

Reproduced with permission from Infrastructure Investment and Policy Report, 9 IIPR, 1/22/18. Copyright © 2018 by The Bureau of National Affairs, Inc. (800-372-1033) <http://www.bna.com>

## Hydropower

### Brazil Shelves Plans for New Megadams to Reassess Strategy

By MICHAEL KEPP

Brazil has shelved plans to build more mammoth Amazon hydropower dams, and although the country is heavily reliant on electricity from dams it will reassess their costs and environmental impacts, a government official told Bloomberg Environment.

“The difficulty of licensing big dams, the increasingly competitive cost of other renewable energies, like wind and solar, and society’s need to discuss all major investments in the Amazon, including dams, has resulted in our putting on standby the building of big Amazon dams,” Mines and Energy Minister Fernando Coelho said Jan. 19.

In a 10-year energy plan announced last year, the government had removed mention of two massive Amazon dam projects. But it had not officially gone as far as Coelho and said those projects would remain shelved while the government considered an end to such new projects the Amazon and elsewhere.

“The government’s intention to suspend megadams, especially big Amazon ones, is a positive sign that reflects how problematic they are, in part because of the huge social and environmental footprint they leave and in part because of cost-overruns,” Brent Millikan, the Amazon program director of California-based International Rivers, told Bloomberg Environment Jan. 19.

“It’s also a positive sign that Brazil is beginning to diversify into nonhydro renewable energy sources, like wind and solar, to help replace mega-dam-generated energy,” Millikan said.

**Hydroelectric Power Importance** Brazil gets most of its electricity—68 percent—from hydroelectric dams, so ceasing construction of the biggest such projects would be a significant change for the country. Brazil has 1,309 dams of varying sizes, most of them built in the past 50 years, and 219 of which are larger than 30-megawatt dams.

At one point, Brazil’s government had planned to build nearly all future massive hydroelectric dams in the Amazon, the source of nearly all of Brazil’s remaining hydropower potential.

But big dams have increasingly included big environmental battles.

Dams in the Amazon created reservoirs that flooded huge swaths of rainforest and forced indigenous people who lived there to relocate. The most recent and most controversial was the \$18.5 billion, 11,223-megawatt Belo Monte dam in the Amazon, the world’s third biggest in capacity, which began operating in 2016. Environmentalists said the Belo Monte dam would greatly reduce the Xingu River’s water volume and threaten fish biodiversity and the river’s navigability. The dam also partly flooded the city of Altamira.

**Rethinking Dams** The government was suspending, but had not definitively abandoned, plans to build large dams, Luiz Augusto Barroso, president of the Energy Research Company (EPE), the research and development arm of the Mines and Energy Ministry, told Bloomberg Environment. The government will consider “whether more large and very large dams is the right strategy from multiple points of view, including social, environmental and cost-benefit ones,” he said.

The reservoirs of some large planned Amazon dams threatened to partially flood protected areas such as parks and indigenous reserves in the Amazon, causing licensing difficulties, Augusto Barroso said.

Policy review is also needed because final costs are often higher than initially estimated, he said.

What’s more, the cost-benefit analyses of these large dams are flawed because they are based on overly optimistic investment cost assumptions, government financing subsidies, and hidden and subsidized electricity transmission costs, Augusto Barroso said.

“Such flaws make it hard to assess major dam project costs and have caused the Mines and Energy ministry and the EPE to question whether to build more complicated large and very large dams or far less costly and less complicated wind and solar farms and fossil-fuel thermopower plants,” he told Bloomberg Environment.

**Future Energy Plans** This policy shift away from building new large was outlined in the EPE's latest 10-energy expansion plan, released in 2017. It was the first such plan that did not include mammoth or even large dams, just 15 small-to-medium-sized ones, only two of which are planned for the Amazon, to provide 3,066 megawatts (MW) of capacity by 2026.

The EPE removed mention of the two biggest planned Amazon megadam projects that were part of its previous energy expansion plans: the 8,040-MW Sao Luiz do Tapajos dam, and the 2,333-MW Jatoba dam. Both were to have been built on the Tapajos River, and they were expected to account for 70 percent of the hydropower to be generated between 2019 and 2023.

The EPE shelved plans to build the Sao Luiz do Tapajos dams after IBAMA, the licensing arm of the Environment Ministry, denied the request by the government electricity holding company Eletrobras for a preliminary license.

IBAMA argued that the dam would take too steep a toll on the environment and indigenous peoples, an ar-

gument reinforced by the legal office of President Michel Temer.

The Jatoba dam, whose planning was less further along, faced similar indigenous and environmental obstacles.

The EPE's latest 10-year energy expansion plans calls for wind and solar energy as well as fossil-fuel power plants, mainly coal and natural gas, to account for larger share of installed electricity capacity, with hydropower to account for a much smaller one.

"The government's decision to suspend building new large and very large dams is the result of how increasingly difficult it has become to accurately gauge their socio-environmental costs," Claudio Sales, the president of the Acende Brasil Institute, a private electricity research think tank, told Bloomberg Environment. "Wind and solar plants, in particular, come with much easier to measure socio-environmental costs."

To contact the reporter on this story: Michael Kepp in Rio de Janeiro at [correspondents@bloomberglaw.com](mailto:correspondents@bloomberglaw.com)

To contact the editor responsible for this story: Rachael Daigle at [rdaigle@bna.com](mailto:rdaigle@bna.com)