

Integrated Resource Plan (IRP)

Location of the Project: The IRP will generally include the region presently interconnected from Ketchikan to Petersburg as well as the planned interconnected communities of Kake and Metlakatla.

Purpose and Objective of the Project: An Integrated Resource Plan is needed to correctly identify the next best 'resource stack' for the interconnected region. Additional generating resources need to be added to the present system to meet future load growth but should be done so that the most beneficial projects are sequentially added to the system with strong regional support.

- **Total Estimated Project Cost: \$500,000**

Project Timeline: 12-18 months to complete

Detailed Project Description: The purpose of this project is the first Integrated Resource Plan (IRP) for the interconnected cities of Ketchikan, Wrangell and Petersburg as well as the planned interconnected cities of Kake and Metlakatla. This project is a combination of reconnaissance, resource assessment and feasibility analysis. A principle goal is to identify generation resources that can be added to the system that has the strong support and consensus of the region.

An IRP identifies the future resource portfolio that achieves a set of objectives that have been established by stakeholders of the IRP process. The stakeholders will include the local utilities, communities, commercial and industrial customers, Federal and State agencies and the general public. The resource portfolio is a set of supply-side and/or demand-side improvements that eliminate any identified energy or capacity deficits. Supply-side improvements would be new generation construction, or modifications to existing generation assets such that energy production or available capacity is increased. This would include the addition of existing efficiency improvements or peak load modification measures. The stakeholders and the IRP issuing body establish the objectives that govern how the resource portfolio is established. Most IRP objectives are governed by the three major categories of cost, risk and environmental impact. The IRP process includes stakeholder input with final content decisions made by the issuing body.

Developing an IRP requires an analysis of the region's generation and transmission system, and an estimation of the region's load growth. Generation and load forecasts are modeled to determine when and to what extent future energy and/or capacity deficits occur. Energy and capacity deficits are resolved by a combination of constructing new generation facilities and through load growth rate or peak hour value reduction via demand side management. The IRP then documents a short-term and long-term plan to address the energy and capacity deficits.

Summary: With the recent completion of the Swan-Tyee Intertie, the communities of Ketchikan, Wrangell and Petersburg are all interconnected together for the first time. Additional intertie segments to Kake and Metlakatla are in the planning process. Generating resources can now be developed and shared by all of the present and planned interconnected communities. There are a myriad of potential hydro projects within and/or near the interconnected region. The Integrated Resource Planning project will evaluate existing and forecast loads, potential demand-side management and new generation projects that can be added to meet future load requirements. This planning process will be conducted with broad stakeholder support.