



THE ROLE OF CROSS-BORDER TRADE IN THE SOUTH ASIA REGION USEA WORKSHOP ON TRANSMISSION OPERATIONS FOR CROSS BORDER ENERGY TRADE

Under the South Asia Regional Initiative for Energy (SARI/Energy) Program, funded by the U.S. Agency for International Development (USAID), the **U.S. Energy Association** conducted a "South Asia Regional Workshop on Transmission Operations for Cross Border Energy Trade". This event, cosponsored by the Bhutan Power Corporation, was held in Thimphu, Bhutan on August 28 – 30, 2012.



Participants of the regional workshop

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THE ROLE OF CROSS BORDER ENERGY TRADE

The purpose of the workshop was to provide an overview of transmission operations for cross border electricity exchange. The two-day workshop presented existing transmission operation practices within the region to ensure reliability, stability,

and safety in cross-border energy trade. With participation from representatives from Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka the workshop addressed best practices in cross border communications for electricity trade.

Within the South Asia region, there are continued shortages and outages occurring which contributes to a lost in GDP. Increasing electricity trade among the countries, as in the case of Bhutan. will increase revenue and contribute to the countries' GDP. Bhutan has successfully made this case by providing electricity to India with the sale of this electricity contributing to 40% of the national revenue. Other counties in the region would also benefit from the surplus electricity to the surrounding countries. Additionally, cross border trade would diversify the generation mix within the region which is key to ensuring that resources are not depleted. As the region reviews the next steps in developing an integrated energy sector, three possible models are emerging:

- Bilateral trade
- Regional bilateral
- Regional energy market

From left to right: Mr. Srinivasan "Padu" Padmanaban, USAID/India; Mr. Hilal Raza, SAARC Energy Centre; Mr. Yeshi Wangdi, Department of Hydropower & Power Systems, Bhutam; and Dasho Bharat Yonzen, Bhutan Power Corporation

The role of the energy companies, the control centers, and the regulators must be clearly defined as they begin to develop these models. Morning presentations by the U.S. Agency for International Development/India, the Department of Hydropower & Power Systems, Bhutan, and the Bhutan Power Corporation emphasized the need to harmonize the policy, regulatory, and commercial aspects of developing a South Asia regional electricity market.

REGIONAL ENERGY MARKET

With bilateral agreements among two countries being the norm within the region discussions were also held on the development of a regional energy market. A presentation from the Southern African Power Pool (SAPP) presented the progression of the pool. Through an Inter-Government MOU signed by the Southern African Development Community (SADC) Minister in 1995, the SAPP was created. This allowed for the interconnection of the northern and southern networks and created an environment for regional trade and cooperation. The SAPP is comprised of 12 countries with the main aim being to optimize the energy resources in the region and assisting each other in emergencies. A similar model may also be utilized in the South Asia region however three key elements will need to be in place:

- Good generation mix; •
- Match supply and demand; and
- Good transmission interconnection

SAPP currently has several markets that the members can participate in to sell their generation. Although SAPP has had their own struggles with developing their market they are moving forward with strong political and regulatory support.

COUNTRY INVOLEMENT IN REGIONAL TRADE

It would not be possible to have a regional energy market without the participation of all of the regional countries. To provide an overview of the current transmission operation issues for cross-energy trade, presentations were made by Bangladesh, India, Nepal, Pakistan, and Sri Lanka. There are plans for future interconnections between India and the countries of Bangladesh, Nepal and Sri Lanka while in the Maldives discussions have centered on a



Bhutanese workshop participants

submarine cable interconnection.

The SAARC Energy Centre will play an integral role in initiating, promoting, and facilitating energy cooperation in the region. Currently, SAARC has identified four regional/sub regional trade options of:

- Power market
- Petroleum refinery
- LNG terminal
- Power Plant

These options were identified via the SAARC Regional Energy Trade Study with a follow-up in progress.

SARI/ ENERGY WAY FOWARD

The final day of discussion focused on how we move forward with key recommendations being made on:

- Institutional framework
- Enhancing capacity building
- Coordination with the SAARC Energy Centre
- Establishing institutional capacity
- Establishing regional regulatory association

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Comments made during the discussion emphasized the need for moving forward in the development of an energy market; however, it was stressed that the missing link is the policy. The policy must be done first before the region can move forward.

SARI/E REGIONAL WORKSHOP PARTICIPANTS

BANGLADESH

Mr. MD Iqbal Azam, Deputy General Manager, Power Grid Company of Bangladesh

BHUTAN

- Mr. Karma Tshewang, Offtg. Head, Transmission & Power Systems Division, Department of Hydropower & Power Systems, Ministry of Economic Affairs
- Mr. Ngawang Choeda, Programme Manager, Planning & Coordination Division, Department of Hydropower & Power Systems, Ministry of Economic Affairs
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INDIA

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