

New Study: Renewables and energy efficiency can reliably replace power from lower Snake River dams

Affordable, clean energy solution offers hope for restoring salmon

SEATTLE, WA -- (April 4, 2018) -- The Northwest region can remove four lower Snake River dams and replace the power and energy services they provide with a portfolio of demand side and renewable energy resources while maintaining grid and transmission reliability at levels equal to or better than the current system and with little or decreased greenhouse gas emissions.

That's the conclusion of a newly completed study commissioned by the NW Energy Coalition and conducted by Energy Strategies, a Utah-based energy consulting firm. The study was undertaken to investigate the technical feasibility and cost of replacing the power from four lower Snake River dams.

For decades, the Northwest has debated keeping the dams, which contributed to reducing salmon populations by more than 90%, or removing the dams and replacing the power they provide with other sources of electricity to help restore salmon populations. The *Lower Snake River Dams Power Replacement Study* provides Northwest residents and policymakers with compelling analysis demonstrating that there are no technical, operational, or environmental barriers to replacing the power provided by the dams with clean, affordable energy.

The study will be released publicly through a webinar hosted by the NW Energy Coalition at 10AM Pacific time on Wednesday, April 4. At that time, NW Energy Coalition staff members will describe in greater detail the reasons for the study, the methodology that was employed, and the study's findings in the areas of electric system adequacy and reliability as well as greenhouse gas emissions and costs. Staff members will also discuss the study's policy implications.

In addition to finding that balanced portfolios of reasonably available clean energy resources, including solar, wind, energy efficiency, demand-response, and storage, can replace the power and energy services provided by the four lower Snake River dams, the study also found that:

- Balanced portfolios of clean energy resources have only minor impacts on greenhouse gas emissions. And, if they are implemented in conjunction with regional greenhouse gas reduction policies, net emission reductions are possible.
- The cost of replacing the power from the dams with a balanced clean energy portfolio is small compared to the cost of the regional power system and would amount to only a few cents a day for average residential customers.
- Even more cost effective and environmentally efficient outcomes than the study found are possible. That's because the study was conservative in its assumptions of the future price of energy from renewable resources and other variables. And it was designed to identify adequate, but not necessarily optimal clean power portfolios. Additional fine-tuning will likely produce additional cost and emissions savings.

The examination of clean energy portfolios that further reduce costs and emissions should be undertaken by regional energy policymakers and by the federal agencies that own and operate the lower Snake River dams. These agencies, which are currently under court order to adequately explore fish restoration options. The relatively small costs the study found would be associated with replacing the power from the dams did not include an evaluation of the opportunity to avoid significant and ongoing capital costs associated with maintaining the dams.

“The Lower Snake River Dams Power Replacement Study provides the region and federal agencies with a framework they can use to really optimize and improve upon the results we’ve achieved,” said Wendy Gerlitz, NW Energy Coalition policy director. “This study provides great reason for optimism about a future of clean, reliable, and affordable power that’s also environmentally sound for the Northwest.”

Bill Bradbury, former chair of the Northwest Power and Conservation Council, added that the threat to salmon populations is increasing as climate change causes river water temperatures to rise, an effect that is exacerbated by the dams. “This study makes it clear we have to take the prospect of dam removal and clean energy replacement a lot more seriously. The study shows we can replace lower Snake River hydro with a range of clean energy resources, enhance the reliability of the Northwest power system, and give Snake River salmon a fighting chance to recover to sustainable levels even as climate change puts a lot more pressure on our river system and the Pacific Ocean.”

Fred Heutte, senior policy analyst with the NW Energy Coalition, said, “The rapid decline in the cost of solar and wind power and the increasing availability of energy efficiency and demand response gives us a new opportunity to expand clean energy in the Northwest and take a big step toward salmon recovery. Still, the problem is a complex one and the Northwest is unique in the extent of its hydropower assets. So, it was critical that the study be thorough and account for the special nuances of the region.”

To assure that would be the case, the study authors relied on data provided by the Western Electricity Coordinating Council, ColumbiaGrid, and the Northwest Power and Conservation Council. And the modeling tools they used are ones that are regularly used by those organizations and by energy planners in the Northwest.

Nancy Hirsh, executive director of the NW Energy Coalition, summed up the feelings of those who worked on the study by looking ahead to

what the findings might mean for the Northwest. “For decades we’ve heard that we have to make a choice between clean, affordable energy or the recovery of fish populations. Whether or not that was ever the case, it’s certainly not true now or in the future.

“If we embrace the opportunity to replace the power from the dams with reliable clean and renewable resources, we can look forward to new jobs and commerce that will be created by the build-out of those resources and we can also focus on taking measures to develop alternative solutions for farmers and others who currently rely on barge service to move goods. Meanwhile, communities and tribal nations up and down the river basins and coast will benefit from the jolt that recovery of salmon and other marine mammals, including orca whales, will give to our tourism and sport and commercial fishing industries.”