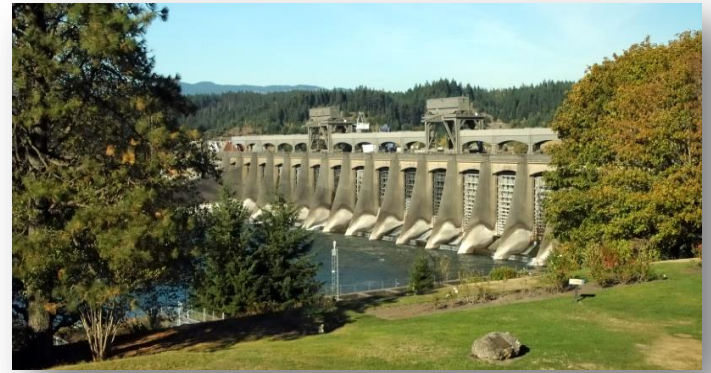




AVAILABLE. RELIABLE. AFFORDABLE. SUSTAINABLE.

Hydropower: For a Clean Energy Future

Hydropower is the nation's **most available, reliable, affordable and sustainable energy source**. Requiring only the power of moving water – rivers, streams, and ocean waves and tides – hydropower is **domestic and renewable**. Free from a dependence on volatile fuel prices, much of the money spent on hydropower stays in America – and expanding hydro capacity could create up to 1.4 million cumulative U.S. jobs.



Available

The United States produces **more electricity from hydropower than from any other renewable electricity source** – it accounted for 56 percent of renewable generation in 2012 and 7 percent of the nation's overall electricity generation.

Hydropower is **available in every region of the country**. Every state benefits from the services that hydropower provides to the electric grid.

The industry **employs approximately 300,000 workers across the United States**, from project development to manufacturing to facility operations and maintenance.



Reliable

The first hydropower plant in the U.S. began operations on the Fox River near Appleton, Wisconsin in 1882. Since then, hydropower has been a reliable, domestic energy source and **today provides electricity to more than 24 million American homes**.

That reliability, combined with unique operational flexibility, also **benefits the nation's electric grid** as a whole. Hydropower facilities can go quickly from zero power to maximum output, making them **exceptionally good at meeting rapidly changing demands for electricity throughout the day**.

Pumped hydropower storage account for 99% of energy storage in the United States and **can store the electricity generated by other renewable power sources like solar and wind**, helping integrate more variable energy sources into America's energy mix.

Affordable

Taking into account full project lifetime fuel costs, operations, and maintenance, **hydropower has the lowest levelized cost of electricity of any energy source** – even energy efficiency – according to recent studies. When the costs of GHG emissions are considered, it's even more competitive.

Sustainable

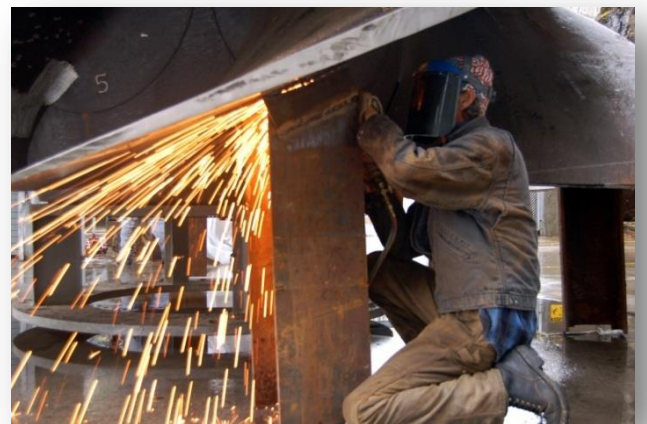
Hydropower taps into the water cycle, harnessing the power of our clean moving waters to produce renewable electricity. Using **hydropower avoided nearly 200 million metric tons of carbon pollution** in the U.S. in 2012 – equal to the **annual emissions from over 40 million cars**.

Hydro Has the Potential to Grow

The current U.S. hydropower capacity is approximately 100,000 megawatts (MW), and with the right policies in place, **the industry can add 60,000 MW by 2025**. NHA has a goal to double hydropower's contribution to the country's energy portfolio.

Some examples of where this growth is possible include:

Modernizing: New technology employed at existing hydro sites represents an opportunity for new sources of power. By installing **more efficient turbines and enhancing performance**, existing hydropower infrastructure can generate more power, sustainably.



Converting Non-Powered Dams: There are **80,000 dams across the U.S., but only 3% have electricity-generating equipment**. Converting non-powered facilities to electricity-generating assets will **increase America's renewable energy supply by 12 GW**, thereby maximizing existing infrastructure.

Conduit Technology: Throughout the country, **existing tunnels, canals, pipelines, aqueducts, and other manmade structures** that move water can be fitted with electricity-generating equipment, resulting in projects that are cost-effective and environmentally friendly.

Marine and Hydrokinetic Technologies: A range of technologies are under development to **tap the power of waves, tides, and river flows**. Thousands of megawatts of potential are available from ocean energy projects from New England to the West Coast and Alaska, and from in-river hydrokinetic projects proposed along the Mississippi River and others.

Pumped Storage: This **vital energy storage technology** can support America's broader renewable energy goals by serving as a **battery for intermittent sources**, but federal support is needed to spur development of these projects across long timelines.