Brazil - Study shows that Belo Monte is the cheapest and cleanest alternative for power generation

The Belo Monte hydroelectric plant, being built on the Xingu River (State of Pará), will cause less environmental impact than the use of alternatives to fossil fuels and costs will be lower than other renewable sources. That is the conclusion of a Comparison Study between Belo Monte and Alternative Projects: Environmental Impacts and Economic Competitiveness ("Impactos Ambientais e Competitividade Econômica") prepared by the Electricity Sector Study Group (Gesel), of the Federal University of Rio de Janeiro (UFRJ).

In the analysis, Professors Nivalde José de Castro, André Luis da Silva Leite and Guilherme Dantas assess what would be the alternatives to Belo Monte to meet the growing demand for energy, and the environmental impacts of these energy sources. According to the study, if Belo Monte were not to be built alternative sources would be required to meet demand, which would have greater environmental impacts or would not have sufficient reliability in terms of energy security to meet the growing need for electric energy that is forecast for the coming years Brazil.

"Belo Monte is an efficient project, it has to be built. Brazil needs energy and any new power generation unit causes environmental impact. We have to analyze the cost-effectiveness relative to other energy sources. This study makes it clear that the hydro generation plant offers the best cost-effectiveness compared to other sources", said Castro.

The academics point out that Brazil has large potential for alternative and renewable energy sources: wind, biomass and solar, but giving priority to these sources would imply a loss of competitiveness for the Brazilian economy due to the cost differential compared to hydroelectricity. There could also be problems with assuring security of supply, due to the seasonal and intermittent nature of these alternative sources.

"As such, in a scenario where Belo Monte would not be implemented, the construction of thermal power plants would be required to maintain a secure balance between energy supply and demand. The question that arises is what are the environmental impacts of fossil fuel alternatives compared to the environmental impact of Belo Monte", the study states.

The analysis also points out that the cost of mitigating the social and environmental impacts of Belo Monte are around RD 3.3 billion, which is lower than the environmental cost of a gas-fired thermal power plant which would be more than RD 24 billion. "That is to say that the thermal power option has an environmental impact mitigation cost almost eight times that of Belo Monte."

Belo Monte is one of the main projects within the Acceleration Growth Program ("PAC") and should be completed by 2015. With an installed capacity of 11.2 Megawatts it will be the largest fully Brazilian hydroelectric plant (Itaipu, which has 14 Megawatts capacity, is bi-national) and will be the third largest in the world.
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