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Buhl plant first to feed electricity to utility

by RON ZELLAR
Times-News writer

BUHL — With no more fanfare than throwing the switch on an irrigation pump, a privately owned hydroelectric plant began adding kilowatts Saturday to Idaho Power Co. lines.

The plant, built by Dan and Wayne Skeem north of Buhl, became the first to furnish electricity to Idaho Power under terms of small-power contracts ordered two years ago by the state Public Utilities Commission.

Technical problems delayed the start for more than a year, but one of the power generating turbines began putting out power late Saturday afternoon. When a second power cluster is completed farther downstream, the Skeem hydro project will generate an average of 532 kilowatts, enough to supply more than 200 homes.

Farm visitors would find the system virtually indistinguishable from a large irrigation plant.

Five 100-horsepower pumps are mounted on a cement

platform adjacent to Mud Creek. Wires from a control panel are attached to a cluster of ordinary-looking, pole-mounted transformers. Steel pipe extends up the canyon face, and a canal runs along the canyon's western rim.

The important difference, Dan Skeem explains, is that the power system runs in reverse.

Water enters the canal from a diversion dam 90 feet above the power plant. At a point directly above the plant, water enters the pipe and rotates the turbine blades to produce — rather than consume — electricity.

Contractors who worked on the plant include two firms with extensive experience in irrigation development. Ed Wickham of Hagerman has been laying steel pipe for 24 years. And Jack and Aaron Witherspoon of Twin Falls are leaders in the pump-supply business.

Only minor modifications in the intake and exit ports were required to use the pumps for power production. And the savings in using off-the-shelf equipment, rather than sophisticated power turbines, was a key factor in making the project feasible, according to Skeem.

As it is, he expects the plant to pay for itself in 10 years.

The contract with Idaho Power calls for producing an estimated 3.5 million kilowatt-hours a year, for which the utility has agreed to pay 6 cents a kilowatt-hour under an "avoided cost" formula established by the PUC.

"There is a certain satisfaction in being the first to fire up," Skeem says, adding that the extra cost required to complete the project during the winter should easily be offset by the additional power generated and sold to the utility.

The project changed shape several times in the year-and-a-half since he and his father first envisioned a power plant on land they own along Mud Creek, Skeem says.

"We added and subtracted until we got to the point that it was as efficient as we thought it could be done," he says.

The vertical drop in the upper plant was increased by lengthening the canal.

A supplemental pipe was added to bring surplus irrigation water from farm land on the opposite bank. The two pipes are joined in a single manifold before entering the turbines, providing a combined generating capacity of about 300 kilowatts.

The second plant a half-mile downstream will use four turbines and yield an estimated 232 kilowatts.

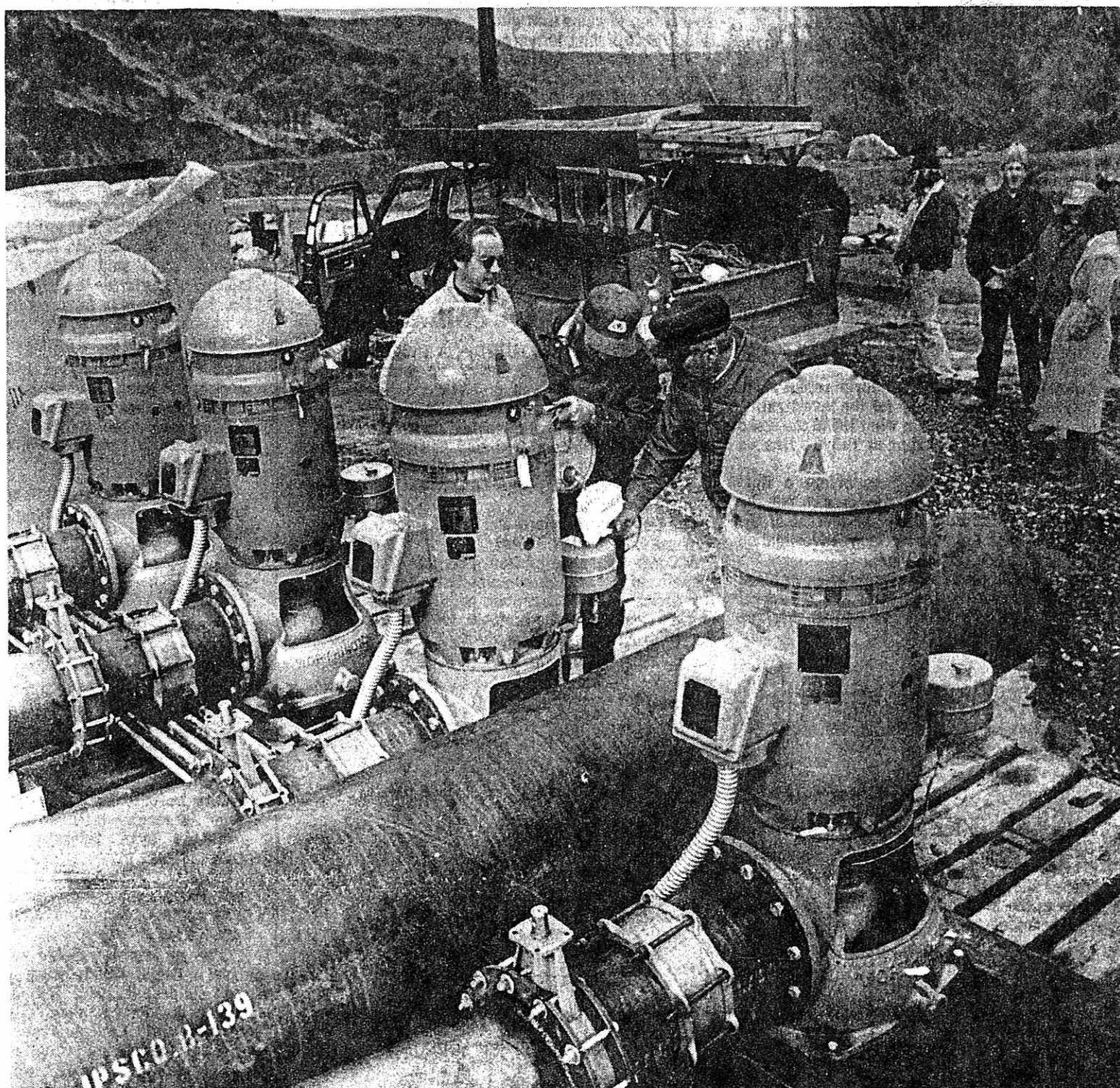
Enough water will be left in the creek to support a small resident trout population, he says.

The state Fish and Game Department has expressed reservations about the hundreds of small plants envisioned in southern Idaho, but it endorsed Skeem's plans for a minimum stream flow on Mud Creek.

Judging from the interest shown in his project, Skeem says he expects to see many other privately owned hydro developments in the next few years.

At avoided cost rates, the power is roughly twice as expensive as the residential price now charged by Idaho Power. But Skeem says if enough small plants are built, privately produced hydroelectric power might help the utility avoid construction of even more expensive coal-generating plants.

Elsewhere in the Magic Valley, developers began construction last fall of a similar plant on the Little Wood River west of Shoshone. A third project on Rock Creek is scheduled to get under way this summer.



BOB DELASHMUTT/7

Not ready yet

Technicians work on a small hydroelectric plant being constructed by Dan and Wayne Skeem north of Buhl. Modified

irrigation pumps will generate the power, using water diverted from Mud Creek. Wet weather and minor technical pro-

blems prevented the Skeems from connecting their plant to Idaho Power Co lines last week.