

Electric Power Daily

US, Brazilian firms to build hydro generation at existing dams

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Hydro Green Energy is partnering with Engevix Engenharia, a major Brazilian energy infrastructure company, to build at least four hydroelectric projects at existing dams in the US. The Westmont, Illinois-based developer is developing about 300 MW at existing dams that do not produce power, a niche that has significant potential, with only 3% of the nation's 80,000 dams producing power. About 12,600 MW could be added to existing dams, according to the preliminary results of a Department of Energy study expected to be issued within several months.

Hydro Green Energy considered developing an in-house engineering and construction team but opted to go with an experienced partner in Engevix, which has helped build about 60,000 MW of hydroelectric capacity worldwide, Michael Maley, Hydro Green Energy president and CEO, said in an interview. Further, Engevix could help finance the projects, he said.

Hydro Green Energy has proprietary "plug-and-play" technology that can be used on low-head dams, which typically have no more than a 30 foot drop in water. The developer will also deploy conventional technology at its projects, depending on the site, Maley said.

Hydro Green Energy has made initial filings to get operating licenses from the Federal Energy Regulatory Commission for seven projects totaling 65.5 MW on the Mississippi River in the Midwest Independent Transmission System Operator market. The projects, ranging from 4 MW to 14 MW, are in Illinois, Iowa, Minnesota, Missouri and Wisconsin. The company expects to start the licensing process for four more projects in the PJM Interconnection by early next year, Mark Stover, vice president for corporate affairs, said. The company's first projects could be online in 2013, he said.

Nearly all of the company's projects are at locks and dams run by the Army Corps of Engineers. Although the projects average about 10 MW each, they have a roughly 75% capacity factor, much better than typical wind or solar projects, Maley said. The low-head hydroelectric projects are competitively priced compared with other renewable and fossil-fueled technologies, he said, declining to be specific.

Further, the dams are connected to the electric distribution system, offering options for interconnecting the planned generating units, Maley said. In contrast, wind farms often require major transmission upgrades to deliver power to the grid. Hydro Green Energy is in advanced discussions with several utilities about buying power from the company's projects, Maley said. Besides having high capacity factors, hydro projects have a reliable and predictable output, he said.

FERC and the Army Corps of Engineers want to see developers add capacity to existing dams, according to Stover. FERC and the Army Corps in March revised a memorandum of understanding that aims to streamline the review process for hydroelectric projects, he said.

Several bipartisan bills are pending in Congress that would help the hydroelectric industry, according to Matt Nocella, a spokesman for the National Hydropower Association. For example, S. 629, sponsored by Senator Lisa Murkowski, a Republican from Alaska, would among other things set a two-year permitting process for low-impact projects, down from a process that can take up to six years, he said.

Despite a tough fiscal climate, there is bipartisan support for bills that would extend the federal production tax credit for renewable energy through 2016, Nocella said. The bills — S. 1764 and H.R. 3307 — are pending in committee. Last year, FERC issued 12 permits to add 110 MW onto existing dams and has issued 12 permits through October this year totaling 45 MW. Although FERC is issuing more permits, relatively little hydroelectric capacity is being added in the US. Only four projects totaling 16 MW were installed last year and three projects totaling 16 MW have been added this year.

— *Ethan Howland*