%	Barge			Same	Same
Atka	South Coastal	Atka Native Store	$4.99	15%	-2%	$5.09	12%	-6%	Barge			Same	Same
Chenega Bay	South Coastal	Chengega Bay Utility	$3.30	-24%	0%	$3.70	-19%	0%	Barge			Same	Same
Chignik	South Coastal	City of Chignik	$3.36	-23%	15%	$2.84	-37%	-10%	Barge			Same	Same
Chitina	South Coastal	Chitina Services Oil and Gas	$3.44	-21%	21%	$3.45	-24%	10%	Barge		Truck	Decrease	Same
Clark's Point	South Coastal	City of Clark's Point	$4.70	8%	-8%	$5.13	13%	9%	Barge			Decrease	Same
Cordova	South Coastal	Hovers Mover	$4.19	-4%	13%	$4.05	-11%	-6%	Barge			Same	Same
Dillingham	South Coastal	Delta Western	$4.24	-3%	12%	$4.96	9%	0%	Barge			Same	Same
Glennallen	South Coastal	Service Oil and Gas	$3.44	-21%	21%	$3.45	-24%	10%			Truck	Increase	Increase
Goodnews Bay	South Coastal	Mumtram Pikkai Village Corporation	$4.00	-8%	-2%	$5.10	12%	2%	Barge			Same	Same

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Appendix: Community Heating Fuel and Gasoline Survey - November 2007 Update

Community	Region	Community Retailer: (entity selling fuel)	Heating Fuel #1 11/2007 Retail: (selling price per gallon)	Percent +/- Statewide HF Average ($4.35+):	Percent +/- 6/2007 Retail: (selling price per gallon)	Gasoline 11/2007 Retail Price: (selling price per gallon)	Percent +/- Statewide Gas Average ($3.64):	Percent +/- 6/2007 Retail: (selling price per gallon)	Transport Method:			Change in HF Demand? (increase, decrease, remain same)	Change in Gas Demand? (increase, decrease, remain same)
Homer	South Coastal	Homer Run Oil	$3.42	-21%	29%	$3.35	-26%	8%	Barge		Truck	Same	Same
King Cove	South Coastal	Peter Pan Seafood	$2.82	-35%	-2%	$3.58	-21%	0%	Barge			Same	Same
Kodiak	South Coastal	Thompson Transfer	$3.28	-25%	12%	$3.49	-23%	-4%	Barge			Same	Same
Kokhanok	South Coastal	Kokhanok Tribal Council	$6.25	44%	2%	$6.75	49%	4%	Barge			Decrease	Decrease
Larsen Bay	South Coastal	City of Larsen Bay	$4.33	0%	31%	$4.10	-10%	22%	Barge			Same	Same
Nelson Lagoon	South Coastal	Crowley	$4.12	-5%	4%	$4.82	6%	13%	Barge			Same	Same
New Stuyahok	South Coastal	New Stuyahok Village Corporation	$4.70	8%	0%	$5.46	20%	0%	Barge			Same	Same
Nondalton	South Coastal	City of Nondalton	$6.15	41%	11%	$6.13	35%	8%		Air		Same	Same
Old Harbor	South Coastal	City of Old Harbor	$4.23	-3%	21%	$4.17	-8%	2%	Barge			Same	Same
Ouzinkie	South Coastal	Ouzinkie Native Corporation	$3.08	-29%	15%	$3.59	-21%	-1%	Barge			Same	Same
Port Lions	South Coastal	Kizhuyak Oil Sales	$3.70	-15%	0%	$4.00	-12%	0%	Barge			Decrease	Decrease
Saint George	South Coastal	Delta Fuel Company	$4.47	3%	0%	$4.08	-10%	0%	Barge			Same	Same
Sand Point	South Coastal	Paul Gundersen	$3.39	-22%	4%	$3.24	-29%	7%	Barge			Same	Same
Seldovia	South Coastal	Seldovia Fuel and Lube	$3.55	-18%	15%	$3.57	-21%	-7%	Barge			Same	Same
Togiak	South Coastal	Togiak Village Corporation	$3.69	-15%	-7%	$4.21	-7%	-9%	Barge			Same	Same
Unalaska	South Coastal	Delta Western	$3.49	-20%	10%	$3.27	-28%	2%	Barge			Same	Same

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Appendix: Community Heating Fuel and Gasoline Survey - November 2007 Update

Community	Region	Community Retailer (entity selling fuel)	Heating Fuel #1 11/2007 Retail: (selling price per gallon)	Percent +/- Statewide HF Average ($4.39*)	Percent +/- 8/2007 Retail: (selling price per gallon)	Gasoline 11/2007 Retail Price: (selling price per gallon)	Percent +/- Statewide Gas Average ($4.54)	Percent +/- 8/2007 Retail: (selling price per gallon)	Transport Method:			Change in HF Demand? (increase, decrease, remain same)	Change in Gas Demand? (increase, decrease, remain same)
Valdez	South Coastal	North Pacific	$3.25	-25%	21%	$3.33	-27%	4%	Barge (Gas)	Refinery (Oil)		Same	Same
Angoon	Southeast	Angoon Oil and Gas	$3.91	-10%	7%	$4.08	-10%	5%	Barge			Decrease	Decrease
Craig	Southeast	Petro Marine	$3.61	-17%	18%	$3.42	-25%	7%	Barge			Decrease	Same
Gustavus	Southeast	Gustavus Dray - Gustavus Propane	$3.61	-17%	11%	$3.63	-20%	-7%	Barge			Same	Same
Hoonah	Southeast	Hoonah Trading	$4.18	-4%	23%	$3.80	-16%	1%	Barge			Same	Same
Juneau	Southeast	Delta Western - Fred Meyer Gas	$3.48	-20%	6%	$3.31	-27%	1%	Barge			Decrease	Same
Kake	Southeast	Kake Tribal Fuel	$4.09	-6%	4%	$3.90	-14%	-10%	Barge			Same	Same
Pelican	Southeast	Lisianski Oil - Pelican Sea	$4.21	-3%	12%	$4.06	-11%	-3%	Barge			Decrease	Same
Petersburg	Southeast	Petro Marine	$3.67	-16%	20%	$3.41	-25%	10%	Barge			Same	Same
Point Baker	Southeast	Point Baker Trading Post	$4.00	-8%	-4%	$3.90	-14%	-8%	Barge			Decrease	Same
Thorne Bay	Southeast	Petro Alaska	$3.48	-20%	16%	$3.52	-22%	-7%	Barge			Same	Same
Wrangell	Southeast	Wrangell Oil - Fennemore's Service	$3.78	-13%	8%	$3.78	-17%	6%	Barge			Decrease	Same
Akiak	Western	Kokarmiut Corporation	$4.60	6%	0%	$5.00	10%	1%	Barge			Same	Same
Anvik	Western	Deloyges, Inc.	$4.50	3%	13%	$5.00	10%	0%	Barge			Same	Same
Atmautluak	Western	Atmauthluak Limited	$4.81	11%	5%	$4.81	6%	0%	Barge			Don't know	Don't know
Bethel	Western	Crowley	$4.25	-2%	4%	$4.52	0%	-4%	Barge			Same	Same

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Appendix: Community Heating Fuel and Gasoline Survey - November 2007 Update

Community	Region	Community Retailer (entity selling fuel)	Heating Fuel 11/2007 Retail (selling price per gallon)	Percent +/- Statewide HF Average ($4.35)	Percent +/- 8/2007 Retail (selling price per gallon)	Gasoline 11/2007 Retail Price (selling price per gallon)	Percent +/- Statewide Gas Average ($4.54)	Percent +/- 8/2007 Retail (selling price per gallon)	Transport Method			Change in HF Demand? (increase, decrease, remain same)	Change in Gas Demand? (increase, decrease, remain same)
Brevig Mission	Western	Brevig Mission Native Store	$4.45	2%	-7%	$5.10	12%	0%	Barge			Same	Same
Deering	Western	Deering IRA	$3.98	-9%	3%	$4.24	-7%	12%	Barge			Same	Same
Emmonak	Western	Emmonak Corp. Tank Farm	$4.85	11%	3%	$5.91	30%	21%	Barge			Increase	Increase
Gambell	Western	ANICA (Gambell Native Store)	$4.75	9%	2%	$5.85	29%	20%	Barge			Same	Same
Golovin	Western	Golovin Public Utilities	$4.00	-8%	-10%	$4.25	-6%	-13%	Barge			Same	Same
Grayling	Western	AYL Grayling Fuel Company	$4.50	3%	-10%	$5.50	21%	0%	Barge			Same	Same
Holy Cross	Western	Holy Cross O.L. Company	$4.55	5%	-13%	$5.30	17%	-6%	Barge			Same	Same
Hooper Bay	Western	Crowley Marine	$5.05	16%	-2%	$5.32	17%	0%	Barge			Same	Same
Kaltag	Western	Kaltag Cooperative	$4.50	3%	0%	$5.00	10%	0%	Barge			Same	Increase
Kiana	Western	Kiana Traditional Council	$5.15	18%	-14%	$5.92	30%	13%	Barge			Don't know	Don't know
Kotlik	Western	Kotlik Yupik Enterprises	$4.50	3%	-9%	$5.60	23%	9%	Barge			Same	Same
Kotzebue	Western	Crowley	$4.20	-3%	4%	$4.36	-4%	4%	Barge			Same	Same
Koyuk	Western	Koyuk Native Corporation	$3.98	-9%	-8%	$3.98	-12%	-8%	Barge			Same	Same
Kwigillingok	Western	KWIK Marina Inc.	$4.85	11%	3%	$5.35	18%	9%	Barge			Increase	Increase
Marshall	Western	Maserculiq Inc.	$4.88	12%	3%	$4.83	6%	-6%	Barge			Don't know	Don't know
McGrath	Western	Crowley	$4.92	13%	2%	$5.73	26%	8%	Barge			Decrease	Decrease

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Appendix: Community Heating Fuel and Gasoline Survey - November 2007 Update

Community	Region	Community Retailers (entity selling fuel)	Heating Fuel #1 11/2007 Retail: (selling price per gallon)	Percent +/- Statewide HF Average ($4.36):	Percent +/- 8/2007 Retail: (selling price per gallon)	Gasoline 11/2007 Retail Price: (selling price per gallon)	Percent +/- Statewide Gas Average ($4.54):	Percent +/- 8/2007 Retail: (selling price per gallon)	Transport Method:			Change in HF Demand? (increase, decrease, remain same)	Change in Gas Demand? (increase, decrease, remain same)
Mountain Village	Western	Azachorak Fuel	$4.81	11%	3%	$5.01	10%	3%	Barge			Same	Decrease
Noorvik	Western	Morris Trading Post	$4.60	6%	1%	$4.88	7%	0%	Barge			Same	Same
Nulato	Western	City of Nulato	$5.00	15%	0%	$5.00	10%	-9%	Barge			Increase	Same
Nunapitchuk	Western	Nunapitchuk LTD.	$4.75	9%	6%	$5.00	10%	5%	Barge			Same	Same
Pilot Station	Western	Pilot Station Native Corporation	$5.98	37%	26%	$6.08	34%	4%	Barge			Increase	Same
Quinhagak	Western	Qanirtuuq Corporation	$4.73	9%	0%	$5.24	15%	0%	Barge			Same	Same
Russian Mission	Western	Russian Mission Corporation	$4.75	9%	-5%	$5.52	22%	0%	Barge			Same	Same
Saint Michael	Western	Saint Michael Fuel Company	$4.65	7%	0%	$4.98	10%	0%	Barge			Same	Same
Savoonga	Western	ANICA (Savoonga Native Store)	$4.69	8%	0%	$5.59	23%	0%	Barge			Same	Same
Scammon Bay	Western	Askinuk Corporation	$5.00	15%	0%	$4.87	7%	-3%	Barge			Same	Same
Shishmaref	Western	Shishmaref Native Store	$5.09	17%	0%	$5.25	16%	11%	Barge			Same	Same
Sleetmute	Western	Henry Hill Store	$5.65	30%	-4%	$6.35	40%	0%	Barge			Decrease	Decrease
Stebbins	Western	Tapraq Fuel Company	$4.96	14%	2%	$5.41	19%	8%	Barge			Decrease	Same
Teller	Western	City of Teller	$3.80	-13%	-21%	$4.25	-6%	-11%	Barge			Same	Same
Toksook Bay	Western	Nunakaulak Yupik Corporation	$5.24	20%	0%	$5.89	30%	0%	Barge			Decrease	Same
Tuntutuliak	Western	Qinarmiut Corporation	$5.15	18%	6%	$5.00	10%	1%	Barge			Increase	Increase

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Community	Region	Community Retailer (entity selling fuel)	Heating Fuel #1 11/2007 Retail (selling price per gallon)	Percent +/- Statewide HF Average ($4.35)	Percent +/- 8/2007 Retail (selling price per gallon)	Gasoline 11/2007 Retail Price (selling price per gallon)	Percent +/- Statewide Gas Average ($3.84)	Percent +/- 8/2007 Retail (selling price per gallon)	Transport Method			Change in HF Demand? (increase, decrease, remain same)	Change in Gas Demand? (increase, decrease, remain same)
Unalakleet	Western	Unalakleet Native Corporation	$4.58	5%	-1%	$4.65	2%	-4%	Barge			Same	Same
Upper Kalskag	Western	City of Upper Kalskag	$5.00	15%	0%	$5.15	13%	0%	Barge			Don't know	Don't know
Wales	Western	Wales Native Store	$4.74	9%	25%	$4.94	9%	21%	Barge			Same	Same
White Mountain	Western	White Mountain Native Store	$3.99	-8%	-7%	$4.59	1%	-8%	Barge			Same	Decrease

Note - Statewide heating fuel average price does not include North Slope communities. Heating fuel in these communities is subsidized by the borough and therefore not comparable.

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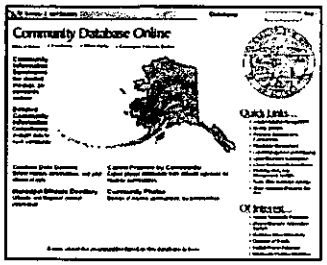
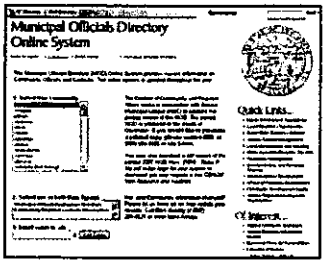
DCRA offers a wide range of online data and information resources to communities, agencies, and the public. The following is a select listing of DCRA's varied information resources.



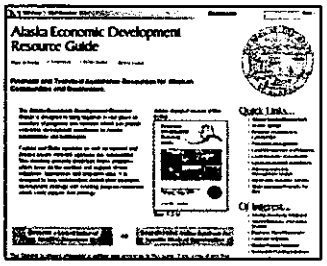
The **Community Profiles Database** contains profiles for more than 390 places in Alaska, the majority of which are communities. Information found in this database includes population, history, culture, facilities, census data, and more. Visit the **Community Profiles Database** at:

http://www.commerce.state.ak.us/dca/commdb/CF_COMDB.htm



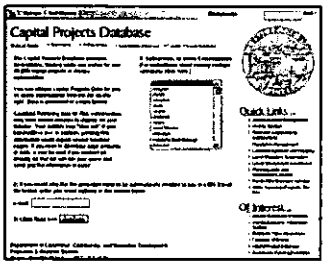
The **Municipal Officials Directory (MOD) Online System** offers dynamic contact information for communities across the state, including local and regional contacts, municipal officials, and employee listings. Visit the **MOD Online System** at:

http://www.commerce.state.ak.us/dca/MOD/MOD.htm



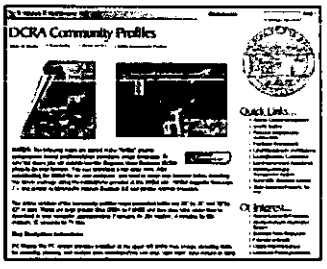
The **Alaska Economic Development Resource Guide (EDRG)** is an inventory of programs and services which can provide economic development assistance to Alaska communities and businesses. Visit the **EDRG** at:

http://www.commerce.state.ak.us/dca/edrg/EDRG.htm



The **Capital Projects Database** contains descriptions, funding levels, and status for over 8,000 capital projects in Alaska communities. The **Capital Projects Database** is designed to quickly deliver requested queries in Excel to your email in-box. Visit the **Capital Projects Database** at:

http://www.commerce.state.ak.us/dca/commdb/CF_RAPIDS.htm



Community Profile Maps display land use, land suitability, land ownership, and ANCSA 14(c) land settlement boundaries. These maps are ideal for use in planning economic developement projects within mapped communities. Visit **Community Profile Maps** at:

http://www.commerce.state.ak.us/dca/profiles/profile-maps.htm