

DISCUSSING BRAZIL'S NUCLEAR FUTURE

Overview

Since the 2001's electricity shortage, Brazil has been searching alternatives for expanding its power generation. Increasing thermal power generation has been proposed as a strategy for the country to reduce its dependence upon hydropower. The impetus with which the revival of nuclear energy came back to the international energy debate also helps to revitalize the nuclear discussion in Brazil. Initially, the domestic contest focused on whether Brazil should resume the construction of its third nuclear power reactor, Angra III. The paper describes how the Brazilian nuclear community bases its arguments upon concepts adopted by outside nuclear supporters, mounting the political pressures to influence the Federal government to retake Angra III's construction. Subsequently, the government issued proposals for a much larger nuclear power program trying to establish a more aggressive and nationalistic nuclear-based energy strategy. Nuclear power is a historic project for Brazil. Such history is briefly described from the launching of Brazil's first reactor, Angra I, in the mid-1960s, to the disappointing partnership with Germany during the 1970s, which led to the construction of Angra II. The Brazilian flaw experiences with nuclear energy must be revisited to avoid major failures in the country's future energy policy. The paper advocates against the immediate construction of Angra III. Yet, given the uncertainties regarding the expected role for nuclear energy in the future as well as the interesting opportunities Brazil can take advantage of at the present, the authors suggest a different approach for a Brazilian nuclear policy, focusing rather on technological development and naval applications, and also including partnerships with Brazil's neighboring countries.

Methods

Testimonial

Discussion

The paper starts briefly describing the evolutions in the international nuclear arena. It is shown that the debate is still opened and uncertainties are present, but clearly nuclear energy seems to be revisited by policy-makers in the western countries. As climate change becomes a major environmental issue and energy security is again perceived as a major goal in any energy policy, the revival of nuclear energy is progressively accepted as the leading and most cost-effective carbon free energy alternative for the world. Better management is allowing nuclear power plants to run more efficiently and to perform much better environmentally. France seems to have proved that safety operation and adequate nuclear waste management can be achieved at affordable cost. In the long run, nuclear electricity can become a cheap solution.

The impetus with which nuclear energy is debated internationally also helps to revive the nuclear discussion in Brazil. The paper describes the increasing political debate regarding the construction of Brazil's third nuclear reactor, Angra III, as well as the more recent governmental proposals of setting up an even larger national nuclear program. The authors suggest that nuclear policy in Brazil may rather have a technological perspective.

Results

The authors discuss those plans and set up arguments against the immediate construction of Angra III. However, the paper presents interesting arguments still favoring the support for nuclear energy in Brazil, but rather promoting the technological development and naval applications. As suggested by the authors, commanding the whole cycle of nuclear activities, from mining to final applications, is a historic and achievable project for Brazil.

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