

# PARTNERSHIP TO ADVANCE CLEAN ENERGY - DEPLOYMENT 2.0 (PACE-D 2.0) PROGRAM

A US-India bilateral program to enhance the deployment of renewable energy technologies by making them more economical and reliable to meet India's renewable energy and economic security objectives.



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FROM THE AMERICAN PEOPLE



GOVERNMENT OF INDIA  
MINISTRY OF NEW  
AND RENEWABLE ENERGY

## PACE-D Program

In 2018, the Ministry of New and Renewable Energy (MNRE) and the United States Agency for International Development (USAID) concluded Partnership to Advance Clean Energy - Deployment (PACE-D) - a highly successful, six-year program. PACE-D focused on accelerating the deployment of renewable energy (RE) technologies in India through the provision of technical assistance. PACE-D aimed to create a strong enabling environment through constructive policies and regulations, process design and standardization, institutional strengthening, awareness and knowledge creation, business models, innovative financing mechanisms and other tools. PACE-D made significant contributions in areas such as the deployment of rooftop solar, smart grids, buildings energy efficiency, innovative financing, skill-building, and micro-finance. In addition, PACE-D has built an innovative partnership between technical experts in the US and India. In consultation with MNRE, Assam and Jharkhand have been selected as partner states for program implementation.

## PACE-D 2.0 Program

In January 2019, USAID India launched PACE-D 2.0 – a two-year PACE-D follow up initiative in India. PACE-D 2.0 has interventions in the following three separate but interlinked components: (A) Strategic energy planning for renewable energy deployment, (B) Scaling grid-connected distributed PV (DPV), and (C) Innovation in procurement of renewable energy.

PACE-D 2.0 aims to enhance the deployment of renewable energy technologies with a goal of reducing power purchase cost, increasing power supply reliability, addressing the energy security needs of India and supporting the government of India to achieve their target of 175 GW by the year 2022. PACE-D 2.0 will focus on assisting states to take advantage of the economic, environmental and technical/systemic benefits offered by renewable energy, preparing distribution companies (DISCOMs) for the transition to a new energy paradigm, and improving markets for private sector investments in renewable energy technologies.

## PACE-D 2.0 Components

**PACE – D 2.0 will focus on scaling up renewable energy utilization in India through interventions in the following three components:**

- **Strategic Energy Planning for Renewable Energy Deployment:** This component will improve renewable energy procurement planning by DISCOMs and states through: a) setting rational renewable energy targets, b) improving DISCOMs' understanding of the value proposition of renewable energy to their business and service delivery, and c) establishing robust demand forecasts and renewable energy resource plans for optimizing power systems at least-cost.
- **Scaling Grid-Connected Distributed PV:** This component will help DISCOMs to realize the benefits of distributed PV resources through: a) establishing appropriate compensation for rooftop solar, b) encouraging the use of distributed solar by low-paying consumers, c) improving rooftop solar quality and safety, and d) developing technical standards and interconnection regulations for solar plus storage installations.
- **Deployment of Emerging Renewable Energy Technologies:** This component will support the deployment of emerging, utility-scale renewable energy options prioritized by MNRE. PACE-D 2.0 will achieve this through supporting the development of: a) competitive procurement frameworks and transaction support, b) new business models to serve commercial and industrial (C&I) consumers, and c) relevant regulations and guidelines.

# PROGRAM COMPONENTS

## Strategic Energy Planning for Renewable Energy Deployment

- Demand forecasting
- Resource planning
- Least-cost Renewable Energy procurement options for discoms
- Methodologies, tools and guidelines for resource adequacy

## Scaling Grid-Connected Distributed PV (DPV)

- New compensation models for DPV
- DPV quality and safety
- DPV for low-paying consumers
- Regulatory frameworks for DPV+ storage

## Innovations in Procurement of Renewable Energy

- Design of innovative renewable energy business models, bidding frameworks and tenders
- Regulations for innovative renewable energy projects
- Discom procurement of renewable energy for C&I consumers

### CROSS-CUTTING ACTIVITIES

Training and Capacity Building

Outreach to Non-partner States/Discomes

U.S.-India Business Collaboration

### APPROACH

Framework and Methodology

Knowledge Product

Open Source Models

White-papers/ Studies/Regulatory Discussion Paper

TA/Institutional Strengthening



## Approach

Policy, Guidelines, Regulations, Models and Tools	Pilots	Capacity Building	Scaling
<ul style="list-style-type: none"><li>• Sensitize and create greater understanding of issues and challenges,</li><li>• White papers/ concept notes/ discussion papers</li><li>• Models and tools</li><li>• Draft regulations/ guidelines</li><li>• Support to institutions</li></ul>	<ul style="list-style-type: none"><li>• Design and conduct pilots in partner states</li><li>• Involve private sector</li><li>• Develop success stories</li></ul>	<p>Structured at '4' strategic levels for all 3 components</p> <ul style="list-style-type: none"><li>• DISCOMs</li><li>• SNAs</li><li>• Regulators</li><li>• State RE/Power planning entities</li></ul>	<ul style="list-style-type: none"><li>• Create repository</li><li>• Disseminate knowledge</li><li>• Scaling in others states</li><li>• National adoption</li></ul>

**National Stakeholders**  
MNRE | CERC | FOR SECI | CEA



**State Stakeholders**  
State energy departments | Regulators | State load dispatch center

## Outcomes

### PACE-D 2.0 will result in the following outcomes:

- Improved resource planning and competitive procurement of renewable energy thereby achieving better service and providing least-cost energy to consumers.
- Accelerated deployment of distributed renewable energy technologies thereby improving grid management and reducing losses.
- Improved capacity of national and state level stakeholders to transition to a new renewable energy future.

### USAID/India

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