

PROPOSED DAM BREACHING

Lower Snake River dams vital to western Montana electric co-ops

STORY BY RYAN HALL | RURAL MONTANA EDITOR

Western Montana's electric cooperatives could have a big dam problem on their hands if four hydropower-producing dams along the Lower Snake River are breached. It's a proposal that has been floated for years, but is now gaining political traction.

"The first concern is public safety, it's such a critical element of what any utility does," said Kurt Miller, executive director of Northwest RiverPartners (NWRP), which opposes the breaching. "As I've been told by Montanans, if you all have a power outage (in the winter), people die."

Miller said that last summer, Portland, Oregon, hit a high of 116 degrees as part of the heat dome that engulfed the Pacific Northwest. More than 500 people died from that weather event.

"And that's with the power grid maintaining its integrity," Miller said. "The lights didn't go off."

"Without hydro, you're in big trouble in our region," agreed Mark Johnson, general manager of Flathead Electric Cooperative in Kalispell, which has sent letters to the state's congressional delegation opposing the breaching.

Important clean power

The Lower Snake River dams produce an average of more than 1,000 megawatts of reliable, consistent electricity, or about enough power to supply Seattle, Miller said. In addition, during peak times, particularly in the winter, the dams can produce up to 2,500 megawatts for short-term needs.

If the dams, which are part of the federal Bonneville Power Administration (BPA), were breached, it would double the region's risk of rolling blackouts. Additionally, BPA customers, which include all of Montana's electric cooperatives west of the Continental Divide, would see a 50-percent increase in their power-supply costs, according to a government study. As member-owned utilities, a large portion of that increase would be passed onto members through rate increases. Additionally, a 2020 Environmental Impact Statement estimated it would cost \$16 billion over 20 years to replace the electric capabilities of those four dams with other clean-energy options.

Johnson said one study showed that to replace the dams would take 5,311 megawatts of new solar capacity, which would require a large chunk of land. According to *homex.com*, a one-megawatt ground-mounted solar array needs about four acres, when all equipment is included. That means a solar farm large enough to replace the dams would occupy more than 21,000 acres.

Another concern is the proposed breaching is coming at a time when electricity usage is trending upward. The move toward beneficial electrification — replacing fossil-fuel based home appliances such as water heaters with electric ones — and electric vehicles will result in increased demand in the future.

"You are getting rid of supply at the same time you are increasing demand," Miller said.

Johnson, whose co-op is nearly 100-percent renewable in its power supply, said the dams promote renewable energy because they provide carbon-free backup power when the wind doesn't blow and the sun doesn't shine. Without a large firming source such as the dams, it would be very difficult to invest in intermittent renewables.

He pointed to graphs available on *bpa.gov* that show the wind and solar generation portion of BPA's resources produced virtually no energy from Jan. 12-18, but the hydro portion of the portfolio was above demand. That means BPA could meet the demand across its entire system with hydro alone.

"That's the hydro story here," Johnson said.

He added that with the potential for wind, solar, biomass and hydrogen mostly to the south and east of the Pacific Northwest, his traditionally environmentally conscious co-op would have little choice but to use fossil generation to replace the dams until a modular nuclear option is built in the region, if that ever occurs.

"You wouldn't have a choice at this point," Johnson said. "If (the four Lower Snake River dams) were yanked out or breached today, we'd be in big trouble."

"The idea of getting rid of renewable power in that amount, it just doesn't make sense," Miller said, adding that right now is a time when the fight against climate change is imperative in the Pacific Northwest, particularly in Oregon and Washington. "You have to have a cohesive energy policy and a cohesive carbon policy. The Pacific Northwest cannot meet its decarbonization goals without these dams."

And if the dams are removed and not replaced with a 24/7 power source that can quickly be ramped up to meet demand, then the results could be devastating for electric cooperative members. Miller said it could lead to utilities going bankrupt, as well as rolling blackouts.

"I can say confidently that if you get rid of the dams, you will destabilize the power grid, make it less reliable, make it much more expensive, make it more polluting and, at the end of the day, not have any certainty of improved salmon returns," Miller said.

Salmon impact

The chief concern among those who support breaching the dam is salmon health. However, Miller said the science isn't there to show that the dams are a chief stressor of the salmon population. In fact, recent studies have shown that most drivers of salmon survival occur in the ocean.

“There’s definitely not agreement that breaching the dams would result in a sustainable salmon population coming back to the Snake River,” Miller said.

He said breaching advocates say that the more dams salmon pass while traveling downstream, the less fish return from the ocean. It’s a theory called delayed mortality. However, the Independent Scientific Advisory Board found no evidence that the theory was correct, Miller said.

“Correlation is not the same as cause and effect,” he said.

Miller pointed out that in the past 18 months, studies have shown that the salmon survival rate has declined 65 percent in the past 50 years due to oceanic warming, and, if that trend continues, that within the next 60 years Chinook salmon could begin going extinct.

Additionally, warmer ocean waters have pushed predators further north, bringing California sea lions and other animals into the salmon’s oceanic habitat.

“The sea lions are voracious in their appetite for salmon and Chinook salmon,” Miller said. “They are just salmon-eating machines.”

In the past 20 years, more than \$1 billion has been invested in fish safety improvements at the four Lower Snake River dams. Miller believes removing the dams won’t improve the salmon survival rate much over what has been established with those measures.

“The cost to society of removing the dams is really sizeable, and if you can’t prove that the marginal benefit to the salmon would outweigh that cost, then you really should be looking at different policy,” he said.