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Energy, Hydropower, and Geopolitics — Northeast India and its Neighbors: A Critical Review of the Establishment of India's Largest Hydropower Base

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Summary

India's demand for electricity has recently been increasing at one of the fastest rates of any country in the world. Among renewables, hydropower plays a crucial role as a mature, cost-effective, and reliable power generation technology. India's Northeast (Brahmaputra Basin) holds an immense hydropower potential of 63 gigawatts, which to this day remains virtually untapped. There are 20 projects in the pipeline with a capacity of greater than 1000 megawatts; among them are both the largest hydropower projects of India as well as some of the largest transmission schemes of anywhere worldwide. Sikkim and Arunachal Pradesh are at the forefront of initiatives to exploit this potential, mainly through private developers and as run-of-river schemes. The government of Arunachal alone has to date awarded 153 hydropower projects with a cumulative capacity of 53.2 GW. The exploitation of hydropower resources is also of crucial geopolitical relevance, both nationally (the Northeast is a vulnerable and conflict-ridden region distinct from mainland India) as well as internationally. China claims Arunachal as its own territory and is developing even more large-scale projects upstream. Additionally, India includes the huge hydropower potential of Bhutan in its own development plans. Most of the forthcoming hydropower projects, those from both the public and private sectors, have been considerably delayed hitherto. The major reasons for this are finance- and tariff-related issues, technical problems, difficulties faced in securing land acquisitions, environmental concerns, and heavy anti-dam public agitation. In this context, the public sector Lower Subansiri Project has evolved into being the most contested dam project in the whole of India.

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