

Agency: Commerce, Community and Economic Development

Grants to Municipalities (AS 37.05.315)

Grant Recipient: Ketchikan

Project Title:

Project Type: New Construction and Land Acquisition

Ketchikan - Whitman Lake Hydro Project

State Funding Requested: \$16,680,000
One-Time Need

House District: 1 / A

Brief Project Description:

Installation of a 4.6 MW of hydropower generating capacity at an existing dam, producing an estimated 16,000,000 kWh annually.

Funding Plan:

Total Cost of Project: \$19,050,000

| | <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> |
| State Funds | \$1,300,000 | 10 | | | | |
| Local Funds | \$1,070,000 | 08,09 | | | | |
| Other Funds | | | \$2,000,000 | 11 | | |
| Total | \$2,370,000 | | \$2,000,000 | | | |

Explanation of Other Funds:

FY11 AEA Application that is currently pending.

Detailed Project Description and Justification:

The City of Ketchikan requests funding to expand the Whitman Lake Hydroelectric Project. Development of Whitman Lake is critical to Ketchikan's economic sustainability and provides the community with reliable and reasonably priced hydroelectric power. The project is the city's top priority and a key component to maximize Southeast Alaska's hydroelectric resources.

Ketchikan has reached its hydroelectric capacity and anticipates an energy shortage within 4-7 years. Ketchikan's energy demand has experienced a 3% growth rate in the last two years alone, and based on identified projects, construction and heating conversions; Ketchikan anticipates a 4% to 5% increase in energy consumption through 2011. With new generation projects more than a decade away, Whitman Lake is the only project that can supply additional energy capacity to Ketchikan in the short term. Expanding Whitman Lake would displace an average of 1,080,000 gallons of diesel fuel annually, and help meet increased electrical demand as Alaskans convert from oil to electric heat.

The Whitman Lake Hydroelectric Project uses existing infrastructure to expand Ketchikan's hydroelectric capacity. The lake's hydrology fits well with Ketchikan's winter power needs with the project adding approximately 4 megawatts of capacity during critical cold periods. The project will install 4.6 MW of hydropower generating capacity at the existing dam, producing an estimated 16,000,000 kWh annually. Pipelines will lead to a new powerhouse containing two hydro generating units:

- Unit 1 will generate power with water that would otherwise be spilled

For use by Co-chair Staff Only:

**\$16,680,000
Approved**

•Unit 2 will generate power from water delivered to a fish hatchery located adjacent to the hydroelectric project.

This approach will result in a smaller environmental footprint and substantial savings over constructing new infrastructure.

The project will help attract new economic development and improve the quality of life for Alaskans facing high energy costs from diesel generation. The nearby Whitman Lake Hatchery, operated by the Southern Southeast Regional Aquaculture Association, will also benefit from an improved and enhanced water supply. An economic impact study reports that, in 2007, SSRAA was responsible for generating \$47 million to the economy of Southern Southeast Alaska.

It is critical to expand the Whitman Lake Hydroelectric Project to meet growing demand and secure a renewable energy supply for Ketchikan. State funding in the FY2011 budget is vital to allow the city to proceed with the project.

Project Timeline:

Phase I - Reconnaissance studies - Completed - \$470,000
 Phase II - Licensing & feasibility studies - Completed - \$600,000
 Phase III - Final design and permitting - 2008–2010 - \$1,620,000
 Phase IV - Construction and project startup - 2010–2012 - \$16,680,000
 Total \$19,370,000

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

City of Ketchikan

Grant Recipient Contact Information:

Name: Karl R. Amylon
 Address: 334 Front Street
 Ketchikan, AK 99901
 Phone Number: (907)228-5603
 Email: karla@city.ketchikan.ak.us

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

City of Ketchikan, Alaska d/b/a Ketchikan Public Utilities

Whitman Lake Hydroelectric Project

(FERC Project No. 11841)

Owner: Ketchikan Public Utilities
334 Front Street
Ketchikan, Alaska 99901

Contact: Karl R. Amylon, General Manager
(907) 228-5603
karla@city.ketchikan.ak.us

Start of Construction: 2010
On-Line Date: 2012
Estimated Cost: \$19,370,000
Requested Funding: \$16,680,000



Whitman Lake Dam

Project Description

The Whitman Lake Hydroelectric Project will be located approximately four miles from the City of Ketchikan. Ketchikan Public Utilities (KPU) proposes to install 4.6 MW of hydropower generating capacity at an existing dam, producing an estimated 16,000,000 kWh annually. Pipelines will lead to a new powerhouse containing two hydro generating units: Unit 1 will generate power with water that would otherwise be spilled; Unit 2 will generate power from water delivered to a fish hatchery located adjacent to the hydroelectric project.

The project will operate in cooperation with the Whitman Lake Hatchery, which is owned and operated by the Southern Southeast Regional Aquaculture Association (SSRAA). An economic impact study reports that, in 2007, SSRAA was responsible for producing \$47 million in economic output in Southern Southeast Alaska.

Project Benefits

Development of the Whitman Lake Hydroelectric Project is critical to Ketchikan's continued economic sustainability as it provides the community with a source of reliable and reasonably priced hydroelectric power. The project will:

- Displace an estimated average of 1,080,000 gallons of diesel fuel annually, over the lifetime of the project, reducing greenhouse gas emissions.
- Meet the demand for increased energy as customers convert from oil to electric heat as well as load growth from proposed new projects.
- Reduce the cost of energy, attracting new economic development and improving quality of life for customers facing high energy costs from diesel generation.
- Use existing infrastructure, resulting in a smaller environmental footprint vs. constructing infrastructure for another energy source.
- Restore and enhance the reliability of the water supply for the Whitman Lake Hatchery. The Whitman Hatchery is one of four SSRAA hatcheries contributing \$46 million annually and 420 jobs to the Southeast Alaska economy¹.
- Protect fish and wildlife habitat, and enhance flows in Whitman Creek.

¹ 2008 McDowell Group Report, Economic Impact (2007 Data)

The Need for Power

KPU is near-term capacity short and anticipates being energy short within 4 to 7 years (excluding diesel generation). Excess energy available from the Southeast Alaska Power Agency (SEAPA) is expected to be fully subscribed around 2015, assuming a 5% growth rate. There are no other shovel-ready generation projects identified in the SEAPA region to supply additional energy and capacity to Ketchikan within this 4 to 7 year time frame. Any other new generation project is reasonably more than 10 years away.

Ketchikan's load growth has increased over the last five years. In the last two years, KPU has experienced a 3% growth rate, normalized against temperature variation. Preliminary energy data from just two planned projects - the Ketchikan Gateway Borough Swimming Pool and the Alaska Ship and Drydock Assembly Building – indicate that these alone may require 2 million kwh annually, adding more than 1% to Ketchikan's current annual energy demand. Based on these and other identified projects, as well as routine construction and heating conversions, KPU anticipates a 4% to 5% energy consumption growth rate through 2011.

Demand peaked at 30.5 megawatts in December 2009. KPU's available capacity at the time, less diesel, was approximately 32 megawatts due to low hydro reservoir elevations. Whitman Lake's hydrology fits well with Ketchikan's winter peaking needs and the new hydro project will add approximately 4 megawatts of capacity during these critical cold periods.

Schedule and Cost Estimate

KPU received a FERC license for the Whitman Lake Hydroelectric Project in March 2009. Article 301 of the license specifies that project construction must start by March 2011 and be completed by March 2014.

The Alaska Energy Authority has previously approved a \$1,300,000 grant for project design and permitting.

| Phase | Description | Schedule | Cost Estimate |
|-------|----------------------------------|-------------|---------------|
| I | Reconnaissance studies | Completed | \$ 470,000 |
| II | Licensing & feasibility studies | Completed | \$ 600,000 |
| III | Final design and permitting | 2008 – 2010 | \$ 1,620,000 |
| IV | Construction and project startup | 2010 – 2012 | \$16,680,000 |
| Total | | | \$19,370,000 |

Final design and permitting work is underway. Construction is expected to begin in 2010, with the project coming on-line in 2012.

Funding Request

The City of Ketchikan d/b/a Ketchikan Public Utilities is seeking an additional \$16,680,000 to fund the remainder of the project.



April 20, 2010

The Honorable Sean Parnell
Alaska State Capitol Building
Third Floor
P.O. Box 110001
Juneau, AK 99811-0001

Dear Governor Parnell:

Re: FY 2011 Capital Budget - City of Ketchikan Projects

On behalf of the City of Ketchikan, I wish to take this opportunity to stress the critical nature of the infrastructure projects included in the FY 2011 Capital Budget for the City of Ketchikan.

As you know, the past several years have seen substantial decline in both timber and tourism industry dollars coming into the City of Ketchikan. These declines have severely impacted our ability to deal with the continuing major infrastructure improvement needs that the City of Ketchikan is experiencing. Although we have incurred debt for many major capital improvement projects, there simply is too much for one municipality to shoulder without assistance.

Again, I wish to stress the critical importance of all of these projects to the City of Ketchikan and urge you for your continued support. These projects truly are of utmost importance to the City of Ketchikan.

In closing, the City Council and I look forward to working with your office in the future to address matters of importance both to Ketchikan and the State of Alaska.

Should you have any questions on this matter, please do not hesitate to contact me.

Sincerely,

Lew Williams, III
Mayor

cc: City Councilmembers
Karen Rehfeld, OMB Director
Randy Ruaro, Deputy Chief of Staff
Ray Matiashowski

