

March 30, 2015

The Features and Benefits of Sweetheart Lake Hydroelectric Facility for the State of Alaska and Juneau, Alaska.

1. Energy Security.

- Provides Juneau with 19.8 Megawatts (MW) of new Nameplate Capacity and will provide new electrical generation that will average of 116,000 Megawatt hours (116,000,000 kilowatt hours) annually. The new additional capacity and new generation will add about 20% additional power to Juneau. To put this amount of power in perspective- The Coeur Alaska Kensington Mine and the Hecla Greens Creek Mine each use about 70,000 Megawatts annually.
- Immune to the Snettisham Avalanche area. The Sweetheart Lake Hydroelectric Facility will interconnect with the AIDEA Snettisham power line at a point that is beyond the traditional avalanche chute. Should there be another avalanche in the same area causing a Juneau power outage, the Sweetheart Lake Hydroelectric Facility will be able to provide back-up power on an emergency basis.
- Displacement of more expensive diesel generation. It is unlikely for the foreseeable future that AEL&P will need to run back up diesel generation in low water years. The additional capacity to provide a cushion of capacity and generation provides safeguards for ratepayers against future fuel surcharges.
- Fossil fuel costs are volatile. They go up and they go down. However, the prices for fossil fuels has been trending upwards. Hydropower costs do not increase with time and rates are generally stable. Hydropower projects can last over 100 years and therefore the project provides Juneau both short term and long term energy security for the Capital City.

2. Local Economics

- 2016 Construction would generate an estimated 87 family wage construction and construction supporting service jobs for two construction seasons. An additional 35 indirect jobs will likely be created providing a boost to Juneau's private sector employment. Juneau Hydropower plans to hire local labor to build the project and related transmission segments.
- The project would generate revenue for the Alaska Department of Natural Resources for the tidelands lease required for the Project. These leases would generate income for the ADNR for the life of the facility.
- Displacement of higher cost fuels. Currently the Coeur Alaska Kensington Mine self-generates it's electrical needs by on-site diesel generation that is considerable higher cost than hydropower. Additionally, the Hecla Greens Creek Mine is on interruptible power and

their energy costs increase significantly when the local utility cannot provide electricity. Lower operating costs intuitively make mining operations more profitable and can extend the lives of mines by allowing mine operators to explore and mine lower grade ore bodies that require lower costs. Lower operating costs also assist mining operations reduce risk to lower ore prices by allowing a mine to operate at lower costs. Energy costs for mine operators are significant. Each of Juneau's mines uses more electricity than the communities of Haines and Skagway combined (Source Alaska Power & Telephone- utility for Haines and Skagway).

- Mines and industrial operations pay significant property taxes and contribute high family wages to the Juneau community (average of \$87,000 annually). Lower energy costs help preserve and intuitively extend local mining lives of operation.
- Provides the capacity and power to electrify the Juneau cruise ship port. Currently there is not enough local energy capacity or generation to take advantage of electrifying visiting cruise vessels during the April through October Southeast Alaska cruise season. Approximately 40% of the Vancouver to Skagway (Source Vancouver Port) ships are able to take shore power electricity while in port. Cruise ship purchases of local Alaskan produced hydropower electricity provides additional revenue to the utility, but also reduces port emissions while saving the cruise industry energy costs by displacing more expensive diesel generation while in port.
- Increased electricity sales generates additional sales tax revenue for the City and Borough of Juneau.

3. Recreational and Fishery enhancements

- Enhancing the personal use sockeye fishery with a partnership with the Juneau DIPAC hatchery.
- Building a natural appearing tailrace that will provide allow wildlife to traverse, but also provide increased fishing area for personal use sockeye fishers.
- Emplacing mooring buoys so boaters can have a safe visit and not worry about anchors slipping on the soft bottom at Gilbert Bay.
- Improving and rocking trails to reduce soil erosion and to make the area safer.
- Providing signage for recreational visitors in coordination with US Forest Service and Alaska Dept. of Fish and Game.
- Seasonal, non-commercial use of Gilbert Bay dock for emergencies as well as to dock zodiacs and tender punts for recreational visitors.
- Emergency phone service availability and likely cell phone coverage.
- Weather cam so Juneau boaters can see the weather before making a trip to the area.