

U.S.-INDIA PARTNERSHIP TO ADVANCE CLEAN ENERGY (PACE)

U.S. INDIA COLLABORATIVE FOR SMART DISTRIBUTION SYSTEM WITH STORAGE

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UI-ASSIST 2020
PROGRESS
WORKSHOP
July 21-24, 2020

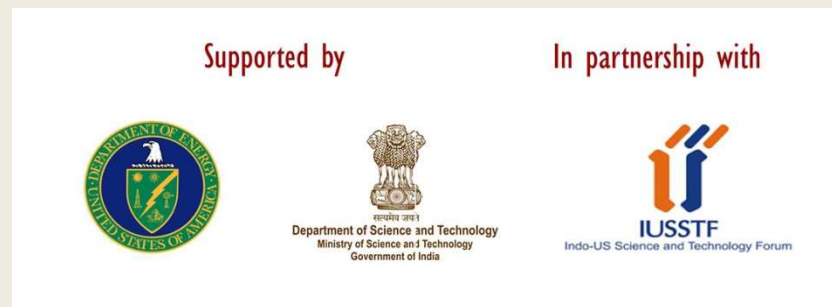


IUSSTF

Indo-US Science and Technology Forum

COLLABORATION ACROSS GEOGRAPHIC AND DISCIPLINARY BOUNDARIES

- Unique partnership bringing together 30 universities, national laboratories, electrical utilities, and vendors in the field of clean energy
- R&D Activities in a number of different areas
- Lab scale pilots for proof of concept/Field Trials
- Manpower training in the area of Smart Grids



EXPECTATIONS

- FOUNDATIONAL AND **TRANSLATIONAL** RESEARCH
- INTEGRATION ACROSS THE DIFFERENT THEMES
 - JOINT PUBLICATIONS IN TECHNICAL JOURNALS AND TRADE MAGAZINES
 - PATENTS
- WORKFORCE: CAPACITY BUILDING (RESEARCH AND INDUSTRY CENTRIC)

EXPECTATIONS

- **POSITION PAPERS: REDUCING THE TIME TO ADOPTION AND IMPLEMENTATION**
 - HIGHLIGHTING THE IMPACT OF THE RESEARCH AND THE BENEFITS
 - IDENTIFYING BARRIERS AND CHALLENGES
 - ADDRESSING SOCIETAL IMPACT
 - INFORMING POLICY MAKERS AND REGULATORS
- **OUTREACH TO THE STAKEHOLDER COMMUNITIES: Example:**
Workshop that brings together utility companies and vendors with policy makers and academic researchers

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IUSSTF Engagements under the PACE umbrella

Indo-U.S. Joint Clean Energy Research and
Development Centre (JCERDC)
(PACE-R)

PACEsetter
(PEACE)

Capacity Building Programs
(PACE-R)

Solar
Energy

Building
Energy
Efficiency

Second
Generation
Biofuels

Smart Grids
and Energy
Storage

Solar
Energy-
BASE
Fellowships

Building
Energy
Efficiency-
BHAVAN
Fellowships

Biofuels
and
Bioenergy
Awards

Solar Decathlon*

U.S.-INDIA STRATEGY ENERGY PARTNERSHIP- JULY 2020

From the Joint Statement

- **New Research Areas:** transformational power generation based on supercritical CO₂ power cycles and advanced coal technologies for power generation and hydrogen production, including carbon capture, utilization, and storage (CCUS).
- **Empowering Women in the Energy Sector:** Recognizing the need for a more balanced workforce with diverse skill sets to support energy innovation and address critical energy challenges of the future
 - Addressing gender diversity, gender mainstreaming, and promoting women's entrepreneurship
 - Working to incorporate gender-focused activities across the technical pillars.

SOLAR DECATHLON INDIA

- IUSSTF and DOE signed a MOU to establish a framework of partnership and engagement toward the organization of a Solar Decathlon in India.
- Partnership between IUSSTF, the Alliance for an Energy Efficient Economy (AEEE) and the Indian Institute for Human Settlements (IIHS)
- Hands-on, practical, innovation-based competition for Student Teams
- Goal: Innovate for net-zero-energy, net-zero-water, net-zero-waste and climate resilient buildings

<https://solardecathlonindia.in/about-us/overview/>



THE INDO-U.S. SCIENCE AND TECHNOLOGY FORUM (IUSSTF)

IUSSTF- GENESIS

- Bi-national organization, jointly created by the Governments of India and the United States in 2000.
- Operates through two bilateral agreements :
 - Indo-U.S. Science and Technology Forum (2000)
 - United States-India Science and Technology Endowment Fund (2009)

20 Years of Catalyzing Partnerships

IUSSTF MISSION

- Act as a **catalyst to promote long-term scientific collaborations** between India and the U.S. through **partnerships** amongst individual scientists, scientific institutions and the scientific community at large.
- Establish **platforms and mechanisms to connect the S&T eco-systems** of both the countries to act as a fertile ground to foster individual and institutional partnerships in a natural and sustainable manner..

SCIENTIFIC NETWORKS

- **Bilateral Workshops/ Training Programs:** To forge partnerships and alliances; “point of initiation”
- **Indo-U.S. Virtual Networked Centers:** To support specific “medium term engagements” to address challenging problems in frontline areas of science & technology

INNOVATION & ENTREPRENEURSHIP

- **U.S. – India Science & Technology Endowment Fund (USISTEF):** Support and foster joint applied R&D to generate public good through commercialization of technology achieved through sustained partnerships between U.S. and Indian researchers and entrepreneurs



RESEARCH & DEVELOPMENT

Indo U.S. Joint Clean Energy Research and Development Centre (JCERDC): To facilitate joint research and development on clean energy needed to improve energy access and promote low-carbon growth (DST, India & DOE, US)

PACEsetter Fund: commercialization of innovative off-grid clean energy access solutions (MNRE, India and U.S. Embassy)

Real Time River Water and Air Quality Monitoring (WAQM): end to end water and air quality monitoring systems on smart, networked, low cost, low power sensor nodes with large scale cloud based data analysis (DST, India and Intel® India)



Indo-US PACEsetter Fund



REAL TIME RIVER WATER & AIR QUALITY MONITORING

VISITATION & FELLOWSHIPS

- **Water Advanced Research and Innovation (WARI) Fellowship** : Water Science and Engineering
- **Bhaskara Advanced Solar Energy (BASE) Fellowship**:Solar Energy
- **Indo-U.S. Fellowship for Women in STEMM**: All areas of Science and Technology
- **Bioenergy-Awards for Cutting Edge Research**: Biofuel and Bioenergy
- **Building Energy Efficiency Higher & Advanced Network (BHAVAN) Fellowships**: Building Energy Efficiency



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