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# Susitna-Watana studies resume after spending freeze lifted

#### **By Elwood Brehmer** Alaska Journal of Commerce

Work is resuming on the Susitna-Watana hydroelectric project under spending guidelines put in place by Gov. Bill Walker's administration.

The overall cost for the proposed 705-foot dam in the upper reaches of the Susitna River has been pegged at \$5.6 billion in 2014 dollars by the Alaska Energy Authority, or AEA.

AEA will need \$105 million, maybe more, to get through the Federal Energy Regulatory Commission licensing process and to construction, authority Executive Director Sara Fisher-Goad said during an Aug. 6 board meeting. However, AEA only has the ability to spend the \$6.6 million it has in the bank for the project through 2017.

That money should get the project to the study plan determination, at which point FERC would rule whether or not the authority has gathered sufficient relevant data to apply for a project license. The FERC license is the last and largest pre-construction hurdle.

Fisher-Goad said AEA will continue to update data with field studies as necessary to prevent work from becoming stale or outdated. National Marine Fisheries Service officials have questioned the validity of some Susitna-Watana fisheries studies.

"The longer we stretch this out, we're losing our economy of scale to be able to have logistics support on several studies at one time," she said. "We're doing this in more of an incremental fashion."

AEA has completed 14 of 58 FERC-approved studies so far, according to Dyok.

To date, the project has received \$192 million in state appropriations. The Walker administration lifted an administrative order July 6 that halted spending on the dam, one of six large infrastructure projects that were put on hold in late December.

After 2017, once AEA has exhausted its funds for working towards a study plan determination, "the project will be revisited in the context of the fiscal environment and other competing major capital projects," Office of Management and Budget Director Pat Pitney wrote in a memo to Fisher-Goad. Mike Wood, president of the lead Susitna-Watana opposition group the Susitna River Coalition, in a July 16 release, called resuming the project a "slap in the face" to Alaskans



AP PHOTO/FRANK FLAVIN/ALASKA ENERGY AUTHORITY

Researchers walk along the Susitna River in this 2012 Alaska Energy Authority photo. With a spending freeze lifted by Gov. Bill Walker, work is resuming on the Susitna-Watana hydroelectric project. However, the authority will need about \$100 million in new funding to get through the Federal Energy Regulatory Commission licensing process and to construction.

as state leaders discuss ways to increase state revenue during a time of multi-billion dollar budget deficits.

"The proposed dam has already wasted hundreds of millions of state dollars and needs to be immediately shut down," Wood said. "It diverts necessary funds for other, more responsible and reasonable alternative energy developments, as well as goes against Walker's campaign promises of fiscal responsibility and fish-first policies."

AEA has touted the dam, which would generate about 2,800 gigawatts, as a way to provide half of the Railbelt's energy demand with clean energy at long-term stable prices.

Continuing at a slower pace to prevent unnecessary spending could end up costing the state if the dam is ultimately built, AEA Project Manager Wayne Dyok said at the AEA board meeting.

At \$5.6 billion to build today, inflation on project financing could add up to \$150 million to the cost each year construction is delayed, he said.

If everything goes according to the current plan, AEA will be able to submit its license application with FERC in 2019, and hopefully begin construction soon after a typical twoyear review, according to Dyok. However, if AEA gets the \$100 million-plus it needs to submit its application before 2017, that timeline could be accelerated by two years and potentially save the state \$300 million.

ect could also have a direct impact on long-term electric rates.

"What you get out of a constructed hydro project is this inflation-proof aspect, but you don't get that until it's constructed and generating," Fisher-Goad said.

Dyok said the dam would save Railbelt consumers an average of \$224 million per year on energy costs over the first 50 years in production, a total savings of a \$11.2 billion over that time.

Initial electric rates from Susitna-Watana - with first power in 2029 - would be in the 13cents per kilowatt-hour range, AEA estimates.

That price would continue to

drop to an average of 6.6 cents per kilowatt-hour as about \$8 billion in principal plus interest is paid off over 50 years.

By contrast, natural gas-generated electricity from the large Alaska LNG Project would be about 11 cents per kilowatthour in 2029 and increase to a more stable rate of about 15 cents per kilowatt-hour over several decades, according to Alaska Center for Energy and Power projections.

On the energy savings alone, Dyok said the cost-benefit ratio for the project is 2.39-to-1. When the avoided cost of building new gas-fired generating capacity,

generation facility retirement, and greenhouse gas reductions are included, the ratio improves to more than 3-to-1, he said.

Roughly half of the project qualifies for a U.S. Department of Agriculture Rural Utilities Service loan, which is conservatively projected with 4 percent interest, Dyok said.

The rest of the project financing is planned as nearly \$4 billion paid in state bonds at 5 percent interest over 30 years a portion of which would be refinanced at a lower rate, according to AEA officials.

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### **Economic**, study impacts

As an added bonus, Susitna-Watana would generate billions for Alaska's economy during construction along with clean, affordable power once its turbines are turning, AEA claims.

The dam would have an economic impact of \$3.4 billion and generate about 1,300 jobs each year during construction, according to a Northern Economics study commissioned by the authority.

Preconstruction study work has generated jobs, but also information that is being used by other state agencies.

"This project has advanced the state of science for a number of agencies, particularly the Alaska Department of Fish and Game through some of the salmon

#### work," Dyok said.

ADFG Mat-Su area sport fish biologist Richard Yanusz said in an interview that AEA's funding for fisheries studies has provided significant benefit to the department. He said there is relatively little data on chinook salmon in the Susitna drainage, despite the popularity of the species. AEA's studies in 2013-14 provided drainage-wide abundance estimates through radio telemetry tracking and mark-recapture efforts.

According to Yanusz, some of that information had not been gathered since the first time Susitna-Watana was proposed in the 1980s.

"It's been a long time between those abundance estimates, so having such a basic piece of information is very helpful to management," he said. "It is almost new information, very rare information, so just having those reference points will be helpful."

Similar studies were done for coho salmon, the other primary sport fish in the drainage, on the main stem of the Susitna, without including the major tributaries such as the Yentna.

Dyok said the Department of Natural Resources has also found flow data helpful for other potential projects in the region.

Managing flow below the dam has been an issue of contention for those opposed to Susitna-Watana, because of the potential impacts to juvenile salmon, particularly in winter. AEA is developing models to better project flow regimes throughout the year, but how much water is let through the dam is ultimately regulated by FERC, according to Dyok.

Average winter flow at the dam site would increase about four times and roughly be cut in half during the summer to retain water during times of lower electric demand based on early projections, he said.

Flow at the dam site currently comprises about 16 percent of the average annual water in the Susitna.

"Fisheries, recreation, and power; you need to balance all of those factors," Dyok said.

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