Loss of clean energy a concern

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October 4, 2009

Four hydroelectric dams installed on the Klamath River between 1918 and 1962 would be removed under a settlement agreement announced by PacifiCorp and stakeholders of the Klamath Basin Restoration Agreement Wednesday.

One of the primary concerns of many constituents: why remove dams that provide carbon-free, renewable energy at a time when the country is looking to reduce its dependence on fossil fuels? There's a variety of answers.

Environmental groups have stated Iron Gate dam, the farthest south, is blocking more than 300 miles of fish spawning habitat for salmon.

If the dams were kept intact and relicensing pursued, a variety of regulations and reviews would require millions to be spent to improve river conditions. PacifiCorp, owner and operator of the Klamath Hydroelectric Project, says the risk that costs would far outdistance benefits is too great.

PacifiCorp Vice President and General Counsel Dean Brockbank said that soon after the power company began the process of re-licensing the dams, it became apparent that governments in California and Oregon, as well as the federal level, wanted the dams out, rather than re-licensed.

"This was not a partisan political issue," he said. "They all wanted the same thing."

PacifiCorp recognized that, at the state level, the water quality permitting process could be so onerous as to make the dams cost more to operate than they could generate. Even surpassing that hurdle, there was the possibility of flow restrictions, and the required addition of fish passage at an estimated cost of $279 million.

"It doesn't come out in the balance sheet," Brockbank said.

AP photos ABOVE: TOP LEFT: Copco 1 Dam spans the Klamath River outside Hornbrook, Calif.

At the same time, PacifiCorp wants to ensure the dams continue to operate as long as possible on temporary permits. The project generates an average of 716,820 megawatt-hours each year, said Pacific Power spokesman Toby Freeman. That is equivalent to powering 70,000 homes or a wind generation project of 200 wind turbines, he said.

"There is sufficient flow in the Klamath River to allow all of the dams to generate power during all days of the year," Freeman said. The turbines aren't working every day of the year, and are usually scheduled for maintenance during September and October.

Freeman said most hydroelectric projects operate at about half of their stated capacity, given that turbines are shut down or online depending on customer demand and other factors.

"We'd like to run these turbines as long as we can," Brockbank said. " We are taking away what we would characterize as a carbon-free, clean generating resource."

But in a press release, conservation group American Rivers states that the dams create a nominal amount of power. "Which can be replaced using renewable and efficiency

measures, without contributing to climate change. A study by the California Energy Commission and the Department of the Interior found that removing the dams and replacing their power would save PacifiCorp customers up to $285 million over 30 years."

The Hoopa Valley Tribe, which resides on the Trinity River, a tributary of the Klamath River, said in a press release that, while the dams may eventually come down, there is still a dire need for protections on the Trinity and its salmon stocks.

"We all agree dam removal is necessary for the improvement of the Klamath-Trinity basin health, and the recovery of salmon runs," said Mike Orcutt, Hoopa tribal fisheries director.

"But the theme of putting the business needs of PacifiCorp above area of origin and tribal water rights concerns us."

Brockbank stated continuing to operate the dams until 2020, the earliest date for dam removal, will still cost tens of millions of dollars in water quality mitigation.

"For the time being, we'll continue to operate under the current cost structure," he said.

Freeman said the company will look for ways to add to its renewable energy portfolio to help balance the retirement of the dams.

"We will be working during this period prior to dam transfer and removal to identify how to replace the emissions-free generation currently provided by the Klamath hydro project with a reasonably priced alternative," Freeman said.

Brockbank said replacing the energy generated by the hydroelectric dams is part of a long term planning process.

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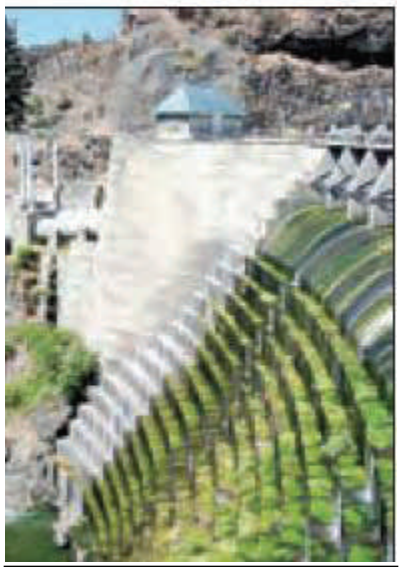
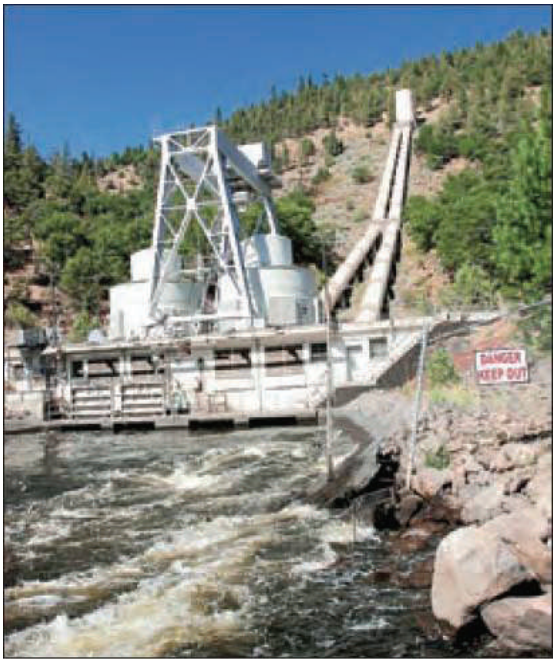
Copco
No. 1 Dam





AP photo: Water flows back into the Klamath River outside Keno after being diverted by J.C. Boyle Dam upstream. The water runs through the

AP Photo: Copco 1 Dam spans the Klamath River outside Hornbrook, Calif.

The water runs through the powerhouse, shown here where electricity is generated.

Copco No. 2 Dam

Height

33 feet

Construction completed

1925

Generation

27 megawatt capacity. Annual average generation: 135,000 megawatt-hours

Estimated Cost of Removal

To be determined

Estimated Cost of Mandated Fish Passage Upgrades

$55 million (per April 22, 2006 PacifiCorp cost estimates)

Number of turbines

2

AP Photo: Copco 2 Dam regulates outflows from Copco 1 upstream on the Klamath River near Hornbrook, Calif.