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John Whitehead

Scott Sterling, interviewer

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Scott Sterling said they will talk about hydropower development. He asked John Whitehead about the history of hydropower in Alaska since territorial days. Whitehead said hydropower has been around for almost 100 years in Alaska. It can be simple like a waterwheel and many such installations were put in as early as the 1880s. The Treadwell Mines developed hydropower installations by the turn of the century. The great increase in hydropower took place in Juneau before World War I when the Juneau mills were looking for a year round supply of hydroelectric power. The earlier power had been seasonal. Hydroelectric power had been built by private gold mining companies in the Juneau area before WWI and some of them still produce some of the power requirements. In territorial days Ketchikan developed hydropower in the 1910s and 1920s. It was Alaska's first all-electric city. Later the federal government built the Eklutna plant near Anchorage about 1955. Natural gas later generated electricity in the Anchorage area for about half the price of hydroelectricity. In the 1970s a federal government project, the Snettisham hydroelectric power plant, was built near Juneau. Other plants have been built or are in the plans in Valdez, Sitka, Petersburg and Ketchikan. Whitehead said hydropower is not something new to Alaska. He talked about the range of power from different plants. The proposed Susitna Project would have 1,600,000 kw of power. The Rampart project would have been the largest ever built in America. It would have dammed the Yukon River and would have almost produced enough power to light the Pacific Coast. The main problem would have been building a transmission line.

Sterling asked what government entity is responsible for projects in Alaska. Whitehead said usually a project is conceived by a local utility. There can be a number of ways the project can be funded such as bonds or funding from the state. The Alaska Power Authority was set up to receive funds from the legislature to aid and develop projects. It can cover feasibility studies, lend money to a utility or a municipality to build a project or actually be the owner of hydroelectric projects.

Sterling asked about the record of success for hydroelectric projects in Alaska. Whitehead said the success has been relatively good. Most of the hydroelectric power projects have not worn out. Some have been abandoned. One problem was a project plant in Ketchikan which had a failure after a rain event. It was rebuilt. There have been failures in transmission lines. Snow avalanches and winds have been a problem with the Juneau project's transmission lines.

Sterling asked about hydroelectricity in the Interior. Whitehead said there have been 700 potential hydroelectric sites in Alaska and there aren't many in the Interior and the Arctic slope. There was one in Chatanika which was damaged in the 1967 flood and was never redeveloped. The Alaska Power Authority is not looking in the Interior. The Susitna Project is about the furthest north project being seriously considered. Power would have to be brought into the Interior by transmission lines. There is the railbelt intertie being built. Once it is completed hydropower could be brought to the Interior in the

future. He talked about the location of the Susitna Project and markets for the power north and south of it.

Sterling asked about a grid in southeastern Alaska. Whitehead said in southcentral Alaska there is a grid in the Anchorage area with the Eklutna power plant and Chugach Electric. He talked about the loss of power over substantial distances over power lines. He mentioned using underground cables to remedy this problem. The Alaska Power Administration has been looking into using underground cables.

Sterling asked about the Susitna Project. Whitehead talked about the Susitna Blackmail Clause and financial implications. Sterling asked what stage the Susitna Project was in. Whitehead said the feasibility study has been done and the Alaska Power Authority has been authorized to seek a license from the Federal Energy Regulatory Commission. If it is granted then that would be the green light to appropriate funds for construction. He thought it would be a couple of years to get the license.

Sterling asked if there would be a time when Alaska might reach its full hydropower potential and get rid of our dependence on fossil fuel for energy and power production. Whitehead said we could if they built all the projects available in the state. He questioned if it would be cheaper to produce power that way rather than the available fossil fuels in particular natural gas.