

PACE UPDATE

A Newsletter on the U.S.-India Partnership to Advance Clean Energy (PACE)

U.S. and India to enhance cooperation on clean energy and climate change

In a landmark visit to New Delhi on January 25-27, 2015, U.S. President Barack Obama witnessed India's 66th Republic Day celebrations as the chief guest and held strategic meetings with the Indian Prime Minister Narendra Modi over this two-day visit.

The two heads of state pledged to expand policy dialogues and technical work on clean energy including the highly successful U.S.-India Partnership to Advance Clean Energy (PACE) umbrella program. They committed to extend the funding for three existing research tracks on solar energy, building energy efficiency and advanced biofuels under the PACE initiative, and launching a new track on smart grid and grid storage technology. As part of the bilateral cooperation on accelerating finance for clean energy projects, the U.S. committed to host the "Clean Energy Finance Forum" and government-to-government Clean Energy Finance Task Force to help overcome strategic barriers to accelerating institutional and private financing.

Other key clean energy-related initiatives announced during President Obama's visit include: starting technical cooperation on heavy-duty vehicles and transportation fuels; promoting super-efficient off-grid appliances; transforming the market for efficient and climate-friendly cooling; and adding new pilot programs to demonstrate the technical viability of clean energy technologies.

The two countries also concluded negotiations on a five-year memorandum of understanding on energy security, clean energy and climate change which is expected to be signed in the near future.



U.S. President Barack Obama and the Indian Prime Minister Narendra Modi in New Delhi



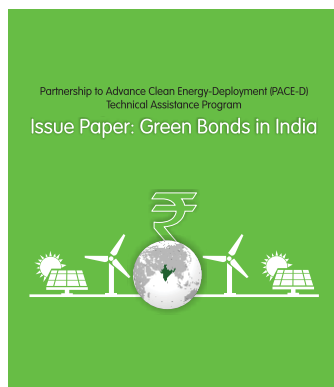
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- **EXIM to provide USD 1 billion credit line for renewable energy:** The Export Import Bank of the United States (EXIM) has signed a Memorandum of Understanding (MOU) with the Indian Renewable Energy Development Agency (IREDA) to provide up to USD 1 billion of credit in medium and long term loans dedicated to clean energy development in India. The loans will be used to finance U.S. technologies, services, and products at low fixed interest rates. According to EXIM Chairman Hochberg, “The MOU will reinforce the strong ties that the U.S. and India already share, create good-paying jobs on both of our shores, and further invigorate U.S.’ clean energy industry while equipping India to meet its own ambitious energy goals.”



From left to right: KS Popli, CMD, IREDA; AK Tripathy, Secretary, MNRE and Fred Hochberg, Chairman, EXIM



- **USAID facilitating the launch of Green Bonds in India:** Green Bonds are one of the key financial instruments that can provide Indian RE project developers access to long-term, low-cost debt capital from institutional investors. The USAID PACE-D TA Program initiated the process to launch Green Bonds in India by developing an issue paper that highlights the global market trends and provides recommendations for the Indian market. The issue paper was released by Ministry of New and Renewable Energy (MNRE) Secretary Upendra Tripathy at a workshop organized by IREDA on December 20, 2014. The issue paper can be downloaded from <http://www.pace-d.com/wp-content/uploads/2014/12/Green-Bonds-Report1.pdf>. MNRE has also set up a committee on innovative financing mechanisms and has invited the PACE-D TA Program to be a part of it.

- **Market study to identify project pipeline for energy efficiency funds:** One of the focal activity of the USAID PACE-D TA Program is to facilitate and enhance investment in the energy efficiency sector. The program is working closely with the Bureau of Energy Efficiency (BEE) on its two financing mechanisms: Partial Risk Guarantee Fund for Energy Efficiency (PRGFEE) and Venture Capital for Energy Efficiency (VCFEE). The program team carried out a market study in December 2014 to identify a pipeline of projects based on data available with energy service companies (ESCOs) and identify potential issues that ESCOs see as a constraint to growth of the industry. The findings of the study reveal that there is a potential pipeline of 237 projects valued at about USD 142 million over the next two years (2014-16).
- **Using corporate social responsibility funds to finance off-grid renewable energy:** The USAID PACE-D TA Program is working with the Chhattisgarh State Renewable Energy Development Agency (CREDA) to jointly work on the deployment and financing of off-grid renewable energy projects in Chhattisgarh. As part of this initiative, the program is collaborating with CREDA to set up a “Distributed Renewable Energy-Community Fund” that will draw upon Corporate Social Responsibility contributions to create community-based renewable energy assets. The proposed fund, of a USD 15 million will support the financing of pilot programs to provide electricity to households, schools, health centers, irrigation, drinking water, and other commercial and local industrial activities.

- **OPIC supports solar solutions in rural India via a loan to Simpa Networks:** OPIC provided USD 3 million loan to Simpa Networks to expand its customer base from 5,000 to more than 50,000. Simpa Energy India, a subsidiary of Seattle start-up Simpa Networks, developed a basic, portable solar home system that is simple to install and affordable to even poor villagers through a



“pay-as-you-go” model. The system provides two or three LED lights, a 40-watt solar panel and a 26 Ah battery. Villagers pre-pay via cell phone based system, and each payment adds to the actual usage and total purchase price of the solar home system. Once fully paid, the solar home system unlocks and delivers free electricity for the expected 10-year life of the product.

Renewable Energy

- **Promoting solar rooftop in Bengaluru:** The Bangalore Electricity Supply Company Ltd. (BESCOM) announced its solar rooftop program in November 2014 and has received 335 applications with a cumulative capacity of 18.5 MW as of January 2015. The USAID PACE-D TA Program is supporting BESCOM on a range of technical and outreach initiatives to enable and encourage individual households to install solar panels on their rooftops. The program provided technical inputs on net metering framework, power purchase agreement, guidelines for developers and technology suppliers and other supporting documents.



- **U.S. DOE and MNRE deliver three solar training workshops:** U.S. and Indian research institutions delivered training workshops on solar resource assessment and solar project development in November 2014. The workshops featured experts from the National Renewable Energy Laboratory (NREL), who provided information on the new solar resource data and training to Indian solar developers on how to utilize the data in financial analysis to improve the performance of solar projects in India. More than 250 solar project developers, EPCs, financial institutions, and energy experts attended the workshops at the National Institute of Wind Energy (Chennai), National Center for Photovoltaic Research and Education (Mumbai), and the National Institute of Solar Energy (Gurgaon).

- **Grant for Energy Storage Pilot Project:** USTDA signed a grant agreement with IL&FS Energy Development Company to partner on the development of innovative wind integrated solar PV energy storage (WISES) projects. IL&FS Energy, an Indian independent wind power producer, is evaluating the development of integrated wind and solar photovoltaic (PV) projects with energy storage, to enable the supply of dispatchable utility-scale renewable energy to meet the Indian grid system's needs.

Building Energy Efficiency

- **Taskforce on Energy Conservation Building Code (ECBC):** The Government of Energy, Rajasthan held the first taskforce meeting on mandatory ECBC implementation in Jaipur on November 28, 2014. USAID, via the PACE-D TA Program, supported the state government to identify taskforce members and its the scope of work. The program team made a presentation at the taskforce meeting and highlighted the timelines and primary responsibility of key stakeholders, approvals requirement and the way forward. The task force is chaired by Secretary Energy, Government of Rajasthan.

- **Webinar on the impact of ECBC:** U.S. DOE, in collaboration with the Pacific Northwest National Laboratory (PNNL), the Malaviya National Institute of Technology Jaipur (MNIT), and the Natural Resources Defense Council (NRDC), delivered a webinar reviewing the progress on the implementation of ECBC in India. The webinar, organized on December 2, 2014, featured presentations from leading scientists and building energy professionals.

Policy and Regulations

- **Demand-side Management Regulations for Haryana:** The state of Haryana has an average demand of 4,500-5,500 MW of power which goes up to 8,000 MW during peak hours in summer. The USAID PACE-D TA Program provided technical assistance to the Haryana Electricity Regulatory Commission to develop Demand-side Management (DSM) Regulations, 2014 that will help ease the power crunch in the state. These regulations will also promote and implement load shifting, strategic energy conservation and pricing initiatives-based programs such as "Time of Day".

- **Energy Efficiency Policy for Rajasthan and Karnataka:** A new era in energy efficiency is beginning in Indian states as policy makers and regulators recognize the importance of the low-hanging fruit of energy savings. USAID's PACE-D TA Program provided technical inputs to the EE policies of two states – Rajasthan and Karnataka. The EE policy of Rajasthan aims to save around 440 million kWh of electricity consumption by 2019. Meanwhile, the comprehensive EE policy of Karnataka, the first of its kind in India, has set a target of saving nearly 300 KWh by 2019. Both state policies provide sector wise energy savings approach and target for different consumer categories including municipal, domestic, agriculture, commercial and industries.

India-U.S. Technology Summit 2014


U.S. was the partner country at the 20th Technology Summit and Technology Platform organized by the Confederation of Indian Industry and the Indian Department of Science & Technology on November 18-19, 2014 in Greater Noida. The focus areas of the Summit included renewable energy and sustainable cities among others.


Dr. John Holdren, Assistant to the President for Science and Technology, Director of the White House Office of Science and Technology Policy, and Co-Chair of the President's Council of Advisors on Science and Technology (PCAST) lead the U.S. delegation to the Summit. The U.S. Embassy New Delhi, along with other U.S. agencies, programs, and businesses participated as exhibitors, speakers, and delegates. The Summit also provided a platform for networking and showcase of U.S. programs, products, and services across different sectors including clean energy.





Inaugural Session of the India-U.S. Technology Summit 2014


Upcoming Events

-  **Clean Energy Finance Forum:** The Clean Energy Finance Forum, organized alongside of MNRE's RE-INVEST expo, will primarily focus on project finance for large scale, grid-connected clean energy projects.
 - February 16, 2015, New DelhiOrganizer: U.S. Embassy New Delhi and USAID. For more information please contact WilliamsDS3@state.gov

-  **Clean Energy Knowledge Exchange Workshop:** The workshop aims to support linkages between different states on clean energy, create awareness about best practices and promote networking.
 - February 18-19, 2015, New DelhiOrganizer: USAID PACE-D TA Program. For more information please contact kkaur@pace-d.com

-  **India Smart Grid Workshop Series:** The workshop will present U.S. smart grid technologies and best practices including the key findings from current USTDA smart grid grant programs in India.
 - March 2, 2015, BangaloreOrganizer: USTDA. For more information please contact Jamie Merriman jmerriman@ustda.gov

-  **National Workshop on Clean Energy Regulations:** The workshop will facilitate knowledge exchange on innovative regulatory intervention measures for energy efficiency and renewable energy, and discuss global best practices.
 - April 8-9, 2015, New DelhiOrganizer: USAID PACE-D TA Program. For more information please contact kkaur@pace-d.com

-  **wPOWER Global Partnership Forum:** The first Global Partnership Forum of USAID-funded wPOWER program will showcase the pivotal role played by rural women as champions of environmental sustainability.
 - April 16-17, 2015, New DelhiOrganizer: Swayam Shikshan Prayog and USAID/India. For more information please contact premagab@gmail.com

About PACE: Launched in 2009, the U.S.-India Partnership to Advance Clean Energy (PACE) seeks to accelerate inclusive, low-carbon growth by supporting research and deployment of clean energy technologies and policies. PACE combines the efforts of several government, non-governmental, and private sector organizations on both the U.S. and Indian sides and contains three key components: Research (PACE-R), Deployment (PACE-D), and Off-Grid Energy Access (PEACE). In September 2014, Prime Minister Modi and President Obama agreed to strengthen and expand PACE through a series of priority initiatives that build on PACE's ongoing work.

PACE Secretariat

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