



The Southeast Alaska Integrated Resource Plan

Presentation to the Southeast
Conference Annual Meeting
Petersburg, AK

General Approach - Public Processes and Coordination with Utilities

- Incorporate a public process to understand Southeast Alaska, its energy needs and resources, current energy issues, economic development issues that depend on energy resources.
- Support two technical conferences, to educate and understand the SE's public's need for energy, to work with electric utilities to develop load growth projections.
- Support an AEA created Advisory Work Group, providing periodic input to the work group at scheduled meetings, that include presentations of planning methodologies and interim work products.
- Work with SE utilities to establish a combined preferred resource list and development plan for power generation and transmission systems to produce and convey wholesale power to SE Alaska Communities.
- Create an abbreviated Integrated Resource Plan for the Southeast Alaska Power Agency, that yields a preferred resource list of generation projects, and transmission line extensions in a defined area that includes Kake, Petersburg, Wrangell, Ketchikan, and Metlakatla and integrate this work into the regional plan.

Understand the Southeast Milieu

- Assist the AEA and Advisory Work Group to explain the vision and goals of the Planning Study, through community meetings, meetings with Utility boards and staff, business and trade associations.
- Develop an understanding of all Southeast communities' energy needs, and the potential for development of renewable energy resources to satisfy these needs.

Assess Existing and Future Energy Needs

- Accomplish through reviewing existing reports and documents, and through consultation with stakeholders that include SE electric utilities and local governments.
- Consider local renewable energy resources for all SE communities, (building on the two existing AEA community-specific energy planning documents - "pathway") to identify potential generation projects that could achieve the goals of the study.

Assess Energy Technologies useful to Southeast Alaska

- Explore the role of new and emerging energy technologies for heating electricity, and vehicle transportation and how and where to deploy in energy infrastructure development for Southeast Alaska.
- Consider Potentials for Reducing Energy Consumption, and lowering Electrical Demands, deployment risks, and potentials for long term benefits to SE Alaskans.

Address Region-wide Energy Issues utilizing the Public Process

- Assist AEA to conduct the first of two regional technical conferences. (after becoming familiar with SE communities existing infrastructures and energy economies, the energy milieu, and the potentials for new and emerging energy technologies to be a part of future energy infrastructure).
- This technical conference will be sponsored by AEA in coordination with Southeast Conference and other organizations, to be an educational and awareness event that will publicly focus energy issues.
- The conference will include a short presentation of the AEA SE regional plan by the Contractor, and structured presentations by southeast electric utilities, energy economists and energy project finance experts, Southeast Conference energy and economic development representatives, and experts in new and emerging energy technologies.
- From the presentations, the Contractor will develop a list of region wide energy issues, and provide the range of strategies the region can employ.
- Conduct a public forum in town meeting format for public comment on issues list and possible strategies. This is envisioned as a two day conference.

Develop a Region-wide Electrical Transmission Plan

- Consider the existing 1997 Southeast Alaska Electrical Intertie System Plan (and subsequent reports), review, develop new criteria for, perform analysis to establish a new region-wide transmission backbone plan that will allow for interconnected grids (and sub-regional grids) for renewable energy generation where economically feasible .
- Consider technical aspects of each link (submarine cable costs, construction and operational risks), economics and operational risks, availability in each community of renewable energy resources that could provide energy at the same cost and reliability of the interconnected source.

Preferred Resource Lists for existing Interconnected Networks

- Review existing IRPs for presently operating interconnected systems, and incorporate preferred resource list that presently is recommended by electric utility.
- This will include Prince of Wales Island (AP&T), Greater Juneau area (AEL&P), Greater Sitka area, Upper Lynn Canal (AP&T) and the SEAPA network.
- Review and summarize the preferred resource lists regionally perspective and develop recommendations on the design, budget and schedule for proposed Generation and Transmission projects to achieve region-wide economic and energy goals.
- Consider and link this work with the Region-wide Transmission Plan task

Integrated Resource Planning for the Southeast Alaska Power Agency

- Using load/demand/growth projection data for the communities presently being served by SEAPA, and Metlakatla and Kake, accomplish an integrated plan for the future development of generation and transmission infrastructure to respond to load growth and new technologies.
- Assume Kake and Metlakatla will be connected via transmission line with M&O costs equal to the SEAPA system wide cost.
- Consider and link this work with the Region-wide Transmission Plan task

Planning for Insular Communities

- Use information from Region-wide Transmission Plan, the local renewable energy resources for all SE communities (from task 1 - SE Milieu), and available energy technologies, develop an approach and a plan for each of the insular communities in SE Alaska.

Financing the Southeast Energy Future

- Develop financing models for public infrastructure that can define a funding mechanism that considers public private partnership funding (use the Reynolds Creek financing package and the Bradley financing model as starting points).
- Key the financial model to considering all aspects of funding, including construction debt, timing for payment of this debt, evolving a long term debt repayment package that levels the rate responsibility for all rate payers that benefit from projects over their lifetime.
- These approaches could spawn opening up the RCA statute, which has not happened for a number of years. The timing and circumstances would need to be just right for this to occur.

Assemble plan components into a draft regional plan

- Link the establishment of the SE energy Milieu with energy technology review, regional transmission plan and integrated resource plans to establish an integrated approach that considers strategies, specific actions for regional transmission lines, and a region-wide preferred resource list for both insular and interconnected networks.
- Create a three level integrated plan that identifies region-wide strategies to address energy issues, region-wide interconnections, and community and utility level plans for Generation and Transmission.
- Produce an explanatory document that presents this three phase approach, complete with an executive summary of findings and results, methodologies and conclusions and recommendations.

Presenting the Southeast Integrated Resource Plan

- Present this plan in summary to the AEA Advisory Work Group, and to a second technical conference, to explain the plan to SE Alaska.
- Solicit written comments, collect these comments, summarize and present to the Advisory Work Group with recommendations on how to edit and finalize the plan.

Project Schedule

(Tentative, Subject to Change)

- Procure Consultant Contractor
(RFP Process 30-60 days)
- Load Forecasts-Resource Assessment
(90-120 days)
- Analysis and Draft Report
(6-9 months)
- Final Report
(Second Session Legislative Session)



On behalf of the Alaska Energy Authority, thank you for your time and attention.

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