

Briefing: A Call for Strategic, Basin-wide Energy Planning in Laos

series challenges the prevailing narrative that the current rapid pace of dam construction on the Mekong River will continue until the entire river is turned into a series of reservoirs. The construction of even a few large dams will severely impact food security in the world's most productive freshwater fishery and sharply reduce the delivery of nutrient-rich sediment needed to sustain agriculture, especially in the ¹. ² strongly suggests that not all of the planned dams will be built. Rising risks such as decreased financing capabilities of foreign investors, drought and climate change impacts, and shifts in regional energy demand impact indicate reduced profitability and investor interest.

Falling far short of current plans for more than 100 dams on the Mekong mainstream and tributaries will have particular implications for Lao PDR, which has set the export of hydropower as its top development priority ³. The lack of a strategic plan has created a situation in which Lao PDR is likely to fall far short of its revenue targets while at the same time severely damage downstream rice and fish production in Vietnam and Cambodia. ⁴ most recent report, *Call for Strategic, Basin-wide Energy Planning in Laos*, ⁵ concludes that it is not too late for a new approach that optimizes the nexus of tradeoffs among energy, export revenues, food security, and fresh water and protects the integrity the Mekong for the benefit of all riparian countries.

A new approach in Lao PDR would maintain the existing focus on exporting energy to regional markets but also involve setting a realistic target of total electricity production from a mix of sources: notably hydropower, solar, and wind. The portfolio mix would be optimized by (1) incorporating sound political, financial, environmental, and social risk analysis into the decision making process; (2) integrating multiple uses of water such as hydropower, transportation, irrigation, and flood control at a basin-wide scale in ways that addresses the needs of downstream countries; and (3) avoid building unnecessary dams in Lao PDR given the associated social and environmental risks.⁶ With this strategy in mind, dams with high exposure to financial risk or the greatest environmental impacts would be replaced by alternative projects and, increasingly, efficiency gains from smart infrastructure systems such as effective power grid management.

The Lao PDR government currently lacks the capacity and resources to implement a strategic, basin-wide energy plan because it depends almost entirely on outside developers to build out its planned inventory of dams under commercial build-own-operate-transfer or BOOT concessions for export to neighboring countries. All of its dams are being constructed in an uncoordinated, project-by-project manner with no prior input from the intergovernmental Mekong River Commission or neighboring countries. As a result, there is at present little opportunity for synergistic planning to optimize the benefits of water usage on a basin-wide scale.

To support a transition toward a strategic basin-wide energy plan, the United States should allocate more resources towards water-energy capacity building in Lao PDR, promote investment in a Lao national power grid, and utilize its regional leadership to marshal support from other donors and regional states like Vietnam. Downstream countries such as Cambodia and Vietnam, which have previously opposed mainstream Mekong dams, can gain a seat at the negotiating table by increasing power purchases from Lao PDR, thus giving them a stake in determining which dams Lao PDR decides to build and in expanding the use of non-hydro renewables such as solar and wind.

Regional Electricity Demand Dynamics

Laos PDR economic development are almost entirely premised on exporting most of its 24 GW of hydropower potential to neighboring countries. However, regional energy policy shifts call into question whether the anticipated demand for Lao hydropower will materialize. Thailand is currently the primary purchaser of Lao hydropower, but it has a history of overestimating demand. As Thailand refines its energy projections and starts to actively pursue energy efficiency gains, demand for Lao

Vietnam stands out as possibly the largest future market for electricity from Lao PDR. Electricity consumption is growing by 10-12% per year and its rapid economic growth requires year-on-year energy consumption by 7-10% through 2030. In

dam resettlement. While the space for civil society and non-government engagement is limited, there are new opportunities for government-to-government engagement on hydropower development.

Given the growing recognition within the Lao government of the risk and uncertainties in the current hydropower development trajectory, the time is right to present alternatives that would meet its development needs and support the optimization of resources at the regional scale. Accordingly, Stimson recommends:

1. **ADB, US, and other donors should fund a feasibility study and design of a**