



**USAID**  
FROM THE AMERICAN PEOPLE



# PTC INDIA LTD. TRAINS NEIGHBORING COUNTRIES ON DESIGNING, MANAGING & OPERATING A POWER TRADING ENTITY

## TRAINING FOR SOUTH ASIA REGIONAL INITIATIVE FOR ENERGY INTEGRATION (SARI/EI)

Delhi, India – Energy executives representing the South Asia Regional Initiative for Energy Integration (SARI/EI) countries participated in the first of three modules on the design, management and operation of a power trading entity. The training was conducted jointly by PTC India Ltd. (India’s largest power trader) and the National Power Training Institute (NPTI). Sixteen delegates were selected to participate in all three modules of the training. The training program was tailored for the Nepalese, to provide them with the institutional and human capacity to establish a power trading entity in Nepal. The activities were targeted toward the Nepal Electricity Authority, Government of Nepal representatives and private sector, but additional representatives from Afghanistan, Bangladesh, and Bhutan were also included. The first round of training emphasized development of skills and knowledge in the functional operations of power trading and was supplemented by classroom lectures on the Indian power sector structure, regulatory and electricity policies, grid code, tariff determination, operational mechanisms, and the evolution of the power market.





*Above: by USAID/India Mission Director Ambassador Jonathan Addleton highlights the need for an increase of energy cooperation between the South Asian countries, which would enable them to realize their enormous potential and lead to the overall socio-economic growth of the countries.*

The training activity was conducted by PTC and took place September 14 – 18, 2015 at the NPTI campus in Faridabad, India. The participants included 12 members from Nepal, 2 members from Bangladesh, and 1 member each from Bhutan and Afghanistan.

The inauguration of the module was done by USAID/India Mission Director Ambassador Jonathan Addleton. Ambassador Addleton spoke on the recent progress of CASA 1000 – a planned transmission interconnection to take power from Kyrgyz Republic and Tajikistan to Afghanistan and Pakistan. As the Ambassador noted, the South Asian region can make similar strides if the relevant players work together.



*Left: PTC India, Chairman and Managing Director Mr. Deepak Amitabh addresses the training delegation. Mr. Amitabh remarked that the region should have every expectation that a vibrant regional electricity market will be formed within the next 5 – 10 years. It is PTC's hope that this training will serve its purpose to help meet that goal.*

PTC India, Chairman and Managing Director Mr. Deepak Amitabh provided the Inaugural Address. In the address, CMD-PTC noted the progress and evolution of PTC hand-in-hand with the advancements of the power markets in India, and its supporting role with its neighboring countries of Bhutan, Nepal and Bangladesh.

Over the course of the five days, participants were taken through the journey of the Indian power sector over the past century. Participants were exposed to the various rules, regulations and governing policies that shape its operating environment in the Indian power sector. Faculty consisted of senior officers from different government/private organizations of the Indian power sector. Each shared their insights along with their personal experiences.



Presentations were proved by the following:

- Mr. Rajinder Kachroo, CMD, 3 Phase Solutions
- Mr. Manish Chaudhary, Assistant Chief Finance, Central Electricity Regulatory Authority (CERC)
- Ms. Indu Maheshawari, Assistant Professor, NPTI
- Mr. RK Verma, Chief Engineer (DP&D), Central Electricity Authority (CEA)
- Mr. RK Bansal, Assistant General Manager, Power System Operation Corporation Limited (POSOCO)
- Mr. SC Shrivastava, Joint Chief-Engineering, CERC
- Dr. SK Chatterjee, Joint Chief – RA, CERC
- Mr. VK Kharbanda, Prject Director, IRADe
- Ms. Shilpa Agarwal, Deputy Chief-Engineering, CERC
- Mr. SS Barpanda, AGM-Market Operations, POSOCO
- Mr. TN Thakur, Ex. CEO, PTC India Ltd.
- Mr. Rajesh Mediratta, Director, IEX
- Mr. AK Meena, Deputy Chief Design Engineer, Power Grid Corporation of India
- Mr. SC Saxena, Deputy General Manager, POSOCO
- Mr. N. Nallarasan, Deputy General Manager, National Load Dispatch Center, POSOCO
- Dr. Frank Felder, Director, Center for Energy, Economics and Environmental Policy, Bloustein School of Planning and Public Policy, Rutgers University



*Left: Dr. Frank Felder, Director, Center for Energy, Economics and Environmental Policy, Bloustein School of Planning and Public Policy, Rutgers University, participated in the training module to serve as a discussion facilitator and offer the U.S. perspective during the sessions. Participants were able to hear directly from Dr. Felder on the unique energy market system in the U.S., and its history.*



*Above: Mr. TN Thakur, Ex. CEO, PTC India Ltd. & Director, Karaat Infrastructure Development Private Limited. As one of the key founders of PTC and Indian power trading, Mr. Thakur was positioned to offer unique and targeted advice to the Nepalese participants.*

## **Background:**

Although South Asia (SA) has been one of the fastest growing regions in the world, with an average annual GDP growth rate of 6%, its energy sector is beset by shortages and poor service quality. In order to meet the rising energy demands, the region's governments have had to increase their reliance on oil imports. As a result, all the countries without exception rely on these supplies to meet more than a quarter of their commercial energy needs. Despite tremendous benefits to be derived out of regional cooperation, the region lags significantly behind most, if not all, regions of the world in energy trade and regional integration. Limited cross-border transmission interconnections and cross-border trading transactions are taking place only between India and Bhutan, India and Bangladesh and to a lesser extent between India and Nepal. Despite the complementarities of the energy resource base of Nepal and India, the two

countries have barely begun to exploit the potential opportunities for cross-border electricity trade (CBET). (Source: USAID)

However, there has recently been significant progress between the South Asian countries on moving towards expanded regional energy cooperation. Last year, the South Asian Association for Regional Cooperation (SAARC) signed a landmark Framework Agreement on Energy Cooperation, aimed at easier distribution and transmission of electricity, allowing public and private entities of member states to buy and sell electricity.

On a bilateral level – India and Nepal are making substantial strides on cross-border exchange. Following Indian Prime Minister Modi’s August 2014 visit to Nepal, a Power Trading Agreement (PTA) between the two countries was signed. The PTA will enable cooperation in the power sector, including developing transmission interconnections, grid connectivity, power exchange and trading through the governmental, public and private enterprises of the two countries. This collaboration will provide much needed economic and environmental benefits and improved energy security to both countries, and ultimately the region.

Since 2000, USAID’s South Asia Regional Initiative/Energy (SARI/E) program focused on advocating energy cooperation in South Asia. The program is now in its next phase of advancing regional energy integration and cross-border energy trade in eight South Asian countries (Afghanistan, Bangladesh, Bhutan, India, Pakistan, Nepal, Sri Lanka & Maldives). This new phase titled South Asia Regional Initiative for Energy Integration (SARI/EI) is designed to build upon SARI/Energy’s successful initiatives of the past to move South Asian countries towards increased regional energy security.

While India has been conducting cross-border electricity exchange for decades, the expanded Nepal-India interconnection will represent a substantial step for Nepal. To assist, USAID SARI/EI assigned the United States Energy Association (USEA) with the task of implementing a program focused on capacity building for the Nepalese. This training is the first in a series of capacity building activities to lend support to Nepal, as well as to the other SARI/EI countries.

## **Results & Next Steps**

The participants completed an assessment that was designed to measure their understanding of the topics covered, the relevance of the training program and the overall rating of the training. The participants reported on their understanding of the various topics, both before and after the activity. The survey analysis showed great improvement of knowledge from the activity. The greatest increase in their understanding was observed in the subjects of “open access”, “roles and functions of power traders” and “congestion management in real time system operation.”

The participants also listed the top five topics they found relevant among the seventeen topics covered. The topics judged as the most relevant were:

- Functions of various statutory and/or autonomous bodies in the Indian power sector
- Key roles and functions of power traders in the Indian power market
- Power market regulations
- Overview and details of the Electricity Act 2003, national electricity policy and national tariff policy
- Open access in India

USEA will be conducting the remaining of the training program for the same 16 participants. Module 2 will be conducted November 30 – December 4, 2015 at NPTI’s training facilities in Faridabad, India and Module 3 will be conducted January 4 – 8, 2016 at PTC headquarters in New Delhi.

## Training Participants

### Afghanistan

- Mr. Sayed Arif Ahmadzada, Energy and Control Manager, Da Afghanistan Breshna Sherkat (DABS), Afghanistan

### Bangladesh

- H.M. Imran Hassan, Assistant Engineer, IPP Cell-1, Bangladesh Power Development Board
- Muhammad Faisal Hasan, Assistant Engineer, IPP Cell-1, Bangladesh Power Development Board

### Bhutan

- Mr. Denkar, Engineer, Transmission & Power System Division, Department of Hydropower & Power Systems, Ministry of Economic Affairs

### Nepal

- Mr. Sanjaya Dhungel, Senior Divisional Engineer (SDE), Office of the Investment Board
- Mr. Madhu Prasad Bhetuwal, Deputy Director General, Department of Electricity Development
- Mr. Shyam Kishor Yadav, Senior Divisional Engineer (SDE), Ministry of Energy
- Mr. Ananda Chaudhary, Senior Manager, Naulo Nepal Hydroelectric Pvt. Ltd.
- Mr. Apar Neupane, Business Manager, Nepal Liaison Office, Statkraft Holding Singapore Pte. Ltd.
- Mr. Krishna Bahadur Khadka, Deputy Director of Services, Nepal Electricity Authority
- Mr. Prabal Adhikari, Chief of Power Purchase, Power Trade Department, Nepal Electricity Authority
- Mr. Subarna Sapkota, Assistant Manager, Power Trade Department, Nepal Electricity Authority
- Mr. Binod Lohani, Assistant Manager, Load Despatch, Power System Operations, Nepal Electricity Authority
- Mr. Aman Rajbhandari, Assistant Manager, System Planning Department, Nepal Electricity Authority
- Ms. Milana Prajapati, Engineer, Corporate, Planning & Monitoring Department, Nepal Electricity Authority
- Mr. Ramesh Kumar Ghimire, Deputy Director (Legal), Nepal Electricity Authority



For more information about the South Asia Regional Initiative for Energy Integration, please contact Ms. Sarah Blanford at [sblanford@usea.org](mailto:sblanford@usea.org).