

Economic Policy Evaluation for the Deployment of Alternative Energy Sources in Brazil

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In this paper we present an economic evaluation of scenarios for the future Brazilian power sector. We regard different paths for the capacity expansion with alternative energy sources aiming at the economically efficient diversification of the electricity mix. The scenarios are constructed in light of specific features of the Brazilian energy system, such as its enormous storage capacity, the imminent depletion of hydropower potential, and design characteristics of the regulated market. Impacts of the economic and political crisis of the Mid-2010's are included in the scenario discussion. The economic relationships of the electricity generation sector are illustrated by micro-economic models of industrial organization theory, parameterized with observed data from energy auctions and official market projections

Power system planning; energy transition policy; renewable energy

Highlights

- Policy assessment for the promotion of alternative energy sources,
- Results in favor of time-limited source-specific auctions for technology promotion,
- Necessity of monitoring and adequately expanding the entire supply chain,
- FA integration benefits from the hydroelectric system's huge storage capacity

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