

HJR

25



REPRESENTATIVE BILL THOMAS

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Sponsor Statement for CSHJR 25 Urging Congress to Classify Hydroelectric Power as Renewable

One of the most readily available sources of renewable energy in Alaska is hydroelectric power. Alaska has a vast amount of high elevation lakes and run-of-the-river systems which have the potential, in many areas, to completely displace diesel generated power with little to no environmental impact. Hydroelectric power is so abundant in Alaska that most areas of the state can make use of it in some form or another.

With such a plentiful source of non-diesel generated power, it is unfortunate that the Federal Government does not have a working definition of renewable or alternative that includes hydroelectric power. This effectively cuts hydroelectric power projects off from many potential sources of federal funding, and therefore, hinders Alaska's efforts to displace diesel generated power.

CSHJR 25 asks Congress to develop a working definition of renewable and alternative which includes hydropower so that reliable renewable energy policy can be developed, and valuable projects receive adequate support.

I urge your support of CSHJR 25.

CS FOR HOUSE JOINT RESOLUTION NO. 25(ENE) am

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SIXTH LEGISLATURE - FIRST SESSION

BY THE HOUSE SPECIAL COMMITTEE ON ENERGY

Amended: 4/13/09

Offered: 3/25/09

Sponsor(s): REPRESENTATIVES THOMAS, Johansen, Edgmon, Millett, Austerman, Kerttula, Muñoz, Wilson, Johnson, Dahlstrom, Gruenberg, Crawford, Gardner, Tuck, Lynn, Gara, Guttenberg, Olson, Gatto, Petersen, Chenault, Holmes

A RESOLUTION

1 **Urging the United States Congress to classify hydroelectric power as a renewable and**
2 **alternative energy source.**

3 **BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

4 **WHEREAS** fossil fuels such as oil, natural gas, and coal are important sources of
5 energy for the electric power supply system of the United States; and

6 **WHEREAS** the cost of most fossil fuels, particularly oil, has increased dramatically
7 in recent years; and

8 **WHEREAS** increases in the cost of fossil fuels such as oil have caused, and continue
9 to cause, substantial increases in the electric bills of residential, business, and governmental
10 rate-payers at a time when the economy of the United States is in a major recession; and

11 **WHEREAS** the United States is dependent on foreign sources for a majority of its oil
12 supply; and

13 **WHEREAS** oil and other fossil fuels are finite resources that contribute to growing
14 worldwide concerns over carbon and other environmental effects; and

15 **WHEREAS** Alaskans, particularly those in rural parts of the state, are dependent on
16 oil-fired electric generation with retail rates as high as \$1 a kilowatt-hour; and

1 **WHEREAS** hydroelectric power is a viable source of clean, renewable, and long-
2 lasting electric energy in many areas of the state; and

3 **WHEREAS** hydroelectric energy can be developed in Alaska using high-elevation
4 lakes and run-of-the-river systems that have few or no negative environmental effects; and

5 **WHEREAS** it is the policy of the state to encourage development of its abundant
6 hydroelectric potential and wind, geothermal, and other renewable and alternative energy
7 sources to reduce dependence on fossil fuels for electric power generation and to reduce the
8 cost of electricity to rate payers; and

9 **WHEREAS** some federal laws and federal renewable and alternative energy
10 programs do not classify hydroelectric power as a renewable or alternative energy source; and

11 **WHEREAS** regions of the United States outside of Alaska have limited water
12 supplies or water shortages that could lead to classifying hydroelectric power as
13 nonrenewable, but many areas of Alaska have ample water supplies that are capable of
14 providing a renewable energy source for hydroelectric projects in the state;

15 **BE IT RESOLVED** that the Alaska State Legislature urges the United States
16 Congress to take the necessary action to classify hydroelectric power as a renewable and
17 alternative energy source so that the state can participate in federal programs without
18 restriction to facilitate development of the state's hydroelectric resources for the benefit of its
19 residents.

20 **COPIES** of this resolution shall be sent to the Honorable Barack Obama, President of
21 the United States; the Honorable Joseph R. Biden, Jr., Vice-President of the United States and
22 President of the U.S. Senate; the Honorable Harry Reid, Majority Leader of the U.S. Senate;
23 the Honorable Mitch McConnell, Minority Leader of the U.S. Senate; the Honorable Nancy
24 Pelosi, Speaker of the U.S. House of Representatives; and the Honorable Lisa Murkowski and
25 the Honorable Mark Begich, U.S. Senators, and the Honorable Don Young, U.S.
26 Representative, members of the Alaska delegation in Congress.

CS FOR HOUSE JOINT RESOLUTION NO. 25(ENE)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SIXTH LEGISLATURE - FIRST SESSION

BY THE HOUSE SPECIAL COMMITTEE ON ENERGY

Offered: 3/25/09

Referred: Resources

Sponsor(s): REPRESENTATIVES THOMAS, Johansen, Edgmon, Millett, Austerman, Kerttula, Muñoz, Wilson, Johnson, Dahlstrom, Gruenberg, Crawford, Gardner, Tuck

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4 lakes and run-of-the-river systems that have few or no negative environmental effects; and

5 **WHEREAS** it is the policy of the state to encourage development of its abundant
6 hydroelectric potential and wind, geothermal, and other renewable and alternative energy
7 sources to reduce dependence on fossil fuels for electric power generation and to reduce the
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HOUSE JOINT RESOLUTION NO. 25

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SIXTH LEGISLATURE - FIRST SESSION

BY REPRESENTATIVES THOMAS, Johansen, Edgmon, Millett, Austerman, Kerttula, Muñoz, Wilson, Johnson, Dahlstrom, Gruenberg, Crawford, Gardner, Tuck

Introduced: 3/13/09

Referred: House Special Committee on Energy, Resources

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14 worldwide concerns over carbon and other environmental effects; and

15 **WHEREAS** Alaskans, particularly those in rural parts of the state, are dependent on
16 oil-fired electric generation with retail rates as high as \$1 a kilowatt-hour; and

1 **WHEREAS** hydroelectric power is a viable source of clean, renewable, and long-
2 lasting electric energy in many areas of the state, including the southeast, western,
3 southwestern, and southcentral areas of the state; and

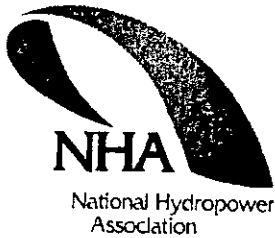
4 **WHEREAS** hydroelectric energy can be developed in Alaska largely using high-
5 elevation lakes and run-of-the-river systems that require little or no dam construction and
6 have little or no negative environmental effects; and

7 **WHEREAS** it is the policy of the state to encourage development of its abundant
8 hydroelectric potential and wind, geothermal, and other renewable and alternative energy
9 sources to reduce dependence on fossil fuels for electric power generation and to reduce the
10 cost of electricity to rate-payers; and

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“Assessment of Waterpower Potential and Development Needs By the Numbers”

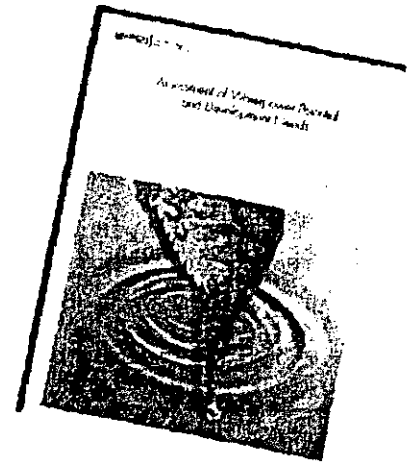
A quick look at the growth potential of hydropower by the year 2025, as detailed in the March 2007 report released by the Electric Power Research Institute.

GENERAL OVERVIEW

- **270,000 GWH** - existing hydropower generation in the United States (75 percent of U.S. renewable energy generation—the largest renewable source)
- **90,000 MW** - overall water potential available
- **23,000 MW** - potential capacity increase by 2025

BY 2025, CONVENTIONAL POTENTIAL

- **10,000 MW** - overall potential increase
 - **2,700 MW** - from new small and low-power conventional hydropower
 - **2,300 MW** - from capacity gains and efficiency improvements at existing hydropower facilities
 - **5,000 MW** - from new hydro at existing non-powered dams



Copies of the EPRI report are available at www.wpri.com. Search for report #1014762.

By 2025, NEW WATERPOWER TECHNOLOGY POTENTIAL

- **10,000 MW** - increase from ocean and wave energy devices
- **3,000 MW** - increase from new hydrokinetic technologies

The power of moving water

National Hydropower Association
1 Massachusetts Ave, Suite 850
Washington DC 20001
p: 202-682-1700 f: 202-682-9478
www.hydro.org

Hydropower is a domestic source of renewable, reliable, and affordable electricity. No other energy source offers so many advantages.

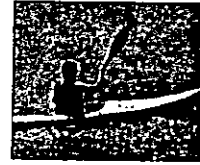
Domestic and Secure

Water from our rivers is a domestic resource that is not subject to disruptions from foreign suppliers, cost fluctuations, and transportation issues.



Efficient

Today's hydropower turbines are capable of converting more than 90% of available energy into electricity, which is more efficient than any other form of generation (the best fossil fuel power plant is only about 50% efficient).



Popular

Nationally, 93% of individuals believe hydropower is important or very important for meeting future electricity needs.

Source: 2002 public opinion poll by Bisconti Research Inc.

Renewable

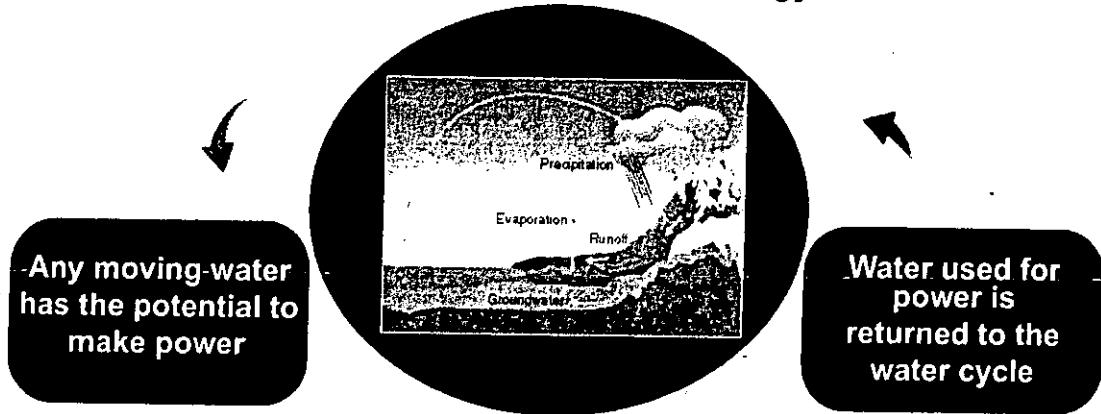
Like wind, solar, and geothermal, hydropower's "fuel" is essentially infinite and is not depleted during the production of electricity. Hydropower facilities simply harness the natural energy of flowing and falling water to generate electricity.

Clean

Hydropower uses water to generate electricity. It is climate-friendly and does not produce air pollution or create any toxic by-products.

HydroPOWER
the power of moving water

Clean power for a secure energy future



The hydrologic cycle

source: http://hydropower.inel.gov/hydrofacts/how_hydro_works.shtml

Reliable

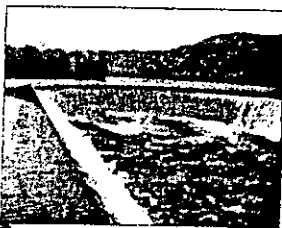
Hydropower can go from zero power to maximum output rapidly and predictably. This makes hydropower exceptionally good at meeting changing demands for electricity and providing ancillary electrical services that maintain the balance between supply and demand.

Flexible

Hydropower has the unique ability to change output quickly. Its unique voltage control, load-following, and peaking capabilities are critical for electric grid stability. This ability also provides an efficient and cost-effective way to support the use of intermittent renewable sources of power such as wind and solar energy.

Non-power benefits

Hydropower projects do more than just produce electricity; they create wildlife conservation lands, provide stable habitat for many kinds of wildlife, support healthy fisheries, provide water supply, control floods, irrigate land for food production, and create recreational opportunities for millions of Americans.



National Hydropower Association
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2009-03-16
US Senator Murkowski says higher taxes on oil, gas could backfire
Washington (Platts)--16Mar2009

US Senator Lisa Murkowski, ranking Republican on the Energy and Natural Resources Committee, said Monday that increasing taxes on the oil and gas industry would have the unintended consequence of driving natural gas producers and independent companies out of the country.

In his fiscal 2010 budget released last month, President Barack Obama called for excluding the petroleum industry from a manufacturer's tax credit, which might raise \$31 billion in additional taxes from the industry.

"People get up in the morning to hate the oil industry," said Murkowski, speaking at Platts Energy Podium in Washington. Murkowski represents Alaska, which after Texas produces the most oil of any US state.

Still, if Congress approves the president's proposal to raise taxes on the industry, that could reduce production of gas and its use as a lower-carbon alternative to coal-fired electricity generation.

She said that the committee will likely not agree on a renewable energy standard, although she said she could support a low-carbon electricity standard which includes nuclear energy and hydroelectric generation.

"If your goal is reduction of emissions, why would you not want to recognize those existing resources that aren't contributing to carbon output?" she said.

Energy and Natural Resources Committee Chairman Jeff Bingaman of New Mexico, a Democrat, plans to offer a renewable energy standard that would require investor-owned utilities to draw 20% of their output from wind, solar and other renewables by 2021. His proposal does not classify hydropower as renewable energy.

Nonetheless, Murkowski said she is optimistic that she and Bingaman will agree on a range of issues that could pass their panel with broad bipartisan support, including increased federal authority over

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transmission siting, ways
to boost energy production on public lands and perhaps
language creating a new
clean energy bank to finance new projects.

She also said the bill could include a provision
addressing energy
futures market regulation, though that issue had lost
some urgency as oil
prices have declined over the last several months. "The
heat has been turned
down on the issue of market regulation," she said.

--Jean Chemnick,
jean_chemnick@platts.com

Similar stories appear in Platts Inside Energy.
See more information at <http://insideenergy.platts.com>.


For a podcast of the Platts Energy Podium with Senator
Murkowski, please visit
<http://www.platts.com/energypodium/>

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- **True-up period.** A three-month true-up period is provided at the end of each year during which generators may obtain the required number of RECs or makeup any shortfall. During this period, purchases of RECs can be made from renewable-resource generators that have unsold RECs, or from generators that have RECs exceeding their requirement.
- **Credit banking.** Generators and renewable energy producers could be allowed to "bank" credits indefinitely. This will help to even out variations in output associated with natural resources, and provide generators with additional methods for ensuring that they are in full compliance.
- **Force majeure provision.** An extended true-up period could be provided to allow response time for extreme deviations in expected renewables generation resulting from events that are impossible to control, i.e., "act of God" situations such as a damaging hurricane. Such fluctuations should not affect the entire REC market, but may affect individual generators who have contracted for RECs from certain facilities.

TOP

Hydropower

It is necessary to exclude large hydropower from the RPS for several reasons. Though hydro brings public benefits in terms of avoiding the air emissions and wastes associated with conventional power plants, hydro is technologically mature, is fully commercialized (representing a significant share of the electricity market), and has limited development potential. Most importantly, including hydro in the RPS would create several intractable practical problems: (a) output from the large base of Canadian hydro projects could potentially be rerouted into the U.S. market and "flood" that market, depressing prices to levels too low to support non-hydro renewables; (b) the large year-to-year fluctuations in hydro output would make it difficult to meet a fixed standard each year and at the same time provide a predictable market for renewables; and (c) many hydro facilities have more than one use and have been built with the aid of large government subsidies. Therefore, it may be difficult to avoid cross-subsidizing irrigation, recreation, flood control, etc., through payments to hydro via the RPS. Including hydro projects under some size limit (no more than 30 MW) may help to keep in operation those projects that will have difficulty competing in the market (especially those with high environmental mitigation costs).

Encouraging a Diversity of Renewables

The RPS in its simplest form is a strategy for diversifying the electric supply with the lowest-cost renewable power available, as judged through market competition. Its primary purpose is not aimed directly at technology commercialization, though it will certainly encourage private investment in technology advancement. A diversity of renewable resources will be encouraged because generators and investors are likely to seek out the most cost-effective technologies and technology applications, thereby taking advantage of the most cost-effective applications of each resource (i.e., the low-cost end of the supply curve for each resource). Because the cost of many renewable technologies, e.g., wind, geothermal, landfill gas and some solid-fuel biomass and some solar thermal facilities, are in the same competitive range, the market is likely to result in a diversity of resources and technologies. The market can also be expected to seek out cost-effective niche applications of renewables, such as distributed applications of photovoltaics. Higher-cost technologies can be encouraged through commercialization programs (e.g., those funded by system benefits charges), which can work along side the RPS. Because the RPS creates a market for renewables, it will help to close the gap between the cost of pre-commercial technologies and the renewables-market price. As a result, technology commercialization program dollars can go farther as a result of the RPS.

Self-generation

Surplus renewables generation that is metered and sold at retail from customer-owned, grid-connected renewable facilities could be eligible for RECs. If a simple method is available to measure the power produced by these systems that is consumed on-site, that generation could also qualify for RECs. Though off-grid renewable self-generation applications could qualify for RECs, there are two reasons for not including them: (1) most off-grid self-generation applications are already competitive as compared to T&D line extensions; and (2) off-grid applications are not metered or sold at retail, and thus verification of production would be difficult. If policy-makers nevertheless want to encourage off-grid renewables, procedures could be developed to estimate production, though verification could entail high transactions costs.

Allocating RECs from Existing Facilities

An RPS policy creates a new, unanticipated source of income for existing renewable

AMENDMENT NO.

Calendar No.

Purpose: To provide a renewable portfolio standard.

IN THE SENATE OF THE UNITED STATES—111th Cong., 1st Sess.

(no.)

(title)

Referred to the Committee on _____ and
ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT intended to be proposed by

Viz:

1 At the appropriate place, add the following:

2 **TITLE VIII—RENEWABLE**
3 **PORTFOLIO STANDARD**

4 **SEC. 01. RENEWABLE PORTFOLIO STANDARD.**

5 (a) IN GENERAL.—Title VI of the Public Utility Reg-
6 ulatory Policies Act of 1978 (16 U.S.C. 2601 et seq.) is
7 amended by adding at the end the following:

8 **“SEC. 610. FEDERAL RENEWABLE PORTFOLIO STANDARD.**9 **“(a) DEFINITIONS.—In this section:**10 **“(1) BASE QUANTITY OF ELECTRICITY.—**

1 “(A) IN GENERAL.—The term ‘base quan-
2 tity of electricity’ means the total quantity of
3 electricity sold by an electric utility to electric
4 consumers in a calendar year.

5 “(B) EXCLUSIONS.—The term ‘base quan-
6 tity of electricity’ does not include—

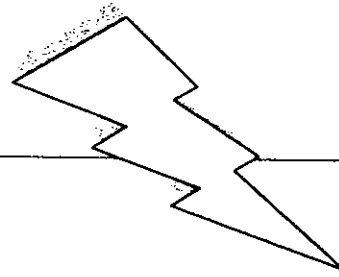
7 “(i) electricity generated by a hydro-
8 electric facility (including a pumped stor-
9 age facility but excluding incremental hy-
10 dropower); or

11 “(ii) electricity generated through the
12 incineration of municipal solid waste.

13 “(2) DISTRIBUTED GENERATION FACILITY.—
14 The term ‘distributed generation facility’ means a
15 facility at a customer site.

16 “(3) EXISTING RENEWABLE ENERGY.—Except
17 as provided in paragraph (7)(B), the term ‘existing
18 renewable energy’ means electric energy generated
19 at a facility (including a distributed generation facil-
20 ity) placed in service prior to January 1, 2006, from
21 solar, wind, or geothermal energy, ocean energy, bio-
22 mass [(as defined in section 203(b) of the Energy
23 Policy Act of 2005 (42 U.S.C. 15852(b))], or land-
24 fill gas.

Southeast Conference Energy Program



Legislative Report – January 2009

Southeast Conference

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Juneau Alaska 99802-1989
(907) 523-2310
Fax (907) 463-5670

Mike Korsmo: SEC Board President
Shelly Wright: SEC Executive Director
J.C. Conley: SEC Energy Committee Chair
Robert Venables: SEC Energy Coordinator

Executive Summary

MISSION STATEMENT

The mission of Southeast Conference is to undertake and support activities that promote strong economies, healthy communities, and a quality environment in Southeast Alaska.

Southeast Conference is a private membership organization that works to advance the collective interests of the people, communities, and businesses of Southeast Alaska. It is the Alaska Regional Development Organization (ARDOR), Federal Economic Development District (EDD), and USDA Resource Conservation and Development (RC&D) Council for the region.

ENERGY COMMITTEE MISSION

Our vision for Southeast Alaska is to reduce, to the maximum extent possible, the use of diesel as a primary fuel source for the generation of electricity.

This will be accomplished through the utilization of the regions plentiful hydroelectric potential and the development of an interconnected transmission system to share these resources throughout the region.

ACCOMPLISHMENTS:

The Southeast Conference, working with its member communities and utilities, has been successful in developing regional plans and obtaining state and federal funds for many energy projects in the region. Our energy committee represents communities, organizations and utilities throughout the region. This is a 'working committee' dedicated to working together to solve the region's energy problems.

Plans and Organizational Work

- Completed an engineering/economic analysis of the entire Southeast Alaska Intertie Project (ACRES REPORT, 1998 AND D. HITTLE & ASSOCIATES, 2003 & 2005).
- Secured U.S. Congressional Authorization for SE Electrical Intertie System Plan (PL 106-511).
- Took a lead role in the formation of Kwaan Electric Transmission Intertie Cooperative (KWETICO), potential owner/operator of portions of the SE Intertie.
- Worked with AEA to develop the Southeast Alaska Energy Export Study (2007).
- Kake-Petersburg Transmission Intertie Study Update (due March 2009).

Current Utility Projects Underway

- Kasidaya Hydro Project near Haines/Skagway (Project operational, 2008).
- Juneau to Hoonah Intertie Segment (Project partially completed to Greens Creek).
- Swan-Tyee Intertie Segment (Project on schedule for completion October 2009).
- Kake-Petersburg Intertie Segment (Planning Study/Economic Analysis, update in progress, joint design/permitting project with AKDOT&PF and AEA).
- Reynolds Creek, Haida Corp. (partially funded, ready to construct this year).
- Prince of Wales Intertie (partially funded, ready to construct).
- Elfin Cove Utility Commission (in final design for hydroelectric facility).
- Gustavus Falls Creek Hydro (operational 2009, final phase ready to construct).

Southeast Conference Energy Program FY10

FUNDING OVERVIEW

To maintain its Energy program, Southeast Conference (SEC) is working to locate short-term funding and to identify long-term (and sustained) sources of income. The immediate goal is to secure funding for two years to maximize the effectiveness of the energy program and assist communities in their ongoing efforts to reduce energy costs and increase efficiencies.

PROGRAM GOALS

- Reduce dependence on fossil fuels. This is critical in light of the recent volatility in oil prices.
- Bring affordable hydro power to communities where this is technically and economically feasible.
- Develop a regional electrical grid interconnecting Southeast communities and utilities with hydroelectric generation.
- Work with member communities and utilities to develop adequate energy infrastructure including alternative energy sources to meet current and future needs.
- Lower costs to rate payers and communities and increase economic development opportunities.

PRIORITIES / TASKS

- Secure funding for permitting and design for Kake-Petersburg Intertie (\$4.3 million).
- Work with IPEC and rural communities on solutions for their energy needs.
- Support Haida Corporation's efforts to advance the Reynolds Creek Hydro to completion.
- Begin working with federal and state funding agencies to construct the Kake-Petersburg Intertie.
- Facilitate efforts in Southeast to develop a regional Intertie and projects that increase hydro capacity.
- Work with member communities and utilities in their efforts to secure permits and funding for hydro and other alternative energy project development.
- Study alternative energy sources - biomass, hydrogen, wind, geo-thermal, tidal, and waste-to-energy.

Southeast Conference feels it is essential to develop and implement a regional energy plan for Southeast Alaska. We are working with the Alaska Energy Authority (AEA) and the Tlingit & Haida Energy Department to develop a regional energy plan and working with the communities to implement the opportunities that exist in their areas. Substantial and measurable progress has been made over the past couple of years, and it is important to keep the momentum of this program moving forward. The Southeast Conference Board of Directors has voted to maintain its energy coordinator position and its energy program as a core program within Southeast Conference and voted to support its staff in the pursuit of these goals. The position is currently being funded from reserves.

The following information is intended to demonstrate many areas where the State of Alaska can make an investment with significant impact and benefits to the region. These projects come from the communities and have been vetted through the public process. It is a work in progress and will be updated as more information comes to us from the communities.

Southeast Alaska Energy Projects with Estimated Funding Needs

Facilities and Infrastructure Construction Needs

- **Metlakatla Intertie to Ketchikan:** This is the southernmost leg of the SE Intertie system and is designed to transmit surplus hydroelectricity (approx. 8,500,000kW per year) to Ketchikan where the energy will be used to offset diesel generation (about 580,000 gallons). **CONSTRUCTION READY AT A PROJECT COST OF \$7,652,000.**
- **POW Island Intertie:** AP&T proposes to construct a 48 mile line extension to the communities of Coffman Cove and Naukati Bay (both use 100% diesel generated power). This project will place these communities onto the POW grid which is supplied by hydroelectric power. This intertie will reduce fossil fuel consumption by 71,082 gallons per year and reduce the electrical rate by up to 60%. **CONSTRUCTION READY, PARTIALLY FUNDED, AP&T HAS REQUESTED \$3,752,181 TO COMPLETE.**
- **Reynolds Creek Hydroelectric Power Project:** This 5 MW hydro facility is located 10 miles east of Hydaburg and is a joint venture between Haida Corporation and AP&T. The development of this resource is essential to meet the electrical needs of the POW Island as it grows and will prevent the use of supplemental diesel power. **CONSTRUCTION READY, PARTIALLY FUNDED, HAIDA POWER REQUESTING \$13,720,000 TO COMPLETE.**
- **Gustavus Electric:** The Falls Creek Hydro Electric Project is an 800 kWh run-of-river hydroelectric facility which will provide electric power to the community of Gustavus. The project will displace existing diesel generation. Construction of the project is approximately 90% complete and will provide 90% of the community's electric needs. **FUNDING REQUESTED BY GUSTAVUS FOR COMPLETION, \$750,000.**
- **Kake - Petersburg Intertie:** This is a high priority need in the region. Funding has been identified through HB 152 for final design and permitting. Detailed construction cost estimates will be available in March, but the project is estimated to cost between **\$25-34 MILLION** and could be funded in phases. The AK DOT&PF has begun field work and is an active partner in the development of this project.

Capacity Development Projects: Final Design and Permitting

Ketchikan - Whitman Lake: The proposed Whitman Lake Hydroelectric Project is located approximately four miles east of Ketchikan, Alaska. KPU proposes to install 4.6 MW of hydropower generating capacity at the existing Whitman Lake Dam to provide an additional source of clean renewable energy to the city of Ketchikan and the Borough area including Saxman Village, while also enhancing the conversion of oil heat to electric heat and displacing expensive and nonrenewable diesel generation. Phases 1 & 2 are complete. **FUNDING FOR FINAL DESIGN IS REQUESTED BY KPU AT \$1,300,000 (KPU MATCH, \$320K).**

Sitka- Blue Lake Hydroelectric Project: This project will raise the height of the dam by 83 feet and expand the plant's capacity from 8MW to 18MW of capacity. Sitka has nearly maxed out available hydro resources. Multiple funding partners are expected to participate in order to bring this facility on line by 2015. The City and Borough of Sitka **REQUESTS FINANCIAL ASSISTANCE IN FY2010 OF \$7,500,000.**

Hoonah Energy Needs: With the costs of the proposed Juneau to Hoonah intertie escalating to an estimated \$40 million, Alaska Energy Authority (AEA) commissioned a conceptual study of the hydroelectric resources in the immediate area of Hoonah along with an analysis of the power plant needs that should be addressed concurrently. The findings are as follows:

- \$4,061,317 Power Plant Replacement (2,600kW @ \$1,562/kW)
- \$4,558,500 Gartina Creek Hydroelectric Project (600kW)
- \$3,946,500 Water Supply Creek Hydroelectric Project (600kW)
- \$4,393,500 Elephant Falls Hydroelectric Project (600kW)

The development of any one of the three proposed hydro facilities would offset approx. 30% of Hoonah's projected annual demand. This would result in a savings of approx. 129,000 gallons of diesel fuel per year (saving approx. \$380,000 using an est. fuel cost of \$3.00/gallon). The development of any two of the three proposed hydroelectric facilities would offset about 50% of Hoonah's annual demand, with an approx. savings of \$640K. No formal request has yet been made, **CAPITAL NEEDS ABOVE TOTAL, \$16,959,817.** These projects will benefit the community significantly but will not meet all of Hoonah's energy needs. The Juneau to Hoonah Intertie Project is construction-ready and is still a long-term objective as part of the regional electrical grid network.

Elfin Cove Utility Commission: This hydroelectric power plant and associated infrastructure for access and connection will serve the community of Elfin Cove. Upon completion, the hydroelectric facility will include: a 1,000-foot long diversion conduit; a 1,300-foot long penstock to tidewater; and upgrades to the hydro power house. **FUNDING REQUEST BY ELFIN COVE FOR FINAL DESIGN AND FERC PERMITTING IS \$395,200.**

Community Planning Efforts: Feasibility and Assessment

Petersburg - Ruth Lake: This Project would develop the hydro potential at Ruth Lake, with a total installed capacity of the powerhouse of 20 MW. The proposed Ruth Lake Hydroelectric Project would be interconnected to the existing transmission infrastructure currently owned and operated by the FDPPA. Ruth Lake would be a major addition to the energy resources to serve communities in an interconnected Southern Southeast Alaska grid. **PHASE 1 FUNDING REQUEST FROM THE CITY OF PETERSBURG FOR PRE-FEASIBILITY IS \$160,000 AND PHASE 2 PERMITTING IS \$2 MILLION.** Petersburg is providing matching funds of \$540,000 for the two phases.

Metlakatla - Triangle Lake: This proposed 4MW hydroelectric project is located along the proposed transmission line intertie to Ketchikan. The Triangle Lake project will provide additional hydro power to Metlakatla and will offset diesel power generated in Ketchikan. **FUNDING REQUESTED BY METLAKATLA FOR FEASIBILITY ANALYSIS AND CONCEPTUAL DESIGN IS \$500,000.**

Sitka - Takatz Lake: Sitka is engaged in a long range strategy to decrease its dependence on oil by developing its renewable energy resources, particularly the known hydroelectric resources on Baranof Island. This project is the study and investigation phase of developing Sitka's hydroelectric resources to determine the feasibility of developing the estimated 28MW Takatz Lake Hydroelectric Project. **THE ESTIMATED COST OF THIS STUDY AND INVESTIGATION OF THE HYDROELECTRIC POTENTIAL OF TAKATZ LAKE IS \$2,000,000.**

This is a compilation of community projects that have gone through the public process. Most are part of the Southeast Intertie Plan authorized by Congress in 2001. More detailed information is available upon request. Other projects, such as Thayer Creek in Angoon will be added to this list as information becomes available.

Attachments to this report:

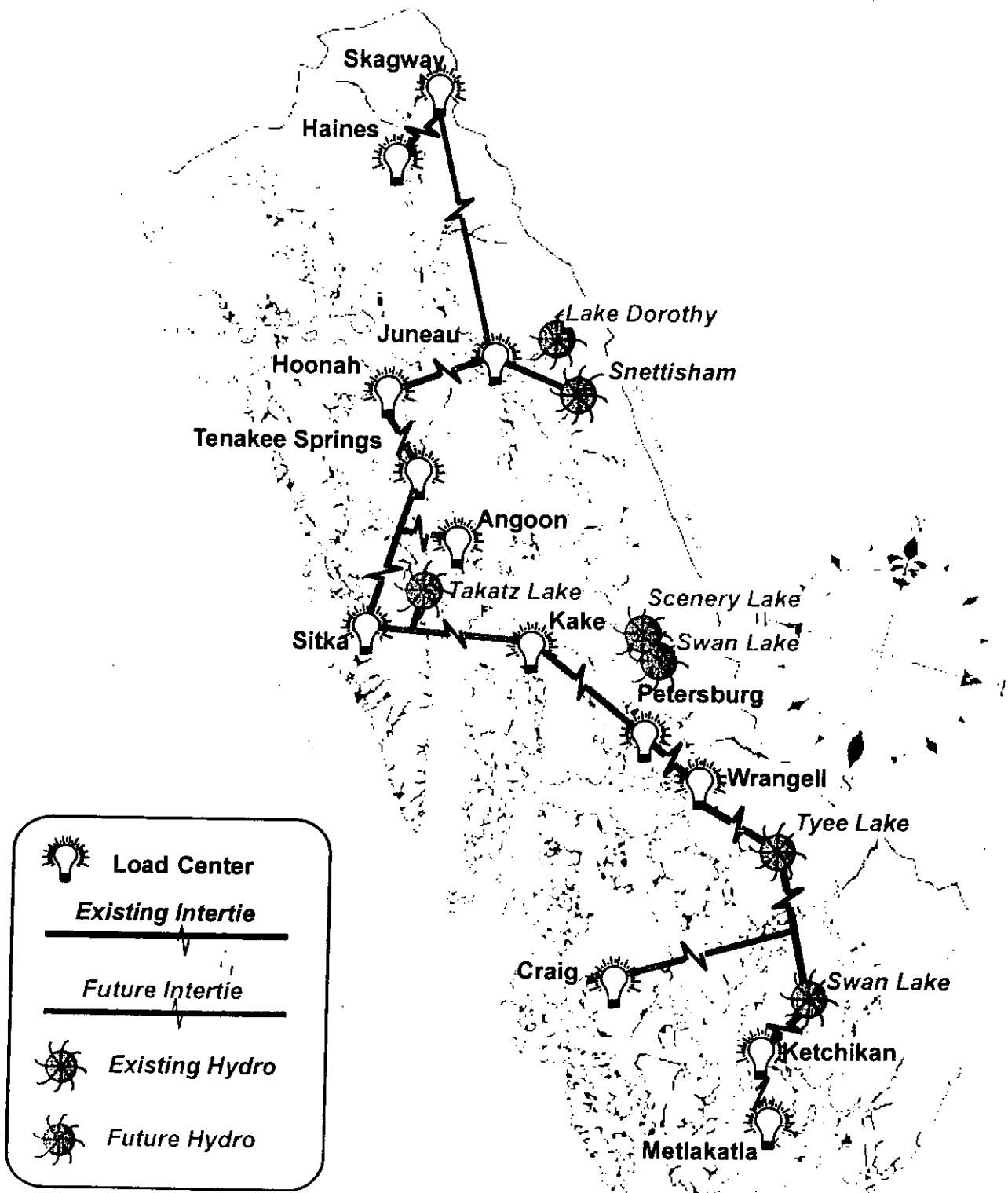
Map1_1997 Electrical Intertie System Plan

Map2_Kupreanof Island

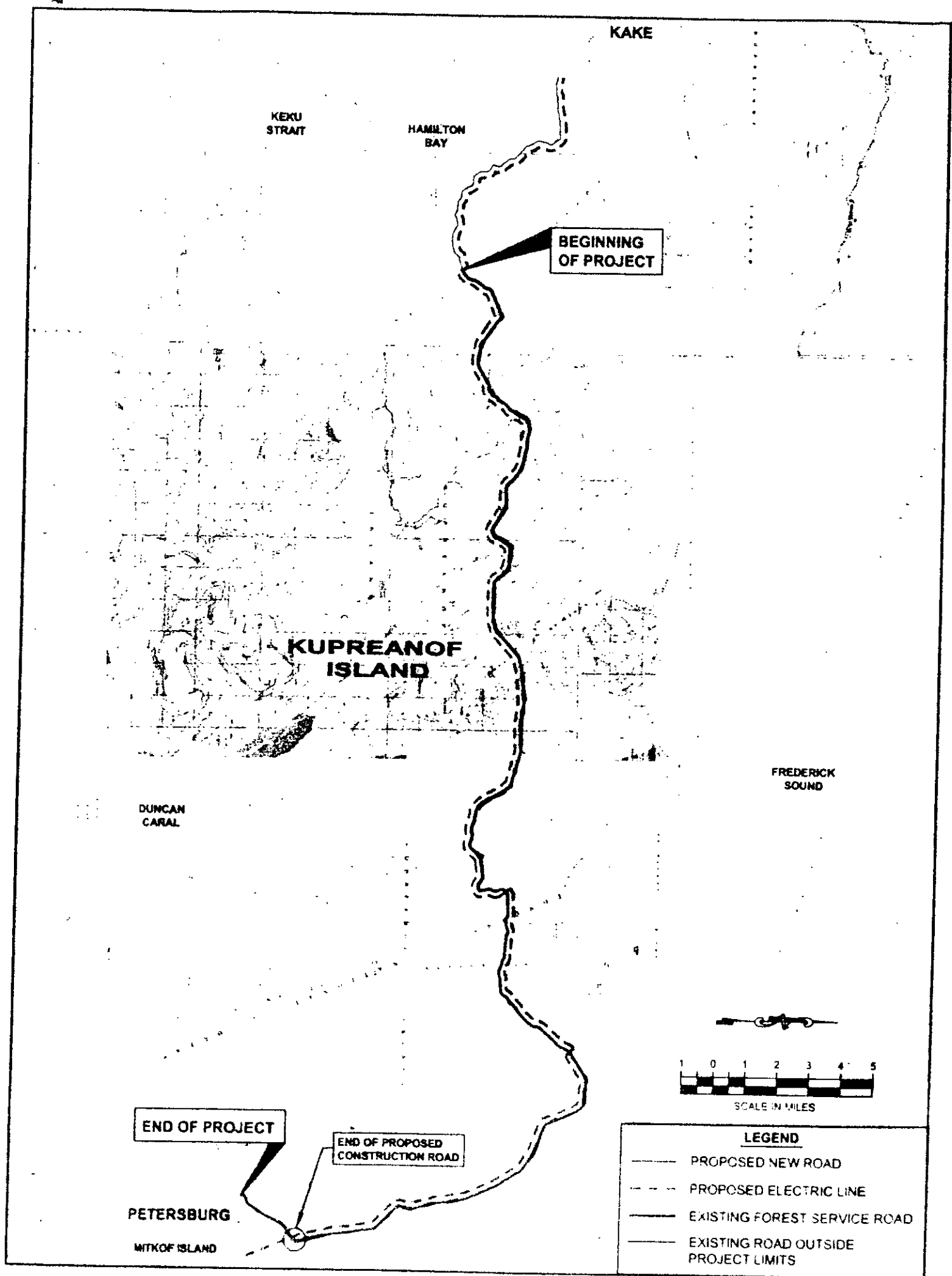
Map3_POW & Reynolds Creek

Map4_Ruth Lake Hydroelectric Project

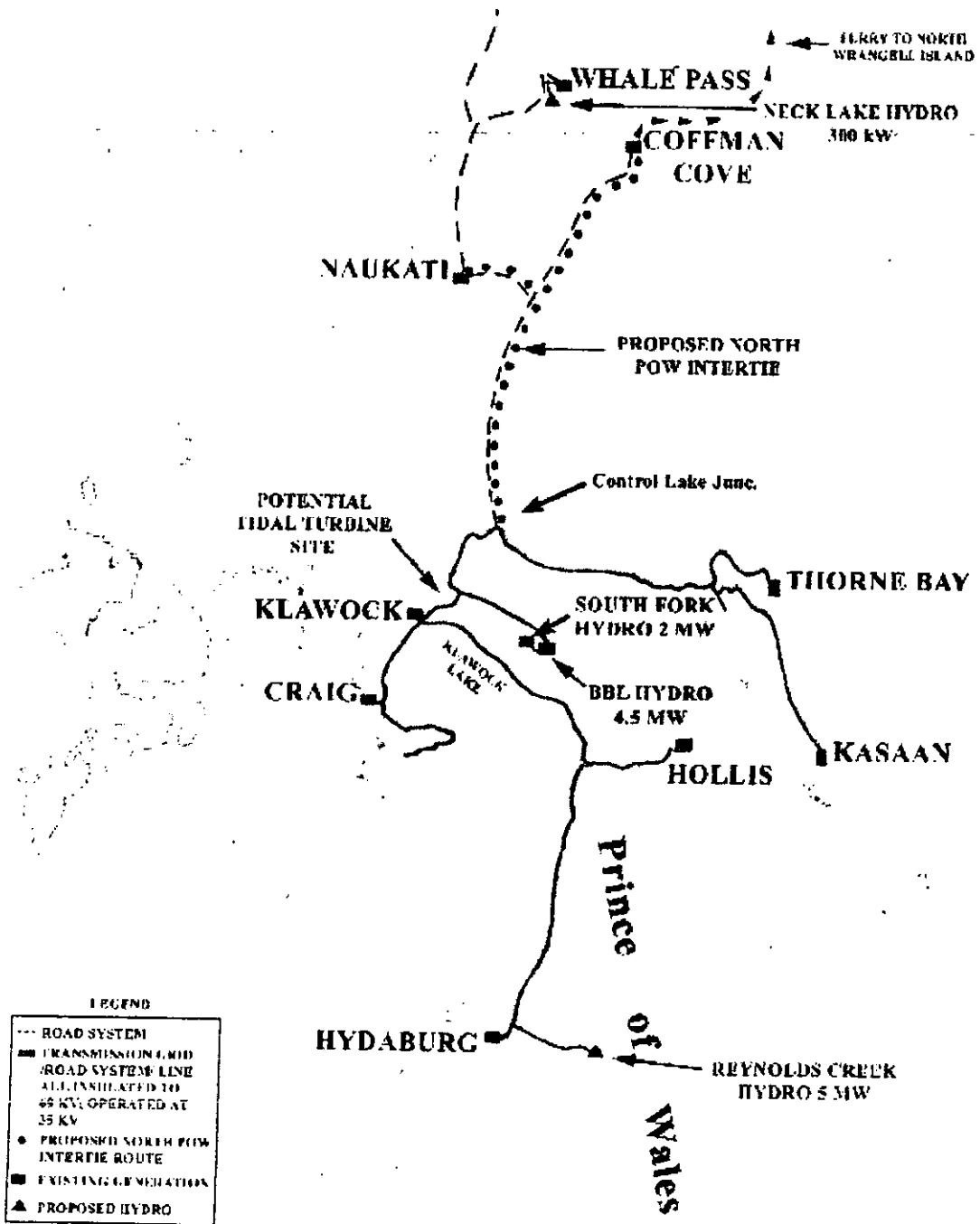
Map5_Upper Lynn Canal Regional Energy Infrastructure

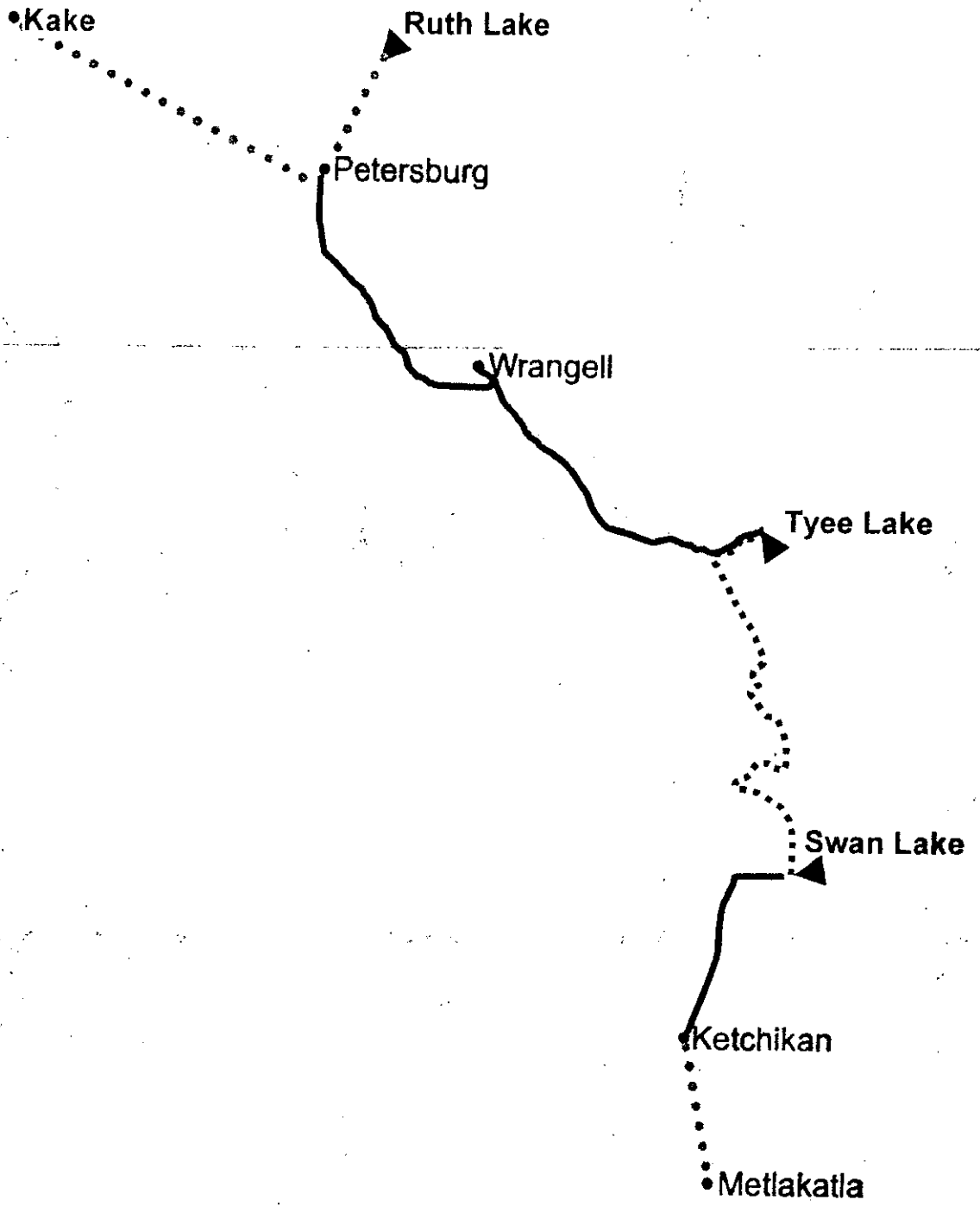


HATCH ACRES
 Southeast Alaska Utilities
 1997 ELECTRICAL INTERTIE SYSTEM PLAN



Prince of Wales Island Intertie & Reynolds Creek Electrical System





Transmission System Legend

- Existing
- Under Construction
- - - - Proposed

Exhibit F.2
Ruth Lake Hydroelectric Project
Southern SE Alaska Transmission System

UPPER LYNN CANAL REGIONAL ENERGY INFRASTRUCTURE

