

Agency: Commerce, Community and Economic Development

Grants to Municipalities (AS 37.05.315)

Grant Recipient: Unalaska

Project Title:

Unalaska - Power Generation Expansion

State Funding Requested: \$ 4,000,000
One-Time Need

House District: 37 - S

Brief Project Description:

Replacing two inefficient generators and construction of a new powerhouse

Funding Plan:

Total Cost of Project: \$22,500,000

	<u>Funding Secured</u>		<u>Other Pending Requests</u>		<u>Anticipated Future Need</u>	
	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>
Federal Funds	\$1,000,000	2008				
Other	\$17,500,000	2009				
Total	\$18,500,000					

Explanation of Other Funds:
The City has \$17,500,000 in approved bonding from the Alaska Bond Bank.

Detailed Project Description and Justification:

Replace existing, inefficient diesel units in an antiquated WWII era facility with two highly fuel efficient 5.2 MW Wartsila units in a new facility, allowing the City to rise above power capacity limits currently restricting iindustry and small businesses growth in Unalaska. The City will obtain long term financing of \$14 million, with another \$5 million coming from the City's General Fund.

The City Powerhouse is currently operating at maximum capapcity with no reserve. Utility power supply planning requires a utility to plan for the loss of your largest generating plant and the plan determines your ability to serve your peak load with excess capacity. The City's total available power is less than 6.2 MW, with about 5.0 MW considered "firm" or consistently reliable. The City can not serve the present firm load under any "loss" conditions.

Because of economic development, the City now finds itself in a position to offer only non-firm contracts to new industrial and commercial accounts. The City has recently interconnected with UniSea for alternate source of power and they can transmit about 3.0 MWs to the City grid. However, this power is on a non-firm basis.

Currently, American Seafoods is building an \$80 million cold storage and dock in Unalaska. The City currently does not have the power to support their investment. Other companies are expanding as well, which is increasing electric demand on the city utility. This project will ensure taht the utility can provide reliable, stable priced power to its customers, thus supporting the tax producing fisheries infrastructure of the State of Alaska.

For use by Co-chair Staff Only:

4:46 PM 4/29/2008

Project Timeline:

Removal of PCB's must be completed prior to constuction of the new facility.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

City of Unalaska

Grant Recipient Contact Information:

Contact Name: Chris Hladick

Phone Number: 581-1251

Address: PO Box 610, Unalaska, 99685

Email: Chladick@ci.unalaska.ak.us

Has this project been through a public review process at the local level and is it a community priority? Yes No

UNALASKA POWER GENERATION EXPANSION PROJECT

Capital Project Request Criteria

Project Name: Unalaska Power Generation Expansion (see attached for more information)

Project Location and House District: Unalaska Island, House District 37

Amount of Funding Request: \$4 million

Total Funding to Complete the Project: \$22.5 million

Number of years to complete the project: 2 years from Notice to Proceed

Matching Funds available sources: \$1 million from Federal Government, \$17.5 in approved bonding to City from Alaska Bond Bank.

Prior State Appropriations: None

In Governors Budget: No

Federal Funds grants or earmarks requested: Yes, we are looking for funding in Washington, DC but have been unable to identify a source.

Public Review Process: This project has been through an extensive public review process in the last seven years. Permitting alone has taken four years. The current project has PCB's on the property left from WW II. For the past several years we have identified this project as the number one priority for the City of Unalaska.

Is funding available for the project this year, who is responsible for providing ongoing maintenance?: The City is committed and approved the bonding, two 5.2 MW Wartsila engines have been purchased and are in storage. The City, through the electric utility rate structure, will be responsible for maintenance.

Economic Return to State of Alaska: Currently American Seafoods is building an \$80 million dollar cold storage and dock in Unalaska. We currently do not have the power to support their investment. Other companies are expanding as well, which is increasing electric demand on the city utility. This project will ensure that the utility can provide reliable, stable priced power to its customers, thus supporting the tax producing fisheries infrastructure of the State of Alaska.

Legislator submitting request: Senator Lyman Hoffman and Representative Bryce Edgmon

Project Contact Information: City Manager Chris Hladick, City of Unalaska Box 610, 99685 chladick@ci.unalaska.ak.us, 907-581-7733

Power Generation Expansion

Project Description: The project will increase the firm electrical generation capacity at the City Powerhouse through the installation of new Diesel Combustion Engine Generators and required switchgear. The project also includes the design and construction of the structural upgrades needed to accommodate the powerhouse expansion and the additional generators.

Three primary sites were evaluated for feasibility. The current Powerhouse cannot house four additional generators due to the physical size of the new units and the inability to remodel the WW II building.

The lack of firm capacity was first addressed in a power supply study in 1998. An attempt to integrate power supply of both the City and the processors failed in 2001. However for various reasons the power integration scheme was not considered. The issue of power supply was revisited by the consultant Mike Hubbard of the "Financial Engineering Company". The 2002 report noted that in 2004 firm power supply was going to be a major concern.

Project Purpose and Need: The City Powerhouse is currently operating at maximum capacity with no reserve. Utility power supply planning requires a utility to plan for the loss of your largest generating plant (n-1) and the (n-1) plan determines your ability to serve your peak load with excess capacity. The City's total available power is less than 6.2 MW, with about 5.0 MW considered "firm" or consistently reliable. The City can not serve the present firm load with a (n-1) condition. If the City is to lose two units (n-2) the system could encounter multiple hours of forced outage conditions. Of the 5.0 MW that is considered "firm" power, 0.8 MW comes from the Unalaska Valley Power Module, which is considered a backup source. In the past 10 years the population has increased by less than 1% but the base load continues to grow at an annual rate of 1.2%.

Because of economic development, the City now finds itself in a position to offer only non-firm contracts to new industrial and commercial accounts. The City has recently interconnected with UniSea for alternate source of power and they can transmit about 3.0 MWs to the City grid. However, this power is on a non-firm basis.

Development Plan and Status: A preliminary engineering study was prepared and completed in March of 2004. Phase I or site selection has been finalized. Phase I also saw the evaluation and ordering of two generators from the "Wartsila Corporation". Partial payment was made from an energy grant from the Department of Energy and City funds in the amount of \$2.0 million. In Phase II, permitting requirements were completed concurrently with the final engineering design in early 2007. Construction is estimated to begin in the fall of 2007. An electrical contractor will be hired to perform the generator installation and switchgear connection and a general contractor will be hired to perform any structural upgrades.

Relation to Other Scheduled Projects: PCB are currently being removed from the powerhouse site at a cost of \$1.5 million. The PCB's must be removed prior to construction of the new powerhouse facility.

CITY OF UNALASKA

P.O. BOX 610

UNALASKA, ALASKA 99685-0610

(907) 581-1251 FAX (907) 581-1417



October 26, 2007

The Honorable Sarah Palin
Governor of Alaska
P.O. Box 110001
Juneau, AK 99811-0001

Re: City of Unalaska Capital Requests for FY09

Dear Governor Palin:

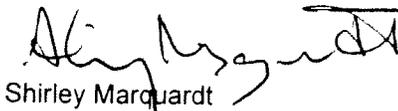
This letter is written to request your assistance with two projects critical to the continued health and stability of our hardworking community by placing \$4 million dollars for Powerhouse Expansion and \$1.5 million dollars for geothermal exploration in your Capital Budget.

The City's Electric Utility is in the process of building a new Powerhouse. This \$23 million dollar project will replace existing, inefficient diesel units in an antiquated WWII era facility with two highly fuel efficient 5.2 MW Wartsila units in a new facility, allowing the City to rise above power capacity limits currently restricting industry and small businesses growth in the "Number One Fishing Port in the Nation." Unalaska will obtain long term financing of \$14 million dollars, with another \$5 million dollars coming from the City's General Fund for the long anticipated project. This leaves a need of \$4 million dollars to complete the project without further burdening our rate payers.

Our community is also very supportive of the City Council pursuing a geothermal project for Unalaska/Dutch Harbor given the high cost of fuel and their desire to reduce our dependence on fossil fuels. A promising resource has been located on the flanks of Makushin Volcano but there is a need for more exploration to see if the resource exists lower in the Makushin Valley. If this is the case, the project costs could be reduced by \$25 million or more, making energy production using a renewable resource more realistic. It will cost \$3 million dollars, with the City Council contributing \$1.5 million dollars to fly in the necessary equipment to drill several holes in the Makushin Valley. This project could be an amazing opportunity for the entire State to learn from, and possibly emulate where feasible.

Any assistance you can provide in this regard will be greatly appreciated. In advance, thank you for your time considering these two important projects to Unalaska.

Sincerely,



Shirley Marquardt
Mayor

Enclosures

cc: The Honorable Lyman Hoffman, State Senator
The Honorable Bryce Edgmon, State Representative
Mr. Mike Tibbles, Chief Of Staff
Karen Rehfeld, OMB Director

CITY OF UNALASKA
UNALASKA, ALASKA

RESOLUTION 2007-48

A RESOLUTION OF THE UNALASKA CITY COUNCIL IDENTIFYING THE CITY OF UNALASKA'S STATE LEGISLATIVE FUNDING PRIORITIES FOR THE FISCAL YEAR 2009.

WHEREAS, the City of Unalaska is in the final design and permitting phase of a new powerhouse to meet its existing and future power generation needs; and

WHEREAS, the City of Unalaska estimates construction costs for the powerhouse project to be approximately \$23 million; and

WHEREAS, the City of Unalaska is fully responsible for all development costs, including a construction loan; and

WHEREAS, the City of Unalaska will have to fully fund the remaining costs to bring this needed project online.

WHEREAS, the City of Unalaska has been investigating geothermal potential for the last twenty years; and

WHEREAS, the City of Unalaska has been working with the Alaska Dept. of Energy to develop this project;

WHEREAS, with the high cost of fuel results in the Unalaska city Council wishes to revisit the feasibility of the geothermal project; and

WHEREAS, a proven geothermal resource exists on the flanks of Mt. Makushin volcano that could be developed if feasible; and

WHEREAS, the next step in the process is further exploratory drilling estimated at \$3 million.

NOW THEREFORE BE IT RESOLVED that the City of Unalaska, by this resolution, hereby identifies its top legislative priorities for FY 2009 and requests legislative appropriations as follows:

Construction of new powerhouse	\$4 million
Geothermal Drilling	\$1.5 million

PASSED AND ADOPTED BY A DULY CONSTITUTED QUORUM OF THE UNALASKA CITY COUNCIL THIS 9th DAY OF Oct., 2007.

Katherine L. McVastan
MAYOR -PRO TEM

ATTEST:

Delmar Macle
CITY CLERK

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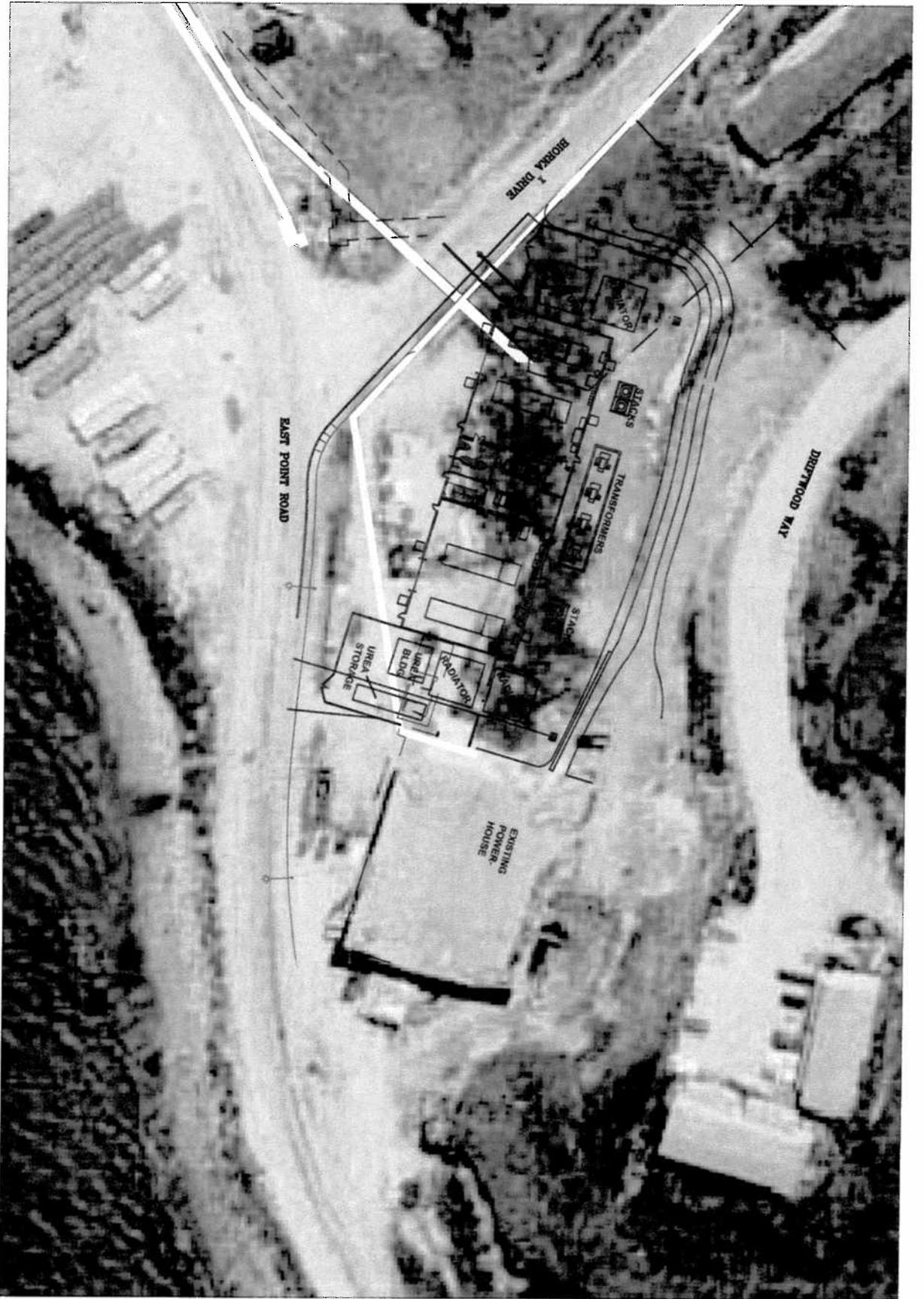
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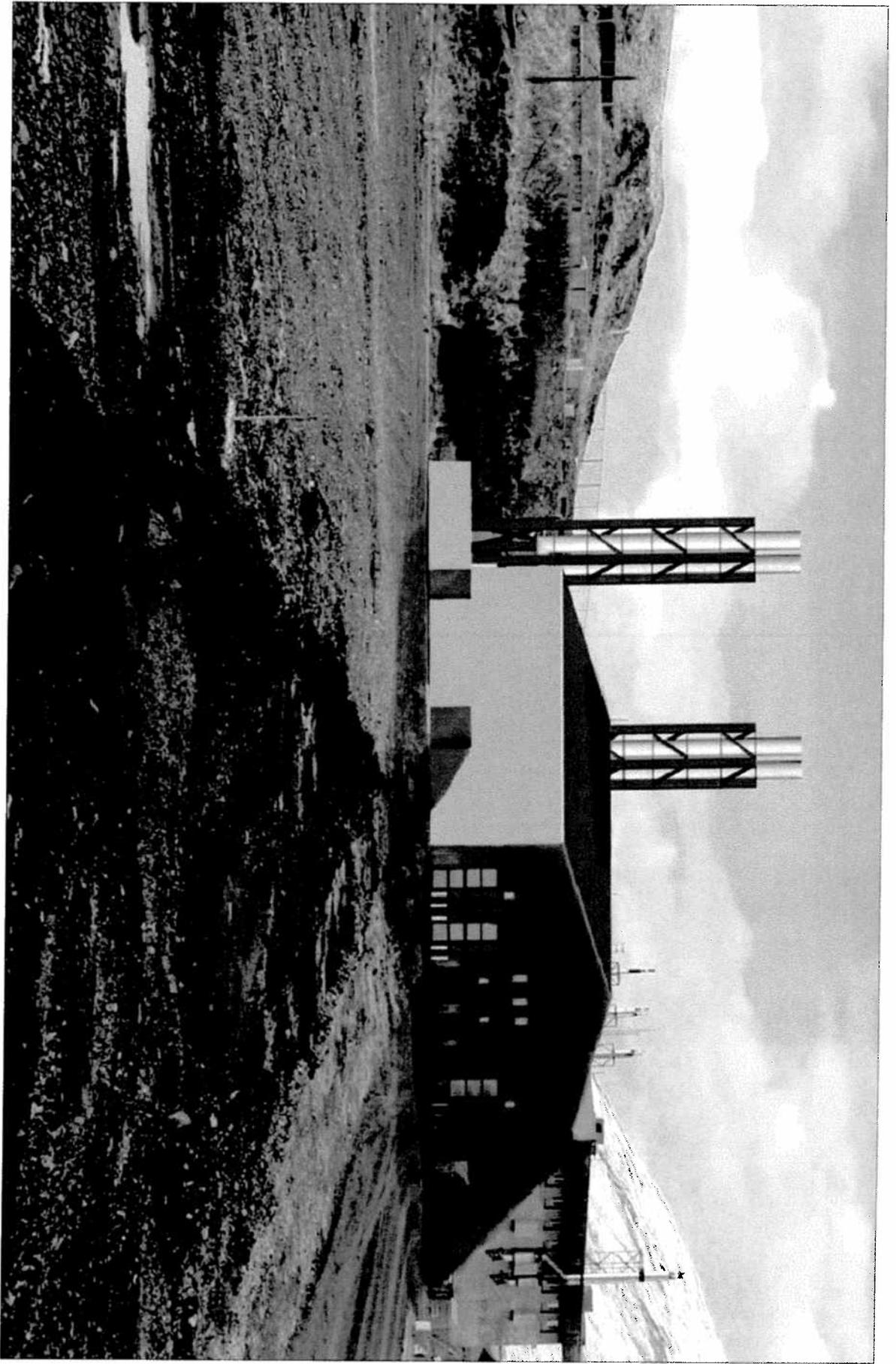
Cost/Benefit Analysis: The new generation will provide an abundant and reliable source of electricity, with benefits for all customers' of the Electric Utility. Additionally, the increase in capacity will allow a customer base to grow and increase utility revenues. Sales are projected to increase from 30,752,000 kilowatt-hours in 2005 to 68,874,700 kilowatt-hours in 2010. Estimated annual revenues will increase from about \$5,500,000 to about \$9,600,000 in this same time frame. Most of this increase will be due to economic growth. Projected load growth and the financial impacts to electric rates----were prepared by "The Financial Engineering Company".

In addition to increased revenues from economic growth, the new generators operate at a much higher efficiency. The City should see a proportional drop in fuel costs of over 20%. Current fuel usage has averaged about 13.7 kilowatt-hours per gallon of fuel. Fuel efficiency on the new generating units should increase to almost 17 kilowatt-hours per gallon. The attached "Projected Electrical Department Costs" indicate a projected drop from \$0.23 per kilowatt hour to about \$0.18 per kilowatt hour.

Cost and Financing Data: Estimated total cost of \$22,500,000.



CITY OF UNALASKA
POWER GENERATION
EXPANSION



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POWER GENERATION
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