



Hydropower Modernization

Meeting Our Energy Challenges by Upgrading Facilities

By upgrading existing hydroelectric facilities and investing in efficiency improvements, the United States can move toward doubling its hydropower capacity. Modernization also stimulates local economies, providing good paying jobs and affordable energy.

Leading U.S. Renewable Resource

Hydropower is America's largest source of clean, renewable electricity, accounting for 67 percent of domestic renewable generation and 7 percent of total electricity generation. While hydropower has generated clean, affordable electricity for more than 125 years, it is poised to double its contribution.

New Policies Will Spur Development

The United States can significantly expand access to clean and affordable hydro-generated electricity by including capacity additions and efficiency improvements in a National Renewable Electricity Standard, with economic and tax incentives, and by adopting smarter licensing procedures.

Affordable Modernization Creates Jobs

Adding 60,000 MW of new hydropower capacity could generate 1.4 million cumulative new jobs by 2025. Nearly 9,000 megawatts would come from modernization projects, such as turbine and generator upgrades, operational improvement, and adding capacity, according to a 2009 Navigant study.

These projects, which do not require new dam construction, would employ local workers and serve communities in all regions of the country.

Increasing Capacity and Efficiency

Substantial opportunities exist to increase the efficiency and capacity of hydroelectric generation with minimal impacts.

The U.S. Department of Energy recognizes the benefits of modernization and recently directed \$32 million in funding to upgrade seven hydro facilities. DOE estimated that these seven low-cost upgrades alone will increase generation by 187,000 megawatt hours per year, at an average cost of less than 4 cents per kilowatt hour.

Modernization projects on existing hydroelectric facilities are some of the most cost-effective, readily-deployable sources of new, domestic renewable energy generation—all without building new dams.