ABSTRACT

Emerging economies are transitioning towards cleaner energy. Indonesia has vast hydropower potential, but its utilization is minimal as it is slowly progressing in achieving its renewable energy target. In the country's ten-year electricity planning, the new additional power plant will come from hydropower, and most of them are allocated to private developers. Hence, it is essential to understand the challenge of utilizing Indonesia's small-scale hydropower potential and propose a way to boost investment in small-scale hydropower.

This research takes a socio-technical approach using stakeholder and institutional theory to explore why small-scale hydropower is underutilized and how to boost small-scale hydropower investment in Indonesia. The data is collected using semi-structured interviews with stakeholders in Indonesia's hydropower business, such as the government, utility companies, private developers, and financiers.

The findings show that institutional conditions, past decisions, stakeholders' attributes, and position in the stakeholder's network influence the interaction in the hydropower market. Indonesia's heavily regulated electricity market, prioritization of affordable energy, and dependency on coal have led to challenges in boosting private's investment in small-scale hydropower in Indonesia, such as conflicting interest among stakeholders in renewable development, preference for low renewable energy prices, centrality and limited resource of the utility company (PLN), the unlevel playing field between fossil and renewable industry, and lack of competency of developers, local financiers, and regional stakeholders.

Finally, the study suggests a strong leadership in balancing energy trilemma rather than focusing on affordability, transparent and competitive tender, incentive for renewable energy, tapping stakeholder's demand for sustainability, and electricity market reform to boost small-scale hydropower investment.