

Agency: Commerce, Community and Economic Development**Grant Recipient: Melakatla Indian Community****Federal Tax ID: 92-0014579****Project Title:****Project Type: New Construction and Land Acquisition**

Alaska Energy Authority - Metlakatla Indian Community

Metlakatla-Ketchikan Intertie

State Funding Requested: \$12,000,000
One-Time Need

House District: 5 / C**Brief Project Description:**

The project will construct an electrical intertie between Metlakatla and Ketchikan.

Funding Plan:

Total Project Cost:	\$12,000,000
Funding Already Secured:	(\$0)
FY2012 State Funding Request:	<u>(\$12,000,000)</u>
Project Deficit:	\$0

Detailed Project Description and Justification:

This project would construct the Metlakatla-Ketchikan Intertie providing for the integration of electrical generation and transmission for Southeast Alaska. Interconnecting electrical facilities in Ketchikan and Metlakatla will provide for a more reliable and economic source of energy, and improve the quality of life for Alaskans.

Southern Southeast Alaska is facing several pressing energy issues that this project will help alleviate. Currently Ketchikan is experiencing a near-term shortage of hydroelectric power and will face an energy shortage within four years. There are no other shovel-ready generation projects that could supply energy to Southeast Alaska and new generation projects are more than ten years away. Conversely, the nearby community of Metlakatla has substantial hydroelectric resources in close proximity to Ketchikan. Construction of an intertie will provide additional power for Ketchikan and other Southeast communities while improving economic development for Metlakatla.

The Metlakatla-Ketchikan Intertie is a major component of a regional effort to advance interconnected hydro power throughout Southeast Alaska. The project will connect with the existing Swan-Tyee Intertie which connects the Swan Lake hydro project in Ketchikan with the Lake Tyee hydro project near Petersburg. The intertie allows the electrical utilities in each community, to work collaboratively to displace diesel generation, load balance and more efficiently distribute power between generation projects.

The intertie will consist of 16 miles of over-head transmission lines and an approximate one mile submarine cable crossing Revillagigedo Channel. The project will include control system upgrades to allow for the integrated operation of the interconnected systems' generating plants. The Metlakatla-Ketchikan Intertie will provide benefits to both Ketchikan and Metlakatla, allowing for significantly improved utilization of Metlakatla's existing hydroelectric generating resources while reducing the use of diesel generators in Ketchikan.

The Metlakatla-Ketchikan Intertie has been well-studied and state funding will provide for final design, permitting, and construction. The project is essential for Southeast Alaska's continued economic future and is a top regional priority.

Project Timeline:

FY12 - FY14

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

Metlakatla Power & Light

Grant Recipient Contact Information:

Name: Arthur Fawcett
Title: Mayor
Address: Box 8
Metlakatla, Alaska 99926
Phone Number: (907)886-4441
Email: art@metlakatla.com

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

COUNCIL ANNETTE ISLANDS RESERVE

METLAKATLA INDIAN COMMUNITY

ARTHUR G. FAWCETT, MAYOR
DIANA M. YLINIEMI, SECRETARY
NATHAN W. FAWCETT, TREASURER

ESTABLISHED 1887

POST OFFICE BOX 8
METLAKATLA, ALASKA 99926
PHONE (907) 886-4441
FAX (907) 886-7997

RESOLUTION NO. 11-06

METLAKATLA INDIAN COMMUNITY BY THE COUNCIL ANNETTE ISLAND RESERVE

WHEREAS, the Metlakatla Indian Community Council is the governing body of the Metlakatla Indian Community, Annette Islands Reserve, Alaska by the authority of the Constitution and By-laws of the Metlakatla Indian Community approved on August 23, 1944 by the Secretary of the Interior; and

WHEREAS, the Metlakatla Indian Community is an American Indian Tribe organized pursuant to the provisions of Section 16 of the Federal Indian Reorganization Act, 25 U.S. C.; and

WHEREAS, The Metlakatla Indian Community Council fully supports and approves the Annette Island Packing Company Freezer Expansion at \$2,700,000.00 as their #1 FY 12 Legislative Priority; and

WHEREAS, the Metlakatla Indian Community Council fully supports and approves the Funding for M.I.C. Participation in the SE Regional Power Intertie Project at \$12,000,000.00 as their #2 FY12 Legislative Priority; and

WHEREAS, the Metlakatla Indian Community Council fully supports and approves the Funding for the Boat Launch Ramps & Boat Grid at \$1,000,000.00 as their #3 FY12 Legislative Priority; and

THEREFORE, BE IT RESOLVED, that the Metlakatla Indian Community Council approves the Annette Island Packing Company Freezer Expansion, the SE Regional Power Intertie Project, and the Boat Launch Ramps & Boat Grid as their #1, #2 & #3 FY12 Legislative Priority.

Signed and dated this 9th day of February, 2011 at

METLAKATLA INDIAN COMMUNITY

Marcel Nelson

Arthur Fawcett, Mayor

ATTEST:

Diana M. Yliniemi
Diana M. Yliniemi, Secretary

CERTIFICATION

I hereby certify that the foregoing Resolution was duly approved at a meeting of the Tribal Council Executives held on February 9, 2011 at which a quorum was present by a vote of 3 FOR and 0 AGAINST.

Signed:

Diana M. Yliniemi
Diana M. Yliniemi, Secretary



Metlakatla

Power & Light

**P. O. BOX 359
METLAKATLA, AK 99926**

Facsimile Cover Sheet

To: Nathan Fawcett - Treasurer
Company: Metlakatla Indian Community
Phone: 886-4441
Fax: 886-3338

From: C. Paul Bryant
Company: Metlakatla Power & Light
Phone: (907) 886-4451
Fax: (907) 886-3313

Date: 2/10/2011

**Pages including this cover
page:** 4

Comments: Attached are the construction cost estimates for the Intertie Project. The total estimated costs (including the Control Upgrades) are - \$12,144,246.

Metlakatla 34.5KV Walden Point Line Extension and Submarine Cable Tie

rev 1/29/10

Cost Estimate Summary

<u>Overhead Line Segments</u>	<u>MP&L Labor</u>	<u>Contracted</u>		<u>Total</u>
		<u>Labor</u>	<u>Materials</u>	
Walden Pt. Road Line	\$ 1,852,000	\$ 1,582,000	\$ 279,000	\$ 3,713,000

<u>Underground Line Segments</u>	<u>MP&L Labor</u>	<u>Contracted</u>		<u>Total</u>
		<u>Labor</u>	<u>Materials</u>	
Chester Lake to Walden Pt. Line	\$ -	\$ 430,000	\$ 74,000	\$ 504,000

<u>Overhead Double Circuit Rebuild</u>	<u>MP&L Labor</u>	<u>Contracted</u>		<u>Total</u>
		<u>Labor</u>	<u>Materials</u>	
Centennial to Chester Lake	\$ 211,000	\$ 134,000	\$ 70,000	\$ 415,000

<u>Substations</u>	<u>MP&L Labor</u>	<u>Contracted</u>		<u>Total</u>
		<u>Labor</u>	<u>Materials</u>	
Mountain Point	\$ -	\$ 55,000	\$ 57,000	\$ 112,000
Centennial Plant	\$ -	\$ 100,000	\$ 221,000	\$ 321,000

Subtotal - Non-Submarine Sections	\$ 5,065,000
Mob/Demob/Per Diem Costs	\$ 450,000
10% Contingency	\$ 551,500
Total - Non-Submarine Sections	\$ 6,066,500

<u>Submarine Cable</u>	<u>MP&L Labor</u>	<u>Contracted</u>		<u>Total</u>
		<u>Labor</u>	<u>Materials</u>	
Submarine Cable material			\$ 1,267,200	\$ 1,267,200
Mobilization	\$ -	\$ 950,000		\$ 950,000
Pre Lay Survey	\$ -	\$ 150,000		\$ 150,000
Installation & Cable Shipment	\$ -	\$ 970,000		\$ 970,000
Anchoring	\$ -	\$ 50,000		\$ 50,000
Demobilization	\$ -	\$ 750,000		\$ 750,000

Subtotal - Submarine Section:	\$ 4,137,200
25% Contingency	\$ 1,034,300
Subtotal - Submarine Section:	\$ 5,171,500

Total Project Estimate: \$ 11,238,000

MP&L Labor Contribution: \$ 2,063,000 (This amount included in total estimate)

Notes:

- 1) This estimate does not include any permitting, engineering, or project/construction management costs
- 2) 45' Class 1 Poles, 1/0 ACSR Conductor, and 10' crossarms with braces have been previously purchased by the Owner for this project and the material costs of those items are not included in this estimate.



June 10, 2009

Paul Bryant
Metlakatla Power and Light
PO Box 359
Metlakatla, Alaska 99926

Dear Paul:

Electric Power Systems, Inc. (EPS) has updated the budgetary estimate that was prepared for Metlakatla Light and Power (MLP) on May 21, 2008. The estimate is for replacement of the MLP hydro generator controls. The existing controls do not have the ability to operate the unit(s) in isochronous control, leaving MLP relying on the BESS system or diesel generator to provide isochronous control. The existing controls are also based on a proprietary control system that has become very difficult to support and repair. MLP has only one source for replacement parts and repairs.

In order to better identify associated costs with replacing the controls versus replacing auxiliary equipment (SCADA components and relaying) the budgetary cost estimate has been broken down into three categories:

1. Governor Upgrade - Replace generator controls (Black Box) with PLC based governor system including integrated generator controls.
 - o Governor Manufacturer
 - PLC based governor
 - Hardware interface kit (hydraulics)
 - Integrated unit control
 - Installation assistance
 - o EPS provide engineering support and project management to MLP
2. SCADA Upgrades.
 - o Upgrade Centennial plant HMI controls to interface with new hydro controls
 - o Replace outdated HMI PC and software
 - o Provide provisions for future plant control at Purple Lake (control of feeders, auxiliary equipment, etc.)
3. Unit Relay Upgrades - Replace existing Beckwith generator protective relays with modern microprocessor based relay(s).

EPS recommends that the first two categories be done simultaneously. It is not clear if the existing controls will interface directly with the new governor equipment. Upgrading the SCADA system will provide the interface to the new governors. Category 3 is an optional item and should be done as resources allow. Upgrading the unit relays will provide improved protection of the generators along with tools for troubleshooting system faults.

Below are the budgetary estimates for the above categories.

WWW.EPSINC.COM

PHONE (907) 522-1953 • 3305 ARCTIC BLVD., SUITE 201, ANCHORAGE, ALASKA 99503 • FAX (907) 522-1182
PHONE (907) 789-2474 • 2213 JORDAN AVE, JUNEAU, ALASKA 99801 • FAX (907) 789-4939

June 10, 2009

GOVERNOR UPGRADES	
PURPLE LAKE	
GOVERNOR EQUIPMENT (DESIGN, MATERIALS AND INSTALLATION SERVICES)	\$ 229,230
EPS OVERSIGHT	\$ 67,980
SUBTOTAL	\$ 297,210
CHESTER LAKE	
GOVERNOR EQUIPMENT (DESIGN, MATERIALS AND INSTALLATION SERVICES)	\$ 130,715
EPS OVERSIGHT	\$ 30,030
SUBTOTAL	\$ 160,745
GOVERNOR UPGRADE TOTAL	\$ 457,955
Notes:	
1. Replacement governor equipment will incorporate the unit control functionality as is currently in the existing Black Box controls.	
2. The estimate assumes the existing HMI demand control system will be compatible with the new governor equipment. No SCADA modifications are included in this estimate.	

SCADA UPGRADES	
PURPLE LAKE SCADA	\$ 135,674
CHESTER LAKE SCADA	\$ 37,176
CENTENNIAL HMI/SCADA	\$ 152,120
SCADA UPGRADE TOTAL	\$ 324,970
Notes:	
1. SCADA estimates are based on having the ability for direct communication between the Centennial plant PLC and unit control PLCs.	
2. Purple Lake SCADA equipment will include hardware for future plant control functions.	
3. Installation costs are based on MPL providing labor for installation of equipment with EPS engineers assisting.	

UNIT RELAY UPGRADES	
PURPLE LAKE RELAYS	\$ 83,864
CHESTER LAKE RELAYS	\$ 39,457
RELAY UPGRADE TOTAL	\$ 123,321
Notes:	
1. Existing Beckwith generator relays will be replaced with modern microprocessor relays.	

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If you have questions or would like to discuss this in detail, please feel free to contact me.

Sincerely,

David Buss, PE
Electric Power Systems, Inc.

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



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

