

Retrofitting untapped dams

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Non-powered dams such as the Byrd Creek Dam in Crossville, Tennessee, may prove viable as retrofitted hydropower facilities, producing sustainable, clean electricity. Credit: Scott DeNeale/ORNL, U.S. Dept. of Energy

Although more than 92,000 dams populate the country, the vast majority—about 89,000—do not generate electricity through hydropower.

Researchers at Oak Ridge National Laboratory are assessing the viability of retrofitting some of these non-powered dams, which may add up to 12 gigawatts of additional electricity to the [power grid](#)—enough to power 9 million homes or every home in Tennessee, Alabama and Georgia.

In a new [report](#) released by the U.S. Department of Energy, ORNL identifies key development challenges, including aging infrastructure, dam design limitations, costs, timelines and environmental considerations. The goal is to accelerate design approaches and innovations that increase energy from [hydropower](#) while ensuring environmental compatibility and economic feasibility.

"Hydropower has over 100 years of history in the U.S.," said ORNL's Scott DeNeale. "DOE's continued investments position the industry well to power untapped water [infrastructure](#) while achieving low-impact renewable energy growth."

Provided by Oak Ridge National Laboratory

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