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SMRs in Brazil: A Paradigm Shift in Energy Policy for Climate Mitigation

Brazil is an extremely important country regarding climate change, both because it is one of the biggest GHG emitters in the world and because it has the means to mitigate these emissions. Brazil has considerable emissions in the energy sector, and power plants that burn either coal or natural gas are increasingly being used to meet energy demand in periods of drought to make up for insufficient hydroelectric production. With the worsening of droughts due to the impacts of climate change, the energy sector is likely to be heavily impacted; in 2023, several regions of Brazil suffered blackouts due to a lack of energy supply. SMRs could represent a viable solution to the problems facing the Brazilian energy sector. The use of a wide variety of energy sources is fundamental to decarbonizing the energy matrix. To decarbonize energy systems efficiently and with the necessary urgency, the sources need to be diversified and climate-resilient. When considering the delay and bureaucracy involved in building nuclear power plants in Brazil (the most recent, Angra 3, began construction in 1984 and is still not finished), it's understandable why Brazilian public policies have given less importance to nuclear energy. Because their installation is quicker, cheaper, and less bureaucratic, SMRs key to decarbonizing energy production in Brazil, replacing the construction of new coal or natural gas power plants, and being allocated to meet local demands. They can also be implemented as part of state policies, rather than federal ones. This study seeks to understand Brazilian energy policy and suggest alternatives for the efficient introduction of SMRs in Brazil.

Country OR International Organization

Brazil

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