

Agency: Commerce, Community and Economic Development**Grant Recipient: Ketchikan****Federal Tax ID: 92-6000082****Project Title:****Project Type: New Construction and Land Acquisition**

AEA - Ketchikan Whitman Lake Hydroelectric Project

State Funding Requested: \$9,500,000
One-Time Need**House District: 1 / A****Brief Project Description:**

Project will install 4.6 Megawatts of hydropower generating capacity at Whitman Lake Dam in Ketchikan.
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Funding Plan:

Total Project Cost:	\$19,050,000
Funding Already Secured:	(\$3,370,000)
FY2012 State Funding Request:	<u>(\$9,500,000)</u>
Project Deficit:	\$6,180,000

*Funding Details:**In 2009 - Alaska Energy Authority grant \$1,300,000 for project design.**Alaska Legislature approved a \$16,680,000 appropriation in FY2011 Capital Budget, but appropriation was vetoed down to \$1,000,000.***Detailed Project Description and Justification:**

The Whitman Lake Hydroelectric Project is vital to Ketchikan and will provide the community with a reliable and economic source of power. Currently Ketchikan is experiencing a near-term shortage of hydroelectric power and will face an energy shortage within four years. The project is essential for Ketchikan's continued economic future as is a top regional priority.

Ketchikan's energy load growth has increased substantially over the last five years. Currently it is anticipated that energy produced from the Southeast Alaska Power Agency (SEAPA), which powers Ketchikan, will be fully subscribed in 2015. There are no other shovel-ready generation projects that could supply energy to Southeast Alaska. New generation projects are more than ten years away. Construction of the Whitman Lake Hydroelectric Project will support the projected energy growth and peaking demand of Ketchikan, as well as being an added resource connected to SEAPA's Intertie with Wrangell and Petersburg.

The Whitman Lake Hydroelectric project is one of the only licensed and shovel-ready energy projects in Southeast Alaska. The Federal Energy Regulatory Commission (FERC) issued a license for the Whitman Lake Hydroelectric Project on March 17, 2009, and has granted KPU a two-year extension to commence construction. Project construction must begin no later than March 16, 2013 and must be completed by March 16, 2016. Approval has been granted by the Forest Service for construction of project facilities within an inventoried roadless area. Final design drawings are being prepared for FERC and agency approval. The environmental studies, permitting and licensing process for Whitman took twelve years to complete. Even after identification of the next FERC jurisdictional resource, it will be at least ten years before another project would be operational. Ketchikan's and SEAPA's available renewable energy capacity will be exhausted before that time.

There is a critical need for new power generation in Ketchikan. Preliminary energy data from just two planned projects - the Oceans Alaska Mariculture Training Center and the build out of Alaska Ship & Drydock facilities - indicate that these projects alone may require 2 million kWh annually, substantially adding to Ketchikan's current annual energy demand. Based on these and other identified projects, as well as routine construction and heating conversions, Ketchikan anticipates a 4%-5% energy consumption growth rate through 2011.

Expanding hydroelectric generation in southern Southeast will reduce reliance on diesel fuel to generate electric power and provide substantial savings to Alaskans. The project will displace an estimated average of 1,100,000 gallons of diesel fuel annually, which equates to over \$3,000,000 per year. The project will also provide increased capacity to support new construction and customer conversions from oil to electric heat.

While Ketchikan fully supports the creation of an Integrated Resource Plan (IRP) for Southeast Alaska, Ketchikan cannot wait for completion of the IRP before moving ahead with construction of the Whitman Lake Hydroelectric Project. If construction does not begin by March 2013, Ketchikan loses its FERC license, many years of planning and a valuable renewable energy resource for Southeast Alaska.

If the Whitman Lake Hydroelectric Project is not implemented, the energy shortage in the region will lead to increased operation of utility's diesel generators which would result in crippling costs for businesses and Alaskans.

This project is critical for the future of Southeast Alaska and is widely supported as a top regional priority.

Project Timeline:

Phase I - Reconnaissance Studies - Completed - \$470,000
 Phase II - Licensing & feasibility studies Completed - \$600,000
 Phase III - Final design and permitting 2008–2011 - 1,760,000
 Phase IV - Construction and project start-up 2011–2013 - \$16,220,000

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

The City of Ketchikan

Grant Recipient Contact Information:

Name: Karl R. Amylon
 Title: City Manager/KPU General Manager
 Address: 334 Front Street
 Ketchikan, Alaska 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.



Welcome Legislators!

Thank you all for your continued leadership and hard work on behalf of our region. Southeast has made great strides in many areas – but especially on the energy front. The establishment of the renewable energy grant fund and subsequent funding has seen unprecedented investment in many projects and the creation of HB 306 and SB 220 (with the southeast energy fund) will help the region achieve its quest toward energy security and diesel-independence.

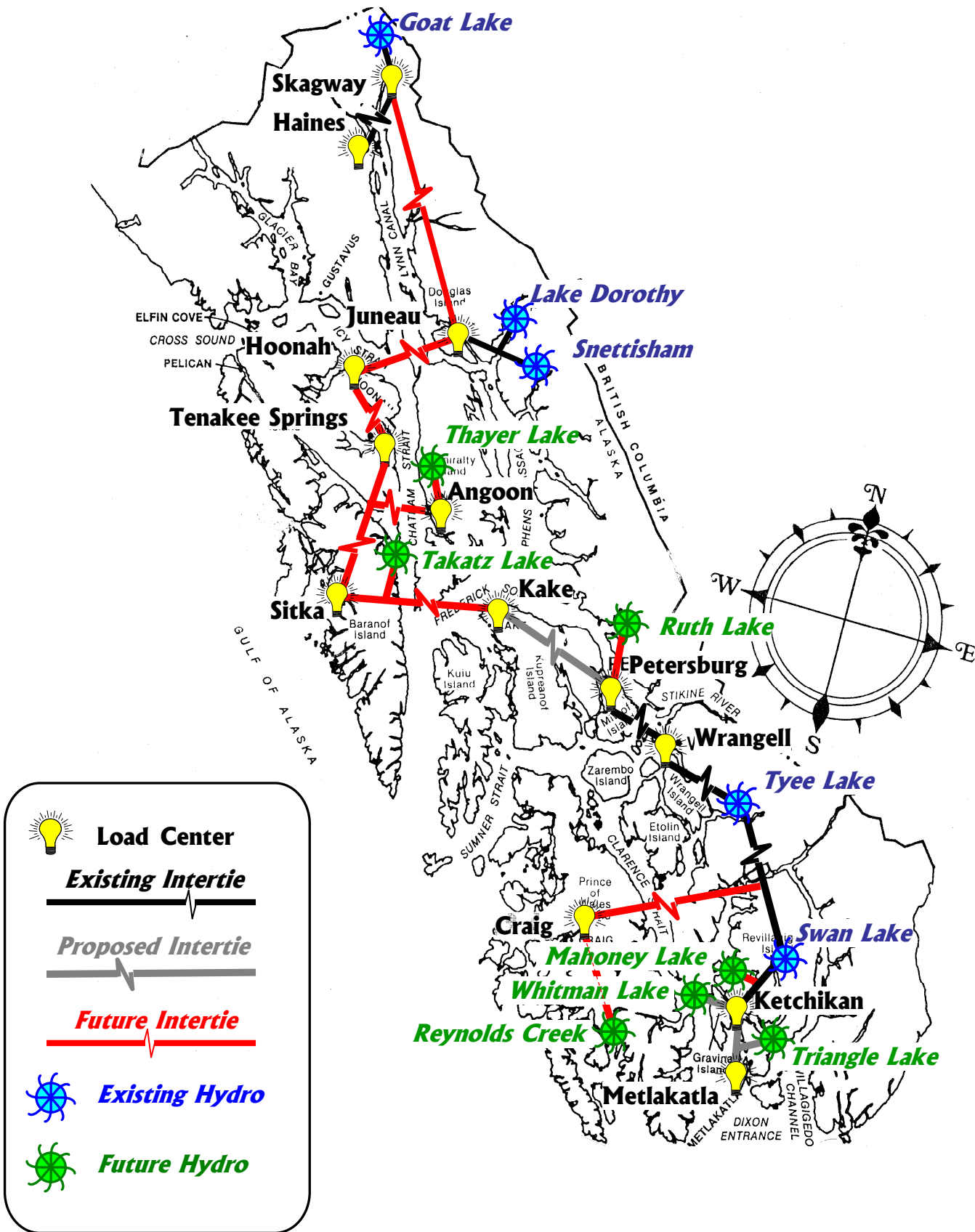
This year's main task will be the development of the Southeast Integrated Resource Plan (IRP). This IRP will be one of the most important documents produced for the region since our 1997 Intertie System Plan (and subsequent updates in 2003/2005) and will provide guidance to communities, utilities – and the State of Alaska as energy infrastructure gets planned for and constructed in our region.

But while we wait for the conclusions of the IRP, there are a number of projects that have been recognized throughout the region that need funding now. The following list of energy projects are offered for your consideration (listed in alphabetical order):

- Blue Lake Hydro - The scope of this project is to raise the height of the existing dam by 83 feet construct a new intake gate and a new section of power tunnel to supply a new powerhouse to be constructed adjacent to the existing powerhouse.
- Kake to Petersburg Intertie – This project has entered the NEPA phase and is funded through the environmental process. The community of Kake is seeking funding so that the project can begin construction as soon as the intertie is designed and permitted (estimated spring 2012).
- Metlakatla to Ketchikan Intertie – The combined hydros at Chester Lake and Purple Lake generate surplus power that could be dispatched to Ketchikan or to Kake via the Southeast Alaska Power Agency (SEAPA) intertie system if extended to Metlakatla. This project is under construction but needs funding for the segment between Annette Island and Ketchikan.
- Reynolds Creek Hydro – This project is officially in the construction phase. Good progress has been made in the creation of a project management team that is now updating costs and performing “value-engineering” tasks. It is anticipated that gap funding will be sought to cover construction-inflation costs that have increased since the project began.
- Thayer Creek Hydro – This hydro is the known solution to Angoon’s need for renewable energy development. The Forest Service signed the EIS Record of Decision for the Thayer Creek Hydroelectric Project in May 2009. Kootznoowoo has the rights to develop the project, and IPEC is the certificated and regulated electric provider for Angoon.
- Whitman Lake Hydro - 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 operate in cooperation with the Whitman Lake Hatchery (owned by Southern Southeast Regional Aquaculture Association).

For more information, contact the communities directly or Southeast Conference Energy Coordinator Robert Venables at energy@seconference.org.

SOUTHEAST ALASKA ELECTRICAL INTERTIE



Resolution No. 2011-01

Advisory Work Group for the Southeast Alaska Integrated Resource Plan

Whereas: The Alaska Energy Authority is conducting a Southeast Integrated Resource Plan as directed by the 26th Alaska State Legislature.

Whereas: The Southeast Integrated Resource Plan will not be completed until January 2012.

Whereas: Many citizens and businesses in the Southeast are suffering severe economic impact from the high cost of oil contributing to very high electricity and space heating costs.

Whereas: The following list of projects will help alleviate the impacts of the high cost of oil on citizens and businesses in the Southeast.

Whereas: The following list of projects have been under development for many years, have completed or nearly completed exhaustive FERC licensing or similar process, and have broad public support.

NOW THEREFORE BE IT RESOLVED THAT The Advisory Work Group for the Southeast Alaska Integrated Resource Plan unanimously requests that AEA accelerate consideration of the below listed projects and that they not be delayed as AEA conducts the SE Integrated Resource Plan project.

NOW THEREFORE BE IT FURTHER RESOLVED THAT The Advisory Work Group for the Southeast Alaska Integrated Resource Plan unanimously requests that the 27th Alaska State Legislature provide funding for the continued development of the following projects in alphabetical order to provide relief to the citizens and businesses in Southeast Alaska from the high cost of electricity and space heating.

- Blue Lake Hydro
- Kake to Petersburg Intertie
- Metlakatla to Ketchikan Intertie
 - Reynolds Creek Hydro
 - Thayer Creek Hydro
 - Whitman Lake Hydro

By: 

Date: March 21, 2011

Rick Harris, Executive Vice President, Sealaska Corporation
Chairman, Southeast Alaska Integrated Resource Plan Advisory Work Group