

# Hydropower/Energy: U.S. Department of Energy Releases Hydropower Vision Report



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The United States Department of Energy ("DOE") announced the release of a study titled *Hydropower Vision Report* ("Report").

DOE states that the goal of the Report is to operate, optimize, and develop hydropower in a manner that maximizes opportunities for low-cost, low-carbon renewable energy production, economic stimulation, and environmental stewardship to provide long-term benefits for the nation.

The Report is stated to have been undertaken through a broad-based collaborative effort with four principal objectives:

- Characterize the current state of hydropower in the United States, including trends, opportunities, and challenges
- Identify ways for hydropower to maintain and expand its contributions to the electricity and water management needs of the nation from the present through 2030 and 2050
- Examine critical environmental and social factors to assess how existing hydropower operations and potential new projects can minimize adverse effects, reduce carbon emissions from electricity generation, and contribute to stewardship of waterways and watersheds
- Develop a roadmap identifying stakeholder actions that could support responsible ongoing operations and potential expansion of hydropower facilities

Note that renewable hydropower is defined to include hydropower generation and pumped storage.

The lengthy Report determined that the United States hydropower could grow from 101 gigawatts ("GW") of capacity to nearly 150 GW by 2050. Further, growth under this DOE model scenario would result from a combination of 13 GW of new hydropower generation capacity (upgrades to existing plants, adding power existing dams and canals, and limited development of new stream-reaches), and 36 GW of new pumped storage capacity.

The previously referenced level of growth would potentially achieve benefits such as savings of \$209 billion from avoided greenhouse gas emissions, of which \$185 billion would be attributable to operation of the existing hydropower fleet.

The Report describes three important foundational principles (obtained through stakeholder input) which include:

- Optimization: Optimizing the value and the power generation contribution of the existing hydropower fleet with the nation's energy mix to benefit national and regional economies, maintain critical national infrastructure, and improve energy security
- Growth: Explore the feasibility of credible long-term deployment scenarios for responsible growth of hydropower capacity and energy production
- Sustainability: Ensure that hydropower's contributions toward meeting the nation's energy needs are consistent with the objectives of environmental stewardship and water use management

The Report contains "roadmap" action areas such as:

- Technology Advancement
- Sustainable Development and Operation
- Enhanced Revenue and Market Structures
- Regulatory Process Optimization
- Enhanced Collaboration, Education and Outreach

[A link to the report can be found here.](#)