



AIT



同濟大學
TONGJI UNIVERSITY

This project was led by TERI University, as a collaboration between the Asian Institute of Technology (AIT), and Tongji University.

The project showed a detailed assessment of the policy and regulatory interventions, more specifically, the fiscal and financial instruments shaping the development of decentralised energy systems in the studied countries (China, India, and Thailand). Although sectoral peculiarities differ significantly across these countries, all of three are experiencing some form of revolution in the energy sector, with a specific focus on transiting to a clean energy regime.

The analysis showed that the larger economic and political settings of the countries govern the decentralised renewable energy sector to a significant extent. Incentives in the form of subsidies, tax concessions such as tax holidays, relaxation of import tax and other taxes, a priority sector consideration for bank lending, are widely used across all three countries. However, there are pronounced variations in the use of specific financial instruments to create incentives for decentralised renewable energy systems. Overall there have been efforts by all countries to transit to smarter ways of subsidy disbursement.

Finally, Higher Education Institutions (HEIs) play a critical role in accelerating the transformation towards sustainable development. It clearly emerged from the analysis that decentralised renewable energy systems have the potential to transition within the energy sector to an overall sustainable development trajectory. More importantly, HEIs are the institutes that hold the knowledge of the complexities of the sector and can help build the necessary skills to address such complexities in the economy. Given the global direction towards renewable energy in general and decentralised renewable energy in particular, HEIs play crucial roles in creating the required pool of skilled man power through a variety of capacity building programmes and can offer innovative solutions through their research.

Gopal Krishna Sarangi, Assistant Professor at TERI University, summarised his experiences, while working on this project as follows: *" There were two major outcomes of this project, first there exists pluralistic interpretation of what constitutes 'decentralised energy systems', and second most interpretations are drawn largely from the country's context. The analysis also showed that differences can be observed not only across various incentive schemes, but also within a scheme in terms of its form, nature, source of funding, and use of the instrument, for example how subsidies were used in the different countries. The most enriching part for me was to compare the theoretical frameworks with the realities gathered through field visits, and to present these findings at the ProSPER.Net meeting."*

Outcomes

A detailed report and its conclusion can be found [here](#).

A working paper based on the project can be downloaded [here](#).

Policy Briefs

A - Maximizing Decentralized Energy Utilization Through Renewable Energy Interventions in Thailand

by Shobhakar Dhakal, Prajwal Upadhya, and Ashish Shrestha

Summary of Policy Recommendations for Thailand

Given increasing demand, Thailand needs to explore all energy alternatives to secure their energy requirements. Renewable energy offers opportunities with significant potential to reduce the use of fossil fuels in Thailand.

Decentralized energy has paramount importance in promoting renewable energy, thereby reducing the transmission losses and GHG emission reduction in Thailand.

Decentralized and grid connected renewable energy in Thailand is already making a rapidly growing contribution to the country's energy supply and it should continue to grow in order to fulfill the nation's 30% renewable energy target by 2036.

Read the full policy brief [here](#).

B - Policy and Regulatory Incentive Structure for Off-Grid Renewable Energy Sector in India

by Gopal K Sarangi, TERI University

Summary of Policy Recommendations for India

Lack of regulatory compliance for the off-grid renewable energy sector results poor safety and security standards, this needs to be addressed. Existing incentive structure for the sector is sporadic and piecemeal in nature, often embedded with the large-scale renewable energy systems.

Coalescing incentive structures of the sector with the large sized renewable energy projects often generates disincentives.

Regional clustering approach could act as an effective solution.

Higher educational institutes have a critical role to play in understanding the complexities of instruments better.

Read the full policy brief [here](#).

C- Investing in Decentralized Energy: Conditions and Joint Efforts from National to Local Levels in China

by Wang Xin, UNEP-Tongji Institute of Environment for Sustainable Development and Haixing Meng,
College of Architecture and Urban Planning

Summary of Policy Recommendations for China

Launch academic studies and evaluations, especially by broadening the role of Higher Education Institutions (HEIs) on research and curriculum development on Sustainable Development to effectuate a longer-term impact of policy.

Create and identify suitable sites for DSPV (Decentralised Scale Photo Voltaic) construction, including suitable roofs with larger scale consumption. It is advisable to use the multi-stakeholder partnership initiatives to create policies and coordination practices.

Promote policy and financial innovations to increase funding and investment, also to increase the confidence of banks to issue loans, adjusting subsidies and the price for electricity.

Read the full policy brief [here](#).