USAID
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STRATEGIC ENERGY PLANNING FOR INDIA'S RENEWABLE FUTURE

Renewable energy technologies are poised to be a major resource in the Indian power sector. The policies adopted in the last decade have enabled growth in the industry, reduced costs for consumers, and produced a mature energy market. However, India requires accelerated deployment of renewable energy technologies to meet the needs of the nation's growing population of more than one billion people. Strategic energy planning supports India's transition to a more self-reliant future, powered by renewable energy.

PARTNERSHIP TO ENHANCE CLEAN ENERGY DEPLOYMENT

Through the Partnership to Enhance Clean Energy Deployment 2.0 Renewable Energy (PACE-D 2.0 RE), the U.S. Agency for International Development (USAID) supports India's commitment to generate 175 gigawatts of new power by 2022, helping advance India's transition to a green, renewable, energy-secure economy by making clean energy cheaper. In partnership with the Ministry of New and Renewable Energy (MNRE), USAID provides power distribution companies (DISCOMs) with a new approach to energy resource planning that helps predict consumers' energy needs more precisely, closely matches electricity demand with a power portfolio that integrates renewable energy technologies, and optimizes new renewable energy procurements to be more cost-effective. The new approach has the potential to reduce power purchase costs by five to 10 percent. At our partner DISCOMs in Assam and Jharkhand, it could amount to savings of $25 million USD annually. PACE-D 2.0 RE supports the Government of India to scale efforts nationally through guidelines and regulations for DISCOMs, resulting in affordable electricity for all Indians.

PACE-D 2.0 RE is part of Asia EDGE (Enhancing Development and Growth through Energy), a United States Government initiative that grows sustainable and secure energy markets throughout the Indo-Pacific region.

SOFTWARE DEPLOYMENT AND TRAINING

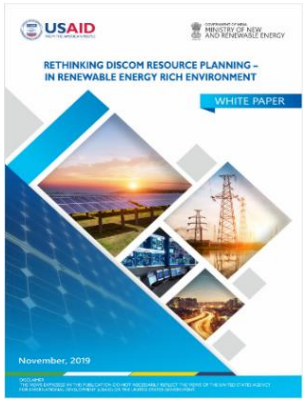
DISCOMs traditionally base resource plans on the compound growth and trend, which only averages past data. PACE-D 2.0 RE and the MNRE developed a new energy planning approach for India that has a more comprehensive methodology and optimizes procurement with renewable energy options that are cheaper, cleaner, and require less time to commission. With this new approach, DISCOMs will be better able to match hourly demand and supply curves, reducing both the power purchase costs and grid integration costs.

In each state, PACE-D 2.0 RE will train DISCOM energy forecasters, planners, and analysts to effectively utilize the software and reap its full benefits. DISCOM staff will gain practical insights and skills to develop resource and procurement plans that incorporate the full palette of supply and demand options. PACE-D 2.0 RE will host workshops on modeling, train-the-trainer programs, as well as courses and webinars.

PACE-D 2.0 RE will deploy the software and training beyond the two partner states. It will also develop case studies, assessment reports, and success stories to share with DISCOMs, clearing the way for broader replication throughout all the states in India and other countries in South Asia that face similar challenges.

REGULATORY FRAMEWORK

A standardized resource planning methodology will better position DISCOMs to deliver reliable, clean energy at a lower price to consumers. In 2019, PACE-D 2.0 RE and MNRE catalyzed a national dialogue that resulted in a white paper, *Rethinking DISCOMs Resource Planning in a Renewable-rich Environment*. National officials from the Central Electricity Regulatory Commission, the Solar Energy Corporation of India, the Central Electricity Authority, as well as the State Electricity Regulatory Commissions, State Nodal Agencies, and DISCOMs from Andhra, Assam, Gujarat, Jharkhand, Pradesh, Rajasthan, and West Bengal contributed to the discussion and white paper. PACE-D 2.0 RE is partnering with the Government of India at the federal and state levels to develop comprehensive resource planning guidelines and modernize the regulatory framework for resource planning.



PACE-D 2.0 RE supports two DISCOMs that provide electricity to

6 million people

The Demand Forecasting Software can reduce power purchase cost by

5-10 percent

Assam and Jharkhand can reduce power purchase costs up to

$25 million USD annually

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