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# EPRI sees hydrokinetic projects in rivers capable of 120 TWh per year

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Rivers in the continental U.S. could be tapped to supply about 3% of the country's annual electricity use, the Electric Power Research Institute said Feb. 12, basing its finding on a new [study](#).

The figure is based on an assessment of the water depth and velocity of 71,398 river segments across the Lower 48. EPRI looked at the amount of energy that could be theoretically captured by hydrokinetic generation projects. Companies such as [Free Flow Power Corp.](#) have pursued these projects by installing turbines in rivers to generate electricity.

The study found that rivers in the Lower 48 could theoretically generate 1,146 TWh per year. But given constraints in technology and assumptions about how practical it would be to harness this energy, the technically recoverable portion is 120 TWh per year. This amount represents about 3% of annual U.S. electricity consumption, EPRI said in a [statement](#).

The Lower Mississippi region has by far the most potential for hydrokinetic generation, contributing 47.9% of the study's total estimate. A [map](#) of the pending hydrokinetic preliminary permits with FERC shows that project developers also recognize this potential. Of 22 pending permits, all but four are for projects in the Mississippi River region of Tennessee, Arkansas, Mississippi and Louisiana.

Free Flow Power is behind these Lower Mississippi projects. According to a recent [analysis](#) by SNL Energy, Free Flow Power is the largest owner of planned hydro generation in the country, with 12,349 MW of planned capacity.

Another form of hydrokinetic energy in the early stages of development is wave energy. The potential for wave energy appears to dwarf river energy; a 2012 U.S. Department of Energy [study](#) found that ocean waves along the coast of the U.S. could produce 2,640 TWh annually.

Hydropower capacity in the U.S. totaled 79 GW at the end of 2011, according to a report [released](#) by the Worldwatch Institute on Feb. 12. The report found that global hydropower capacity was at 970 GW in 2011, a 1.6% increase from the previous year. A total of 25 GW of new hydropower capacity was added in 2011, representing a slow down from previous years. China, Vietnam, Brazil, India and Canada were responsible for 75% of the new capacity.

The Worldwatch report also looked at geothermal capacity, which reached 11.2 GW in 2011. The growth in geothermal that year was the first time since 2002 that the increase in capacity slowed to below 1%.

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