

Federal Incentives for Water Power

The U.S. Department of Energy's (DOE's) Water Power Program works to accelerate the deployment of water power technologies such as hydro-power, wave, tidal, and current devices. This document lists some of the major federal incentives for water power. This list is current as of April 2014.

Research and Development Cooperative Agreements

The DOE Water Power Program periodically posts competitive solicitations for R&D cooperative agreements to improve the performance and lower the cost of water power, or to reduce barriers to deployment.

energy.gov/eere/water/financial-opportunities

DOE's Advanced Research Projects Agency-Energy (ARPA-E) sponsors R&D grants for earlier-stage, high-potential, high-impact energy technologies.

arpa-e.energy.gov/?q=programs/apply-for-funding

DOE's Small Business Innovation Research and Small Business Technology Transfer (SBIR/STTR) Program offers periodic solicitations for small businesses

science.energy.gov/sbir/funding-opportunities/

While DOE generally does not fund the purchase or installation of water power systems by individuals or companies, there are a number of government-sponsored deployment incentives as outlined in this publication.



By the end of 2012, the United States had 78 GW of installed hydropower capacity, and the nation's first grid-connected tidal power projects are being deployed off U.S. shores. Photo from U.S. Army Corps of Engineers, NREL 06595

Incentives for Businesses

The federal government uses several policy incentives to stimulate the deployment of renewable energy.

In 2014, Congress appropriated funds for Hydroelectric Production Incentives under section 242 of the Energy Policy Act of 2005. Eligible hydroelectric facilities including non-powered dams and conduits may receive up to 1.8 cents per kilowatt hour (kWh) (indexed for inflation) with maximum payments of \$750,000 per year for hydroelectric energy generated by the facility during the incentive period. For more information, visit energy.gov/eere/water/financial-opportunities

The federal **Renewable Electricity Production Tax Credit (PTC)**, established by the Energy Policy Act of 1992, allows owners of qualified renewable energy facilities-hydroelectric and marine hydrokinetic (MHK) (including wave, tidal, ocean thermal, and hydrokinetic)-to receive tax credits for each kilowatt-hour (kWh) of electricity generated and sold by the facility over a 10-year period. Qualified hydroelectric or MHK facilities or

hydropower efficiency improvements are eligible to receive 1.1 cents per kWh (indexed for inflation). dsireusa.org/incentives/incentive.cfm?Incentive_Code=US13F

The federal **Business Energy Investment Tax Credit (ITC)** is a corporate tax incentive that allows for owners of qualified new hydroelectric or MHK generation systems to receive tax credits worth 30% of the value of the facility. dsireusa.org/incentives/incentive.cfm?incentive_Code=US02F

Project owners must choose between the one-time Investment Tax Credit, tied to the total value of the facility, and the Production Tax Credit, tied to the energy produced over a ten year period. To qualify for either the PTC or the ITC, projects must have begun construction by December 31, 2013, which is defined as having started physical work of a significant nature or incurred 5% of the total project cost irs.gov/pub/irs-drop/n-13-29.pdf

Several pieces of legislation have been introduced in Congress which would restore the PTC.

DOE offers **loan guarantees** to help companies secure financing to deploy innovative, clean energy technologies that reduce, avoid or sequester carbon dioxide and other emissions. While all new or significantly improved renewable energy technologies may be considered, enhancements of existing facilities—such as powering non-powered dams or adding variable speed pump-turbines into existing hydro facilities—are identified as a catalytic area of interest in the 2014 draft solicitation. lpo.energy.gov/

Incentives for Tax-Exempt Entities

Several incentives are available to stimulate the deployment of water power by certain tax-exempt entities that cannot take advantage of tax credits.

Qualified Energy Conservation Bonds (QEBCs) allow qualified state, tribal, and local government issuers to borrow



Northwest Energy Innovations verified the ocean wavelength functionality of the Azura device (previously called WET-NZ) through wave tank testing and a controlled open-sea deployment of its 1:2 scale device.



Ocean Renewable Power Company's TidGen™ converts ocean and river currents into clean renewable electricity. Photo from Ocean Power Technologies, NREL 24507

money at attractive rates to fund energy efficiency and renewable energy projects. A QEBC is among the lowest-cost public financing tools because the U.S. Department of Treasury subsidizes the issuer's borrowing costs. Issuers may choose between structuring QEBCs as tax credit bonds or as direct subsidy bonds. Both tax credit and direct payment bonds subsidize borrowing costs—most QEBCs are expected to be issued as direct subsidy bonds due to the current lack of investor appetite for tax credit bonds. QEBC proceeds can be used to fund capital expenditures on water power projects that spur rural development.

irs.gov/pub/irs-drop/n-09-29.pdf

In addition, DOE's Tribal Energy Program provides financial and technical assistance, education, and training to tribes for the evaluation and development of renewable energy resources on tribal lands. eere.energy.gov/tribalenergy/

Other Incentives

The U.S. Department of Agriculture provides farmers and ranchers with grants for renewable energy development assistance through its Rural Energy for America Program (REAP). Certain entities, such as state, local, and tribal government, educational institutions, and rural electric cooperatives, are also eligible for these grants.

www.rurdex.usda.gov/bcp_reap.html

Additional resources for information on financial incentives:

DOE's Office of Energy Efficiency and Renewable Energy
eere.energy.gov/financing

Database of State Incentives for Renewable Energy
dsireusa.org

