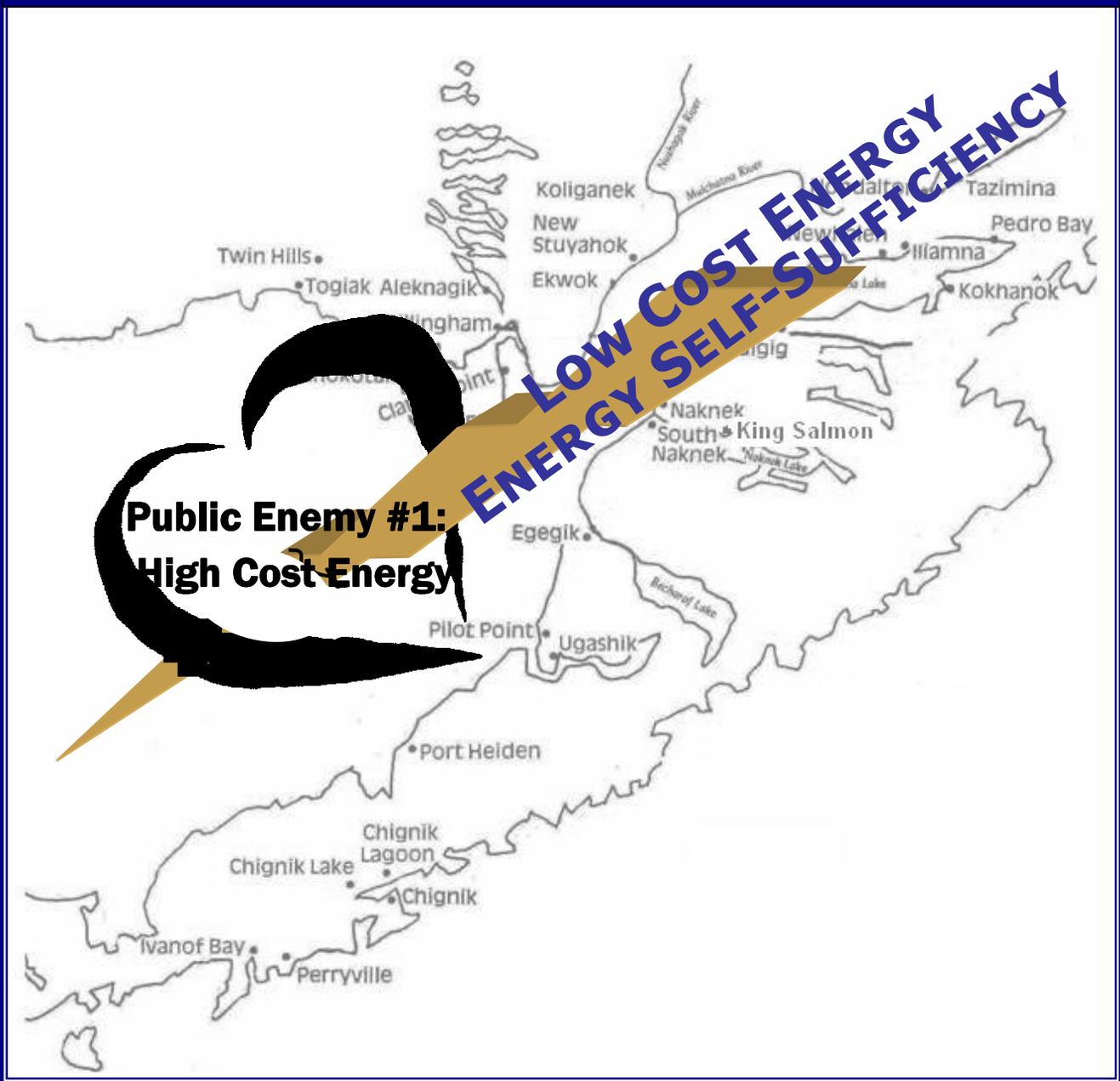


# Bristol Bay Energy Policy and Energy Crisis Recovery Plan: Phase One

April 15, 2008





# Bristol Bay Energy Policy and Energy Crisis Recovery Plan: Phase One

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April 15, 2008

*Prepared for the Bristol Bay Partners, an association of:*



Bristol Bay Area Health Corporation



Bristol Bay Economic Development Corporation



Bristol Bay Housing Corporation



Bristol Bay Native Association



Bristol Bay Native Corporation

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This document, “Bristol Bay Energy Policy and Energy Crisis Recovery Plan: Phase One,” is dedicated to our good friend Andy Golia. In his many years of contributing to regional economic development, he saw the need for lowering the cost of electricity, gasoline, diesel, heating fuel, aviation fuel, and propane for Bristol Bay. For eleven years, Andy pushed for and organized Bristol Bay Alternative Energy meetings which form the foundation of this energy report. He carried the energy mission to the various boards and committees on which he served. He was an inspiration to us and continued to support and help us when we needed to get energy policy and planning further down the road. Through this Bristol Bay Energy Policy and Energy Crisis Recovery Plan, Andy’s work continues.



Andrew Golia  
*(photo courtesy of the Bristol Bay Native Corporation)*

Respectfully,

The Bristol Bay Partnership

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## **Energy Vision as described by Participants at the Bristol Bay Economic Action Summit of 2006**

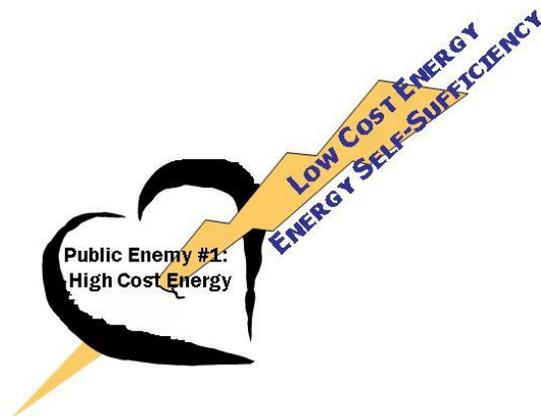
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**Background:** At the 2006 “Bristol Bay Economic Action Summit,” four key topics affecting the region were discussed:

- *Jobs and Training Opportunities*
- *Current High Fuel Costs*
- *Resource Development*
- *Transportation Infrastructure Needs*

Summit participants were encouraged to identify specific actions to be addressed for each of the four topics. The Energy Group reached consensus that high cost energy is Public Enemy Number 1. The Energy Group reported a goal for diesel independence by 2025 and electricity to be at 5 cents per KWH. The group also reached consensus that:

- *Everyone needs to be working together to defeat **Public Enemy #1 – the high cost of energy***
- *We need to support fully funding the PCE program AND fully funding the PCE Endowment*
- *We need to support augmenting the LIHEAP (Low Income Home Energy Assistance ) program*
- *We need to establish Fuel Coops and finding Storage for Bulk Fuel Purchases*
- *To achieve non-reliance on diesel, we need to create a Regional Energy Plan that supports the diversification of energy supplies by developing our regional alternative energy sources*
- *We need to maintain current generation systems by making sure that power plant operators have the best training available because use of diesel will continue until we can convert to a next generation of low-cost, reliable, and long-term energy source.*





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## Executive Summary

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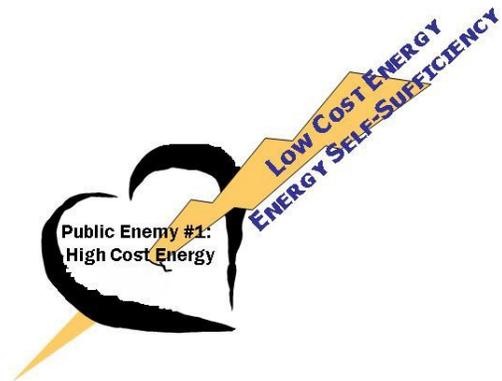
The Bristol Bay Partners – made up of the Bristol Bay Area Health Corporation, Bristol Bay Economic Development Corporation, Bristol Bay Housing Authority, Bristol Bay Native Association, and the Bristol Bay Native Corporation – met on January 18, 2008, and decided on a process to address the high cost of energy in Bristol Bay.

### Background:

At the January 18 meeting, Mr. Ralph Andersen, CEO of the Bristol Bay Native Association, and Chair of the Bristol Bay Partners, made a presentation that summarized the energy situation in Bristol Bay. Although much good work and many reports have made the case for lowering the cost of energy, it was noted that no statewide or regional energy policy exists. The Bristol Bay Partners have taken on this responsibility. The Partners have undertaken the task of developing a regional energy policy and will work collaboratively with Bristol Bay villages and their respective organizations, Tribes, utilities, regional organizations, municipalities, the private sector, state, and federal agencies. The Bristol Bay Partners decided to adopt Phase One of its own energy policy and plan, which will lead to detailed implementation strategies in Phase Two. Bristol Bay will address its energy crisis in phases to solve its short-term, median and long-term energy needs. Partners further noted that Bristol Bay communities are in critical need of action.

### Findings – Bristol Bay Energy Costs and Trends:

- More and more people in the region can barely afford to keep their homes heated and lighted.
- Increasingly high-energy prices continue to guzzle what little discretionary income our people have. This affects the ability to buy goods and services further eroding Bristol Bay's tenuous economy. Strong evidence indicates that people are moving from the region to urban centers and becoming energy refugees because of the high cost of energy.
- High-energy prices negatively impact businesses and industry that operate in Bristol Bay.
- As of April 15, the spot price for a barrel of oil was trading over \$113 per barrel. Experts in the oil trading business say crude oil will be \$120 a barrel by June and possibly \$145 per barrel by fall based on expert testimony before Congress. The prices of fuel are exceptionally high because of a lack of competition. For example, if fall barge prices are high when the fuel is delivered and prices drop after the fuel is delivered, most people in rural communities are stuck with that high price (regardless of market price fluctuations).
- World supply and demand for oil is about par. Any disruptions to the country's oil sources will cause huge problems for our national economy, hinder Bristol Bay's ability to develop its economy, and cause more of the region's people to exit the region.
- In addition to pressures of the world markets for oil, diesel prices are subject to environmental regulatory costs in the form of Ultra-Low-Sulfur diesel. It is estimated that this regulation will raise the cost of diesel by 25 to 50 cents a gallon. Efforts are underway to acquire short-term waivers, but eventually this regulation will need to be complied with.
- Threats to the Power Cost Equalization (PCE) fund still exist. While a cut to the PCE fund has been restored, PCE is a critical health and safety lifeline that rural Alaska depends upon and



it cannot be under funded. The Anchorage Chamber of Commerce and the State Chamber of Commerce support the PCE funding until a better long-term solution is found to supply power to Rural Alaska. (State Chamber, 2008; Anchorage Chamber, 2007)

- The state of Alaska is responsible for ensuring all Alaskans with energy security. The Bristol Bay region – and the balance of rural Alaska – is, at this point, very insecure and it needs help.
- The Alaska Municipal League supports the recommendations of the Rural Energy Action Council to advance immediate solutions to the energy crisis, which includes full funding for Power Cost Equalization (REAC Recommendations, April 2005; AML, 2008 Policy Statement).
- The State Chamber of Commerce and Anchorage Chamber of Commerce, Alaska Power Association and Southwest Alaska Municipal Conference support developing and implementing an energy plan to provide secure, reliable and affordable energy for Alaska. (<http://www.alaskachamber.com/artman/publish/prior08/EnergyPolicy.pdf>; Hope is Not a Strategy 2007; Alaska Power Association Resolution 08-03; SWAMC Resolution 08-10)
- Subsidies are needed and can be used as a tool to bridge today's energy needs to a long-term solution. Once low cost energy is being produced, then these subsidies will no longer be needed.

#### **Immediate Action:**

While the Bristol Bay Partners agreed that a Bristol Bay Energy Policy is critical for comprehensive, affordable, reliable and long-term solutions to the high cost energy in our region, the Partners also recognize that the Bristol Bay energy situation is at crisis levels. The Legislature and Governor and the Congressional delegation must understand the severity of the problem facing Bristol Bay and other rural communities.

Bristol Bay Partners need to continue to request that state and federal agencies take immediate action to help the villages of the Bristol Bay region stabilize the cost of energy. Further, if necessary, representatives of the Bristol Bay Partners should be ready to testify to state and federal agencies and to push for a sustainable energy plan for the Bristol Bay region.

#### **Next Steps:**

Once Phase One - Bristol Bay Energy Policy and Energy Crisis Recovery Plan – is adopted, then the Partners will be able to move to Phase Two to authorize the development of specific implementation strategies. In Phase Three: Implementation, the proposed implementation strategies should be filtered through the following process and provide the Bristol Bay Partners with answers to these questions:

**Do-ability:** Which alternatives are pie in the sky and which of the alternatives are doable?

**Timeframe:** When will multiple acceptable alternative energy sources deliver low cost fuel and electricity in the shortest possible time? When will the region see results?

**Affordability:** Which of the multiple alternatives is affordable? Costs for each alternative will be looked at to see what can be financed by identifying sources of funding to install, operate, maintain the alternative, and amortize the debt.

**Reliability:** Will the alternatives be as reliable as diesel has been?

**Length of service:** How long will the alternatives produce low-cost fuel and electricity?

**Regional:** Which alternatives will be regional in application?

**Looking Ahead to Phase Three: Implementation**

As the Partners move past Phase Two, thought needs to be given to what organization will implement the strategies adopted by the Bristol Bay Partners. The Partners need to select an organization that will be working full time to achieve the goals and objectives identified in the “Bristol Bay Energy Policy and Energy Crisis Recovery Plan: Phase One.” Organizations for consideration follow:

Partners could decide which of their respective organizations will implement the Bristol Bay Energy Policy and Energy Crisis Recovery Plan strategies.

If one of the Partners is designated to implement the Policy and Plan, a Department of Energy Development will need to be created.

The Partners may decide that a quasi-governmental entity such as a Bristol Bay Energy Development Authority be created by the state to implement the strategies adopted by the Bristol Bay Partners. This will require drafting legislation, state legislative action, and approval by the governor. Start up would be subject to legislative action.

The Partners may decide that a Bristol Bay Regional Fuel Coop should be developed to deal exclusively with acquiring fuel at a lower cost than communities are capable of purchasing individually.

The Partners may decide that a Bristol Bay Regional Energy Development Coop be developed to deal exclusively with a regional approach to lower the cost of fuel AND electricity.

In the document that Andy Golia developed in 1980, “Energy and Bristol Bay”, he suggested that a Regional Energy Authority carry out any polices and plans adopted by Bristol Bay. In addition to that suggestion, it was recommended that a Bristol Bay Development Authority be considered to address energy, transportation, and communications needs of the Bristol Bay region. Since that time in 1980, prices of fuel dropped such that the economics of new energy projects were not as feasible. However, now that the region is again experiencing increasingly high energy prices, there is a need to revisit these proposals.

In summary, the next step is for the Bristol Bay Partners to review the “Bristol Bay Energy Policy and Energy Crisis Recovery Plan: Phase One.” Once that review is completed and the Partners have decided which of the policies and plans will move ahead, then Phase Two: Implementation Strategies can begin.

## Introduction

Increasingly high energy prices around the state of Alaska are driving regional and statewide efforts to do something to lower the cost of energy. In Bristol Bay, communities have seen prices for fuel and electricity continuously rise year after year. It is at crisis proportions.

Sources of information on statewide and regional energy costs are scattered and inconsistent. The Alaska Energy Authority, Alaska State Division of Community Advocacy, University of Alaska's Cooperative Extension Service and the Alaska Housing Finance Corporation are the main sources of

Table 1:

**Fuel Prices in Bristol Bay Communities  
as of January 2008**

<b>Community</b>	<b>28-Jan-08</b>
Aleknagik*	\$ 4.56
Aleknagik*	\$ 4.31
Aleknagik	\$ 4.95
Chignik Lagoon	\$ 2.96
Chignik Lake	\$ 2.96
Clark's Point	\$ 4.70
Egegik	\$ 3.42
Ekwok	\$ 4.20
Igiugig	\$ 5.05
Kokhanok	\$ 7.75
Koliganek	\$ 4.75
Levelock	\$ 4.70
Manokotak	\$ 4.60
Newhalen	\$ 6.38
New Stuyahok	\$ 4.70
Nondalton	\$ 6.10
Perryville	\$ 4.97
Pilot Point	\$ 5.68
Portage Creek	\$ 4.50
Port Heiden	\$ 4.51
South Naknek	\$ 3.95
Togiak	\$ 3.68
Twin Hills	\$ 3.68
Ugashik	\$ 5.68
Chignik Bay	\$ 2.96
Dillingham*	\$ 4.49
Dillingham*	\$ 4.16
Ekuk*	\$ 4.49
Ekuk*	\$ 4.16
Iliamna	\$ 6.38
Naknek*	\$ 4.12
Naknek*	
Naknek*	\$ 4.02
Naknek*	\$ 4.23
Pedro Bay	\$ 5.57

**Source:** Bristol Bay Native Association, January 2008

Note: The table lists more than one fuel price because there is more than one vendor.

primary and published information on energy costs (electric, heating fuel, gas). The Institute of Social and Economic Research at the University of Alaska Anchorage, various research and consulting firms as well as community and regional organizations will sporadically collect energy costs data for ad hoc reports.

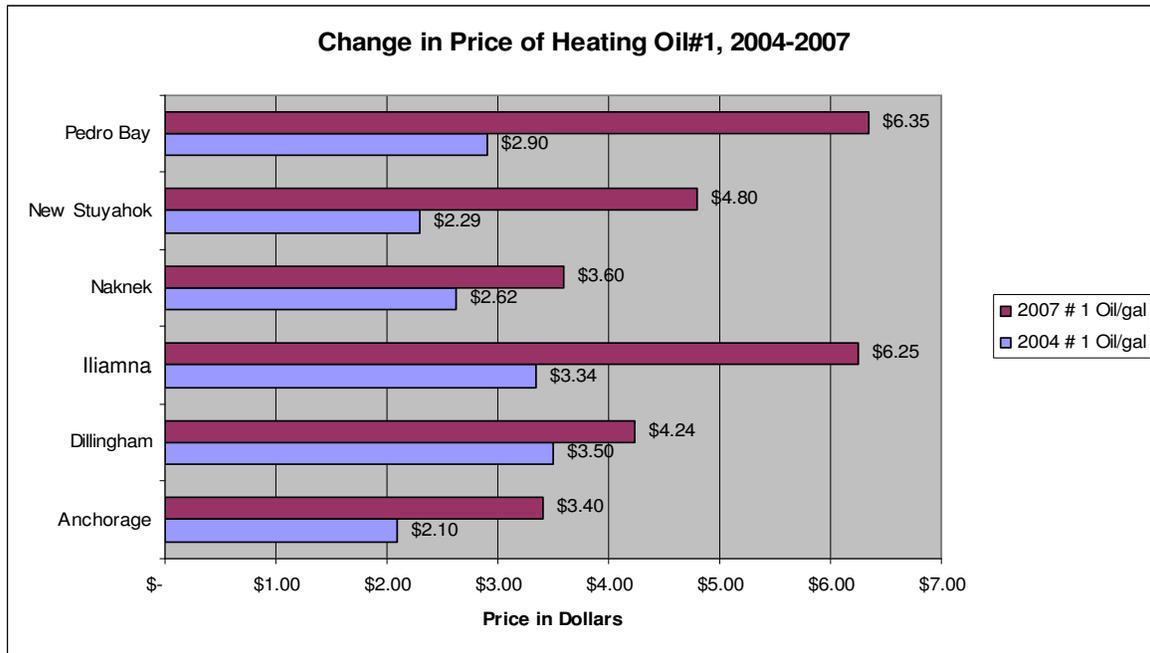
The fuel cost information presented in this report is derived from data gathered by the Bristol Bay Native Association, the Alaska Housing Finance Corporation, the University of Alaska Cooperative Extension Service, the Power Cost Equalization Program and the Alaska Industrial and Export Authority.

The table and graphs illustrate prices that communities in Bristol Bay are paying for heating fuel, motor gas and electricity. *Table 1: Fuel Prices in Bristol Bay Communities* show the prices for heating fuel in 28 of the villages in Bristol Bay. The highest price for heating fuel as of January 2008 is in Kokhanok where they are paying \$7.75 dollars per gallon. The lowest is in Chignik Bay where residents were paying 2.96 per gallon.

The graphs on the following page illustrate the changes in prices for heating fuel, motor gas and electricity over time. Again, the reader should note that due to lack of publicly available data that are consistently gathered over time, the information presented is the best that is available.

On the next page in figure 1, *Change in Price of Heating Oil #1, 2004-2007*, we see a dramatic increase in prices in less than five years for the selected communities of Pedro Bay, New Stuyahok, Naknek, Iliamna and Dillingham. Anchorage is provided as a baseline comparison. If data for all the communities in the Bristol Bay region over this time period were available, one would likely see the same type of results – seriously increasing prices that residents pay for heating oil.

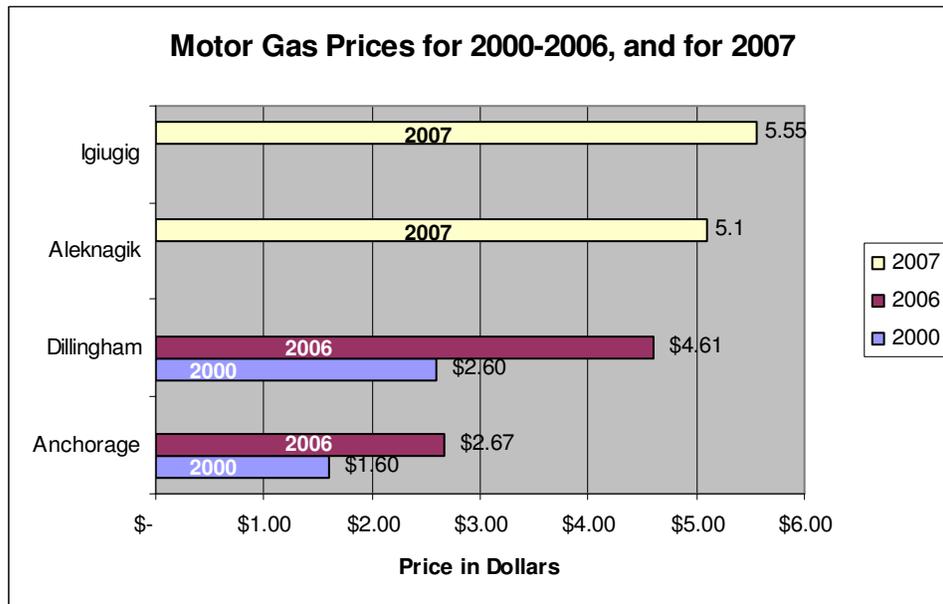
**Figure 1**



**Source:** Alaska Building Science Network for the Alaska Housing Finance Corporation and Department of Health and Social Services, 2000 and 2007.

Likewise, in figure 2, *Motor Gas Prices for 2000-2006, and for 2007*, within a 5-year period, the University Cooperative Extension Service documented increasing prices for motor gas in Dillingham through its food cost survey. The villages of Igiugig and Aleknagik responded to the Alaska Industrial and Export Authority's fuel survey, reporting prices of \$5.55/gal and \$5.10/gal of gas, respectively.

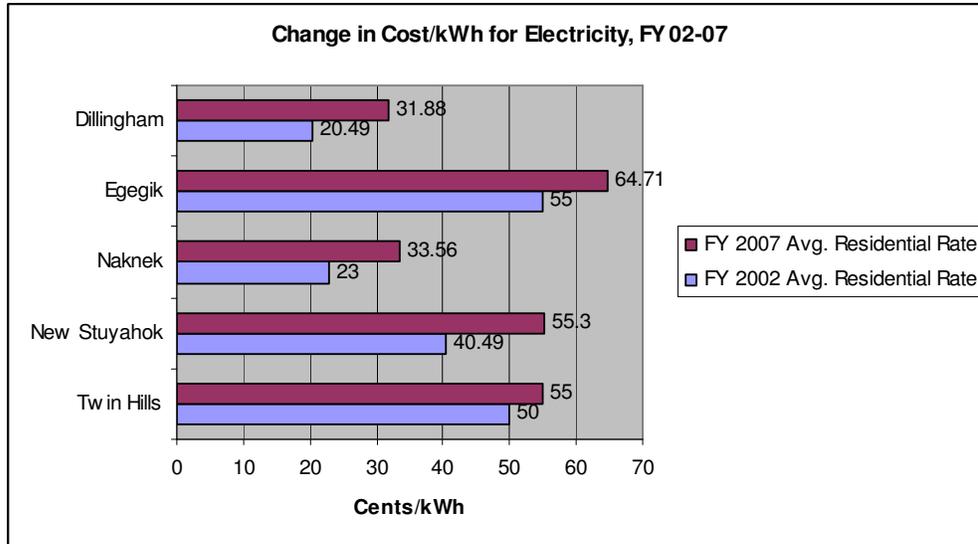
**Figure 2**



**Source:** University of Alaska, Cooperative Extension Service, "Food Cost Survey" September 2000 and 2006; AIDEA Fuel Survey, 2007 **Note:** 2007 University of Alaska, Cooperative Extension Service online, published data were not available for Dillingham.

Finally, in figure 3, *Change in Cost/kWh for Electricity, FY 02-07*, data is taken from the Alaska Energy Authority's Statistical Report of the Power Cost Equalization (PCE) Program for the villages shown below. The change in prices (cents per kWh) illustrates an increase in the cost to the consumer before the PCE subsidy is applied.

**Figure 3**

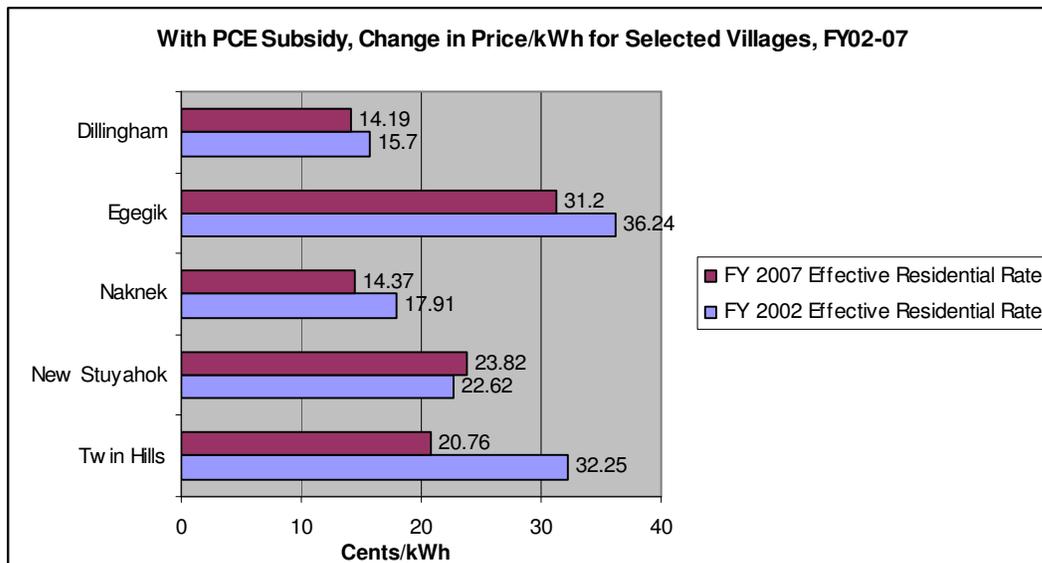


**Source:** Statistical Report of the Power Cost Equalization Program, FY 2007 and FY 2002  
<http://www.akenergyauthority.org/publications.html>

**Note:** The cost per kWh shown is the total cost per kWh based on monthly usage of 500 kWh and before PCE is applied to the cost.

It should be noted that, when the PCE subsidy is applied, the consumer is paying a bit less for electricity per kWh. In figure 4 below, we can see that with the PCE subsidy applied, the effective residential rate that the consumer pays is less than what it would be without the PCE subsidy. The decrease over time is also due to the fact that the PCE endowment has been fully funded and the PCE program has received supplemental funding since 2005 to keep up with the rising cost of fuel.

**Figure 4**



**Source:** Statistical Report of the Power Cost Equalization Program, FY 2007 and FY 2002  
<http://www.akenergyauthority.org/publications.html>

As one examines these and other energy data, one sees that:

- There are price equity issues within the region and compared to the rest of the state.
- Increasing costs of heating fuel, motor gas, propane, electricity are becoming unsustainable and action is needed to stabilize the costs.
- Power Cost Equalization is helping to decrease the cost of electricity; however, the cost for most villages in Bristol Bay is still two to five times higher than in Anchorage.

The challenge of finding a way to deliver reliable, low-cost, and long-term energy – heating fuel, motor and aviation gas, diesel, propane – to all of Bristol Bay presents interesting opportunities for innovative strategies that will put the region on the path of energy self-sufficiency by 2010. The best, and fastest, way to realize low-cost, reliable, energy self-sufficiency is through a process beginning with an energy policy and an energy plan.

Energy policy can be likened to a four-legged energy stool.

- **Leg one:** increasing supply;
- **Leg two:** diligently searching for acceptable, affordable, reliable, and long-term energy alternatives;
- **Leg three:** vigorously promoting conservation practices to lower our cost of energy; and finally
- **Leg four:** the WILL to do all of the above.

Figure 5.

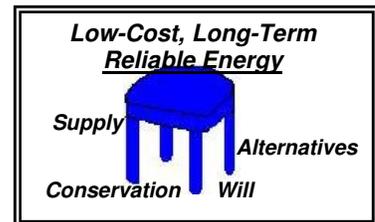
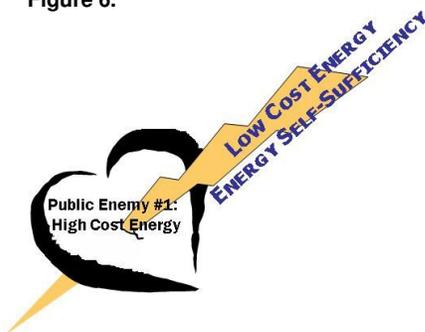


Figure 6.



In the 2006 Bristol Bay Economic Action Summit, participants from all around the region agreed that:

- “High cost energy is Public Enemy Number 1
- We need to have everyone working together to defeat the high cost of energy
- The goal is to:
  - Become non-reliant on diesel and be energy self-sufficient by 2025
  - Have electricity at 5 cents/kWh to all Bristol Bay villages.”<sup>2</sup>

The recommended Bristol Bay Energy Policy is based upon the consensus reached at the 2006 Bristol Bay Economic Action Summit. The recommended policy provides guideposts that, if adopted, can help focus the efforts of Bristol Bay communities and organizations to realize the goals adopted at the Summit and lower the cost of energy. The Bristol Bay Energy Policy also guides the development of an Energy

<sup>2</sup> In the meeting minutes submitted to the full summit, the Energy Group reported the following:

**“Diesel Independence by 2025/Electricity 5 cents a KWH**

**Consensus** was reached on the following:

High cost energy is **Public Enemy Number 1**. We have to have EVERYONE working together to defeat **Public Enemy Number 1**

- We need to support fully funding the PCE program AND fully funding the PCE Endowment
- We need to support augmenting the LIHEAP program
- We need to establish **Fuel Coops** and finding **Storage for Bulk Fuel** Purchases
- To achieve Non-Reliance on **Diesel**, we need to create a **Regional Energy Plan** that supports the diversification of energy supplies by developing our regional alternative energy sources

Although our goal is to become Non-Reliant on diesel by 2025 and have our electricity delivered at no less than 5 cents a KWH to all of our villages, we still need to maintain our current generation systems by making sure that all of our power plant operators have the best training available. Use of diesel will continue until we can convert to our next generation of low-cost, reliable, and long-term energy source. Respectfully submitted, Nels Anderson, Energy Group for the BB Economic Action Summit, March 22-23, 2006”

Crisis Recovery Plan. The plan provides suggestions for short, median and long-term plans to the energy crisis facing the Bristol Bay region.

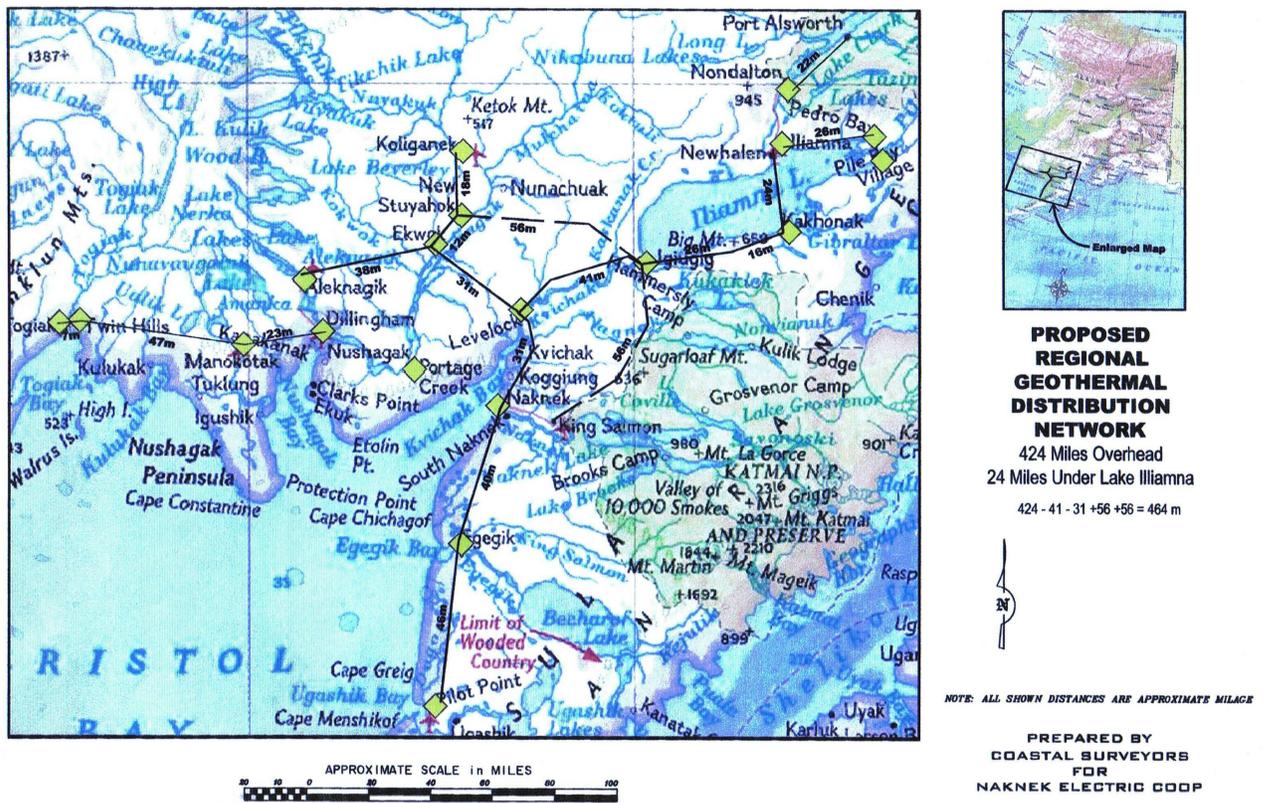
The recommended energy policy statements are also derived from the authority granted by the Alaska State Constitution. The language found in Alaska’s Constitution is broad and clear regarding how its natural resources should provide "for the maximum benefit of its people." Specifically:

*"Article 8, Section 2. General Authority -  
The legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the State, including land and waters, for the maximum benefit of its people."*

The Bristol Bay region and communities can use this authority to demand that the State provide the necessary resources and programs to allow the region to develop its energy resources to be energy self-sufficient and ensure the well-being of its people.

Since many Bristol Bay communities are located close to hydro, geothermal, wind, tidal, coal-bed-methane, and bio-mass resources, it may be possible to move the region’s communities away from diesel toward renewable energy more quickly than anticipated<sup>3</sup>. Regardless, it is imperative to devise strategies that will bring the most benefits in the shortest time possible.

Figure 7: Naknek Electric Proposed Geothermal Project



**Source:** Naknek Electric Association, Inc.

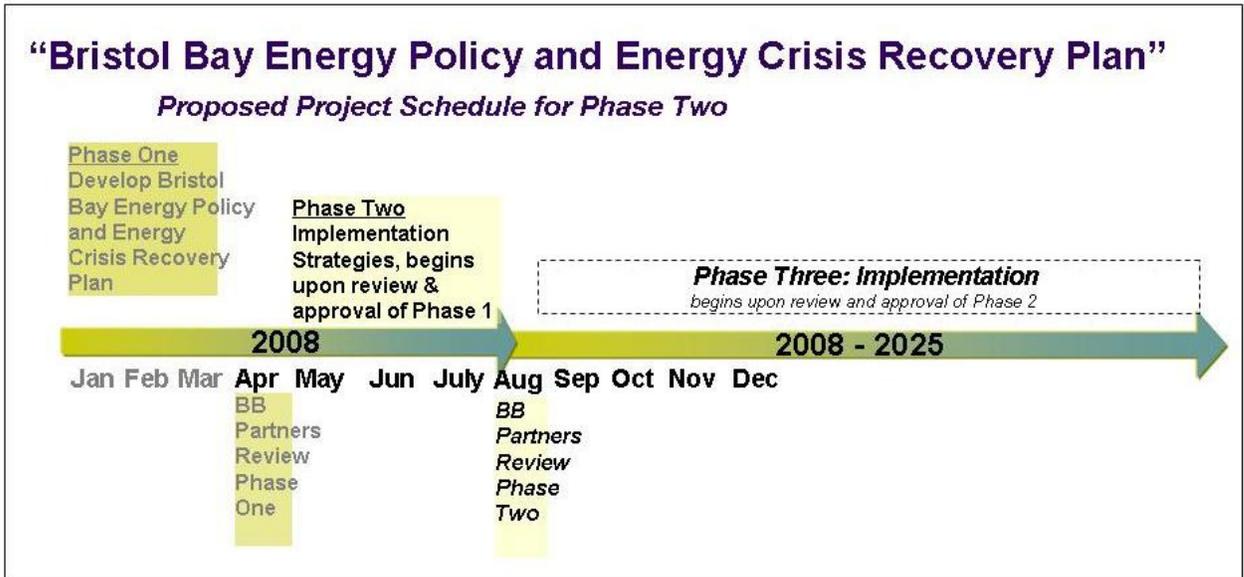
Note: This map and additional information on the Naknek Geothermal project can be obtained at <http://www.nea.coop/about/geothermal.shtml>, or <http://www.alaskapower.org/docs/DonnaVukich.pdf> or <http://www.swamc.org/images/stories/bristolbaygeothermal.pdf>

<sup>3</sup> For more information on studies quantifying these resources, see Appendix 4.

That is what this document does. It recommends the policy and plans needed to get from the current high-cost energy situation to acquiring low-cost, reliable and long-term energy security for Bristol Bay through increased supplies, conservation, and acceptable alternatives. The Bristol Bay Energy Policy and Energy Crisis Recovery Plan can also be used to inform federal, state, Tribal and local governments, as well as private capital investors, how they can assist the Bristol Bay region achieve its low cost energy goals.

The Bristol Bay Partners have reviewed Phase One, and are moving toward authorization of Phase Two which would develop strategies to implement the Bristol Bay Energy Policy and Energy Crisis Recovery Plan.

Figure 8.



# **Bristol Bay Energy Policy and Energy Crisis Recovery Plan: Phase One**

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## **Bristol Bay Energy Policy**

*The intent of the Bristol Bay Energy Policy is to reach the goal of affordable, reliable, safe and long-term energy and to realize energy self-sufficiency and security that supports and sustains the well-being of Bristol Bay people and communities and that promotes economic development opportunities.*

- **Bristol Bay will sustain its support for fully funding the Power Cost Equalization program and other energy assistance programs until they are no longer needed.**
- **Bristol Bay and its villages will:**
  - **Have adequate and affordable fuel sources to keep its communities heated and lighted year-round**
  - **Maintain current diesel generation systems by making sure that all of its power plant operators have the best training available and learn fuel purchasing strategies**
  - **Wean itself from use of diesel as its primary source of electrical energy**
  - **Enjoy energy equity and access to energy sources the same as all other citizens of Alaska.**
- **Bristol Bay will promote energy conservation to reduce waste and lower heating and lighting costs for homeowners and public buildings.**
- **Bristol Bay will support and encourage exploration of all on-shore, private, state, and federal lands in the Bristol Bay region to find new sources of energy.**
- **Bristol Bay will support and encourage:**
  - **Energy interties that connect Bristol Bay villages into a common Bristol Bay Energy Grid and to the Railbelt Energy Grid**
  - **A State-Wide Energy Grid to achieve the goal of low cost energy**
  - **Transportation corridor planning that will parallel energy grid development in Bristol Bay.**
- **Bristol Bay will search diligently for and promote acceptable energy alternatives that will reduce the carbon imprint in the Bristol Bay region.**
- **Bristol Bay will encourage Energy providers and producers to plan collectively for energy infrastructure development.**

# Bristol Bay Energy Crisis Recovery Plan

The purpose of an energy policy is to ensure Bristol Bay's energy security by establishing an energy plan that will assist in developing energy strategies to lower the cost of fuel and electricity in Bristol Bay. The following presents the energy policy and the recommended energy plans needed to carry out the policy:

**1. Bristol Bay will sustain its support for fully funding the Power Cost Equalization (PCE) program and other energy assistance programs until they are no longer needed.**

**Rationale:** Until the Bristol Bay region fully realizes its goal of low-cost, diesel free energy, communities and residents will need the Power Cost Equalization program and other subsidies that provide immediate relief to high cost motor fuel, heating fuel, propane and aviation gas. Even organizations such as the Alaska Municipal League (AML) and the Anchorage Chamber of Commerce recognize the importance and need for Power Cost Equalization (Hope is not a strategy, 2007; AML 2008 Policy Statement<sup>4</sup>).

**Plan recommendation:** The Bristol Bay region and villages should continue advocacy for support of these programs through resolutions, face-to-face communications with legislators and the Governor and public relations campaigns that educate and communicate what these programs are and how they help bridge the gap between the current crisis and future solutions.

Bristol Bay should also develop a strategy that the state can adopt that will transform the PCE Endowment Fund into an Energy Development Fund to finance Rural and Remote Energy initiatives to achieve low cost energy for our villages once our villages no longer need the PCE program.

**2a. Bristol Bay villages will have adequate and affordable fuel sources to keep its communities heated and lighted year-round.**

**Rationale:** Strategies to ensure that Bristol Bay villages do not run out of fuel should be a very high priority for the region. There have been instances where some villages have been unable to acquire their fuel because of low-water conditions; high cost of fuel making it impossible to fill up the bulk fuel tanks; state and federal loan programs failing to work; lack of a regional fuel monitoring program for our villages; and, the lack of strategic plans for other unforeseen circumstances beyond the control of the villages.

For instance, New Stuyahok, Manokotak, South Naknek have all had problems getting fuel delivered. This is not a circumstance happening only in the Bristol Bay region. As an example, the village of Nikolski was without fuel for most of 2007 because of weather conditions. The Bristol Bay region must have contingency plans for its villages to make sure that it can meet any energy challenge that may arise.

**Plan Recommendation:** A regional fuel contingency strategic plan needs to be created and implemented to make sure that each Bristol Bay village has the fuel it needs to keep heated and lighted year-round.

A regional fuel monitoring program is needed to determine which villages are unable to fill their fuel tanks for the entire winter.

Strategies must be developed that will enable Bristol Bay villages to fill their fuel tanks to keep them going year-round.

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<sup>4</sup> For more information on these policy statements, see Appendix 4, Review of Energy Policy and Energy Resource Studies for Bristol Bay and Alaska.

**2.b. Bristol Bay and its villages will maintain current diesel generation systems by making sure that all of its power plant operators have the best training available and learn fuel purchasing strategies.**

**Rationale:** It will take several years for the region to realize its goal of becoming diesel free. In the meantime, the region must ensure that its villages can operate diesel gensets at the highest rates of efficiency, and that village fuel purchases are conducted using the latest cost-saving techniques that result in the lowest cost to the communities.

**Plan Recommendation:** Plans should be devised to allow utility operators and others to get training in fuel buying and management techniques. Organizations such as Oil Price Information Service (OPIS) operate training programs like the “Fuel Management University” and “Winning Fuel Buying Strategies” to help fuel operators realize cost savings<sup>5</sup>. Strategies should also be developed to continue to ensure that the Bristol Bay region’s power plant operators have the best training available to maintain current diesel generation systems.

**2.c. Bristol Bay will wean itself from use of diesel as its primary source of electrical energy.**

**Rationale:** With oil over \$100 a barrel it is imperative that Bristol Bay villages do everything possible to move away from being totally dependent on diesel as soon as practicable. Diesel oil continues to increase in cost and there is nothing that indicates that high crude oil costs are going to go away. In addition, Ultra-Low Sulfur Diesel is being mandated to be used by all village utilities in the near future. Even if we are successful in getting a reprieve, it will only be temporary and the cost of diesel will be more expensive as a result. Other problems arise with ULSD such as fuel storage and transportation difficulties that have not yet been resolved.

Therefore, strategies that will move Bristol Bay villages away from diesel must be a high priority in order to prevent unscheduled downtime in village utilities. If diesel prices continue to rise, villages may not be able to pay for their electricity.

**Plan Recommendation:** Near-term strategies should be planned and adopted to move Bristol Bay villages away from diesel generation as soon as possible. Careful consideration must be given to connecting villages that are close to each other to subregional grids. This would allow more villages to share the cost of power generation if villages decide to build a sub-regional electrical intertie. Furthermore, a regional intertie electrical grid should be in the planning stages to be ready for large scale energy projects like the Naknek Electric Geothermal Project. The region also needs to push to connect itself to the Railbelt Energy Grid, and eventually be connected to a State-Wide Energy Grid.

In addition, strategies are needed for a regional fuel cooperative to be developed very quickly. Bulk fuel purchases for all of the region’s villages would help bring down the cost of fuel as a stop gap measure. Acceptable alternatives to diesel need to be evaluated and adopted as each is measured by do-ability, timeframe, reliability and affordability.

**2.d Villages of Bristol Bay will enjoy energy access and costs equal to all other citizens of Alaska.**

**Rationale:** The State of Alaska's Constitution, under Article 8, Section 2. General Authority, states that, "The legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the State, including land and waters, for the maximum benefit of its people."

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<sup>5</sup> OPIS, Oil Price Information Service, conducts a Fuel Management University every year. The next course is in April 2008. Topics such as futures, price caps, risk, trends hedging and cash flow are taught. For more information see <http://www.opisnet.com/fmu/>. Another training program is the Fuel Buying Strategies which provides an introduction to the fuel buying world. For more information see <http://www.opisnet.com/wfbs/>.

We know that communities in Bristol Bay are paying far higher prices than counterparts in the Railbelt. Bristol Bay fuel and electricity costs are up to 5 and 10 times more expensive than what people pay in Anchorage, Fairbanks, Mat-Su, and Kenai. The Alaska Constitution states clearly that we can demand that state Royalty Oil be used for in-state use at a discount to help get through the energy crisis we are experiencing.

It makes little economic sense to send tankers of Alaska's oil down south, have Alaska's crude oil refined in Seattle, and then barge the fuel back to Alaska. Alaska should be able to make a call on its Royalty Oil for its citizen's use.

**Plan Recommendation:** Bristol Bay villages and region need to make a call on Alaska's State Royalty Oil to have it refined at Flint Hills or Tesoro. The gasoline, diesel, heating fuel, aviation fuel, jet fuel, and propane should be sold at a discount to all Alaskans across the state of Alaska. A cap of \$3.50 a gallon for all fuel should be set and the difference that Alaskans pay should be provided by the state.

The Bristol Bay region should make immediate plans to connect to the Railbelt Energy Grid as it works on tying all of the region's villages together with a common energy grid. The State of Alaska should be encouraged to begin planning a State-Wide Energy Grid to tie all of Alaska's communities together.

**3. Bristol Bay will promote energy conservation to reduce waste and lower heating and lighting costs for homeowners and public buildings.**

**Rationale:** The cheapest energy we can get is the energy we don't use. Although we cannot conserve our way out of this energy crisis in Bristol Bay, we can encourage conservation strategies that will lower the end user's cost of energy. There are many programs that have addressed conservation; the region should continue to support any and all conservation efforts to reduce the cost of energy.

**Plan Recommendation:** Strategies should be developed to provide incentives to conserve energy. Local energy providers, regional and community organizations, state and federal agencies should work together to devise and implement a menu of acceptable conservation strategies. The strategies could include tax credits, low interest loans, rebates, and grants to weatherize homes or to purchase more efficient heating systems, purchase solar panels, wind generators, and or other technologies that will result in lower cost energy for residents.

The same agencies should develop public service announcements, energy conservation brochures, conservation forums, and finally, bring the idea of energy conservation into our schools.

**4. Bristol Bay will support and encourage exploration of all on-shore, private, state, and federal lands in the Bristol Bay region to find new sources of energy.**

**Rationale:** If Bristol Bay is going to lower its cost of energy, the region needs to increase its supply. The world demand for oil is pushing oil prices over \$100 a barrel. More supply will help meet the demand for oil and help to stabilize the region's cost of heating fuel, diesel, aviation fuel, gasoline, and propane for use in the region. If natural gas is found, it could be used for electrical generation.

**Plan Recommendation:** The region should support and encourage exploration and development of all private, state, and federal uplands on-shore in the Bristol Bay region and all other regions across the state of Alaska.

5. **Bristol Bay will support and encourage the development of energy interties that connect Bristol Bay villages into a common Bristol Bay Energy Grid and to the Railbelt Energy Grid, and connect to a statewide energy grid and will encourage transportation corridors that will parallel energy grid development in Bristol Bay.**

**Rationale:** Bristol Bay energy studies have recommended connecting villages in sub-regional and regional grids in order to realize energy cost savings and to make development of alternative energy sources more feasible<sup>6</sup>. The State of Alaska has recommended interties for rural Alaska in its Rural Energy plan<sup>7</sup>. A regional transmission energy grid will need to be maintained and it would be practical to promote policies that call for jointly planning electrical transmission and transportation corridors. Environmental and other regulatory considerations are important to consider at the same time regional transmission lines and transportation corridors are being created. Many of the transmission lines and transportation corridors will parallel or cross many of our fish-producing streams and rivers in the Bristol Bay region; care must be taken to protect our fish and other natural resources.

**Plan recommendation:** An RFP calling for proposals to energize the Bristol Bay Region may be advisable. The RFP would ask for plans and the feasibility of connecting all villages to a common energy grid as well as to identify acceptable alternative energy power sources to meet the region's needs. Because there is no guarantee that the Naknek Geothermal Energy Project will be successful, there is a need to plan for other alternative energy sources. It makes sense to be ready for any major energy project that could provide for the region's energy needs with a grid that ties all the villages into whatever the source of alternative energy may be.

Bristol Bay should begin to plan for:

- Tying the villages into sub-regional energy grids
- Developing a transportation corridor to coincide with a regional energy grid
- Tying into the Railbelt Energy Grid, and
- Advocating and supporting efforts to develop a State-Wide Energy Grid

6. **Bristol Bay will search diligently for and promote acceptable energy alternatives that will reduce the carbon imprint in the Bristol Bay region.**

**Rationale:** Clean energy initiatives are supported by a vast number of Alaskans and people in the Bristol Bay Region. In order to reach that goal, it may be necessary for the Bristol Bay region to build a bridge between now and the future of renewables. Use of clean coal technology as an energy bridge from diesel power to green power sources may be an acceptable alternative as we watch crude oil prices move over a \$100 a barrel. Diesel use is going to become cost prohibitive if crude oil continues to rise and the federal government continues to push use of Ultra-Low Sulfur diesel.

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<sup>6</sup> See Appendix 4 for Review of Energy Policy and Energy Resource Studies for Bristol Bay and Alaska.

<sup>7</sup> In the "NonRailbelt Report-Findings and Recommendations of the Alaska Energy Policy Task Force, 2004, page 11, the report states, "b. Long-term energy needs NonRailbelt findings: A long-term plan is needed for coordinated generation and transmission of power, to maximize the use of public funds, and to minimize the cost of power to the consumers. The Task Force adopted the definition of long-term as 20 years or more. Within the next 20 years, it was determined that NonRailbelt Alaska needs to:

- Create secure and reliable transmission between load centers
- Provide energy infrastructure for economic development
- Identify and evaluate long-term fuel sources
- Establish regional system operations where feasible
- Connect new areas to the Railbelt grid
- Replace aging generation
- Replace an aging workforce lessen dependence on fossil fuel generation where renewable options are available." <http://www.akenergyauthority.org/EnergyPolicyTaskForce/FinalNonRailbeltReport.pdf> .

There is an urgent need to prove several green energy sources such as the Naknek Electric Geothermal project, Togiak Tuya, wind, solar, tidal, peat, biomass, and other acceptable regional energy alternatives as soon as possible. This effort must take on the urgency of the construction of the AICan Highway and getting a man to the moon. Anything short of a concentrated effort will leave Bristol Bay villages in a crisis.

**Plan Recommendation:** Multiple strategies that will accelerate the region’s efforts to gain low cost, clean energy sources for its villages should be a high priority. Strategies should include:

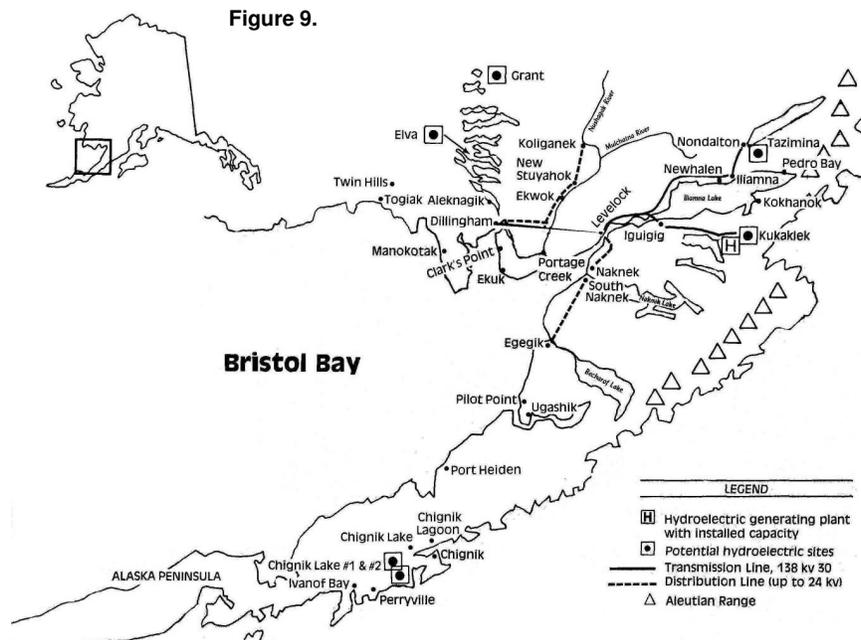
- Continued support for the Naknek Electric Geothermal Energy Project, and
- Support for all village, regional, municipal, private, state, and federal clean, alternative energy initiatives that are currently in progress.

**7. Bristol Bay will encourage Energy providers and producers to plan collectively for energy infrastructure development.**

**Rationale:** Bristol Bay needs to establish strategic alliances to create a regional integrated energy development plan. This will require the leadership from all stakeholders in the Bristol Bay region. This would include all Bristol Bay villages and their respective organizations, utilities, regional organizations, municipalities, the private sector, state, and federal agencies that have an interest in the future development of the villages and the Bristol Bay region.

**Plan Recommendation:** Bristol Bay needs to consider the formulation of a regional entity(s) to address the many questions that arise when considering major energy projects in the region.

In June, 1980, the “Bristol Bay Energy Report” prepared by Andy Golia recommended that a Regional Energy Authority be established that would *“provide a better chance for the residents of Bristol Bay to actively seek and secure major energy development projects within the region. Unity provides strength, and such an organization would provide more political clout for local residents to work through its current energy dilemma.”*



Source: “Energy and Bristol Bay”, Page 9. Report prepared by Andrew Golia, June 1980

The Bristol Bay Partners should consider a Regional Development authority that would be established to solve its energy crisis and to address transportation and communication needs as well. Transmission rights of way are going to have to be established in order to tie all of our villages into a regional energy grid. Those lines are going to have to be maintained and it makes economic sense to plan a transportation corridor that would parallel the regional electrical intertie to the extent practicable.