



## South Asia Regional Quarterly Update – Jan to Mar 2010

### FEATURED ACCOMPLISHMENTS FOR THE QUARTER

#### **LAUNCH OF THE WOMEN'S INSTITUTE FOR SUSTAINABLE ENERGY RESEARCH (WISER)**



*Celebrating the launch of WISER at the Kanakakkunu Palace in Kerala, India on 22 March 2010*

USAID's SARI/Energy Project, in cooperation with the Government of Kerala, India and its Energy Management Centre (EMC), held a ceremony to celebrate the opening of South Asia's first dedicated center to advance the consideration of gender issues in regional energy policy: the Women's Institute for Sustainable Energy Research (WISER). WISER's goal is to promote the active participation and leadership of women in the field of energy through targeted awareness building that empowers them in the efficient use of energy and leads to an improved quality of life for them and their families.

In the keynote address, Ms. Elizabeth Warfield, Deputy Mission Director, USAID/India, noted that the launch of WISER is the culmination of a multi-year effort by USAID to bring together, through the SAWIE (South Asia Women in Energy) network, women who work in the energy sectors of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. She described how clean energy affects livelihoods, education, health and sustainable development, and emphasized the importance of WISER as a key regional institution. Other speakers celebrating WISER's launch included Professor V.K. Damodharan, Vice Chairman of EMC; Mr. L. Radhakrishnan, IAS, Government of Kerala; and The Honorable Minister for Health and Social Welfare, Government of Kerala, Smt. P.K. Sreemathy Teacher. Smt. Teacher closed the ceremony with a call for WISER to provide "a platform for women across South Asia to share their knowledge, their potential, and their ability to reach out to their counterparts across the globe," and led the traditional lighting of the lamp.



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### **EXECUTIVE EXCHANGE ON THE SOUTHERN AFRICA POWER POOL'S CROSS-BORDER EXCHANGE OF ELECTRICITY**

The U.S. Energy Association organized an exchange for South Asian electricity executives to attend the 34<sup>th</sup> Southern African Power Pool (SAPP) meetings in Gaborone, Botswana, and to visit Eskom, South Africa's public electric utility and a member of SAPP. Hosted by Botswana Power Corporation from 15-18 February 2010, the event was attended by 13 executives from Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka as part of the South Asia Regional Energy Transmission Partnership.

SAPP is managed by the inter-governmental SADC (Southern African Development Community), headquartered in Gaborone. It comprises utilities from 12 countries that serve 230 million people. Over the course of the three-day annual meeting, the South Asian executives received a first-hand overview of the power pool's governance and vision; its growth from a cooperative pool to a competitive power market; the functions of the SAPP Executive Committee and the Market, Planning, Environmental, and Operating Sub Committees; and the mechanisms of the SAPP Coordination Centre, which researches and evaluates disturbances and monitors the system.



*Above: SAPP and SARI/Energy delegates pose for a photo with the Permanent Secretary after the official opening of the meeting.*



*Left: Dr. Lawrence Musaba, Coordination Centre Manager for the Southern Africa Power Pool, provides a detailed overview of the history, operations and current challenges of the electricity market to the South Asian delegates.*

*Right: SAPP Environmental Sub-Committee members and the SARI/Energy delegates visit a waste disposal site in Gaborone to discuss the safe disposal of compact fluorescent light bulbs.*





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The SARI/Energy delegates concluded their stay in Africa with a visit to Eskom. Headquartered in Johannesburg, South Africa, Eskom is the largest producer of electricity in Africa, and is among the top-seven utilities in the world in terms of generation capacity and among the top nine in terms of sales. Eskom generates approximately 95% of the electricity used in South Africa and about 45% of the electricity used Africa-wide. The utility generates, transmits and distributes electricity to industrial, mining, commercial, agricultural and residential customers and redistributors.

Power stations and major power lines are being built to meet rising electricity demand in South Africa, especially in advance of the World Cup. In an effort to meet growing demand, Eskom has embarked on a massive, R385 billion (in nominal terms) build program to 2013. Since the building program started in 2005, 4,454 MW of additional capacity have been commissioned up to 30 April 2009.



*In an effort to reduce demand during peak times, Eskom has implemented a unique “Power Alerts” program that reaches out to residential consumers through a system posted on local television stations. During common peak periods of the day, consumers look for the “Power Alert” dial on the television that will inform them if the grid is at risk of a blackout. Then, consumers can assist in avoiding a blackout by turning off unnecessary appliances and other household electricity devices.*

### CAPACITY DEVELOPMENT PROGRAM FOR AFGHAN WOMEN – CLEAN ENERGY ACCESS

Following its 22 March 2010 launch, WISER commenced operations by hosting a nine-day training program, sponsored by USAID Afghanistan, for 19 female delegates from Afghanistan. The participants included solar engineers, government employees, teachers, community leaders, social activists and recent graduates. They benefited from a mix of classroom training and hands-on exposure to renewable energy and energy efficiency technologies, financing mechanisms for clean energy, and gender considerations in energy policy development.

Among the knowledge partners who delivered coursework and led discussions were two experts from the US National Renewable Energy Laboratory (NREL): Ms. Cecile Warner, a solar photovoltaic expert; and, Ms. Shannon Cowlin, who specializes in renewable energy resource assessment and end-use applications. EMC (Energy Management Centre) leaders such as Prof. V.K. Damodharan (Vice Chairman) and Ms. Deepa S. Kumar (Energy Technologist) delivered highly-targeted presentations on such topics as renewable energy and energy efficiency applications, financing mechanisms, and public awareness techniques. Mr. L. Radhakrishnan, IAS, Principal Secretary (Power), Government of Kerala, advised on how to frame government policies to encourage clean energy. Afghan gender activist Ms. Suraya Pakzad, who in 2009 was named by *Time* magazine as one of the world’s most influential individuals, spoke on women’s rights and natural resources in Afghanistan, and composed a closing poem for the Kerala sessions. Other speakers included leading experts from Indian and Nepalese government agencies, private companies, research institutions and universities.



*Top: Afghan delegates visit an EMC-organized women’s energy clinic in Vilapilsala, Kerala to learn about methods for raising awareness of clean energy practices among women in rural villages*



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While in Kerala, the Afghan delegates conducted site visits to commercial facilities where renewable energy and energy efficiency measures are deployed, attended demonstrations of village-level energy technologies at EMC, and observed a rural women's energy clinic.

In Bangalore, the delegates participated in a two-day session hosted by Tata BP Solar that featured detailed discussions of design considerations, and financing and distribution mechanisms for solar photovoltaic and solar thermal systems. They also toured one of the company's production facilities. In addition, the delegates visited the Solar Electric Light Company (SELCO) to learn about its market-based approaches to solar energy.

One of the Afghan delegates' recommendations is to form a chapter of WISER to institutionalize their efforts. Their roadmap for increasing clean energy access in Afghanistan emphasizes working in rural areas to deploy household-level clean energy technologies such as improved cook stoves, solar and light emitting diode (LED) lighting, and solar water heating systems. To better serve urban areas, they suggested developing hydropower projects to increase electric generation capacity. The delegates also emphasized the need for gender mainstreaming in energy policies and sector applications, and for hydropower systems, where women could be trained to operate and maintain decentralized and small dispersed systems. With the EMC as the center for providing support, the participants sought technical assistance in training counterpart agencies, self-help groups and other women-centric organizations that would support income generating activities. They also highlighted the need for support for technical education, especially for girls and young women; and requested support for reviewing existing and potential energy sector policies and their implementation.



*Delegates tour a solar water heater production facility of Tata BP Solar India Limited in Bangalore.*

### **SRI LANKA'S REGIONAL CENTER FOR LIGHTING**



The Regional Lighting Center (RCL), an initiative of USAID SARI/Energy, is a partnership of the Sri Lanka Sustainable Energy Authority (the host organization) and the Lighting Research Center of Rensselaer Polytechnic Institute in New York (the knowledge partner) to promote the adoption of energy-efficient lighting technologies, programs, and best practices throughout South Asia.

RCL organized a five-day Comprehensive Lighting Course from 16 - 21 January, 2010 at Beruwala, Sri Lanka. During the program, LRC professors joined faculty of Sri Lanka's University of Moratuwa to share and discuss the newest advances in energy-efficient lighting design, technology and measurement. The targeted audiences were engineers, architects, designers and planners in Asia.



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The course provided a foundation in lighting terminology and technology. The participants learned about systems and applications for lamps, ballasts and luminaires, including the most recent information on LEDs and LED system integration. Participants also received guides and tools to assist in selecting lighting technologies.

The course attracted 40 participants from South and South East Asia. Attending were participants from the Asian Development Bank, ECO ASIA, and Landlite Philippines Corporation, as well as 15 participants from USAID SARI/Energy.

### **AFGHANISTAN CAPACITY BUILDING PROGRAM: TECHNICIAN TRAINING OF TRAINERS**



USAID's SARI/Energy Program, under the Afghanistan Capacity Building Program, strengthens the capacity of Afghan power sector professionals through various capacity building programs. A three-week training-of-trainers program was held between 8 and 27 March 2010 at YMPL, Udaipur; it focused on metering system technologies. Fifteen engineers from DABS, an Afghan utility, participated. The participants work in its Meter Management Group and were keen to gain a familiarity with the latest developments and best practices in static metering technology, systems, and applications. The course provided an understanding of the hardware and software features of meters, applicable standards, testing and calibration, management of meter test labs, tamper and fraud methods and their detection, and principles of revenue protection.

The participants also benefited from hands-on experience with different testing and calibration techniques for meters in the laboratory and the field. They indicated that the program was successful in achieving its goal of providing an in-depth understanding of: 1) the principles of electrical energy flow, measurement of power and energy in single- and three-phase circuits; 2) applicable international standards for energy meters, calibration and testing of energy meters, and meter test systems; 3) tamper and fraud issues, and good installation practices; and 4) the role and importance of instrument transformers and issues of application and testing when used as a part of a metering system.

### **SMALL GRANTS UPDATE**

The Small Grants Program (SGP) reached out to the 18 organizations short listed during the Round-II solicitation – these included 7 applicants selected by the Small Grants Evaluations Committee (SGP-EC) that were given a clear go-ahead and another 11 selected from the SGP-EC's recommendations in descending order of evaluation scores received.

The agreements associated with the seven clear go-ahead cases were prepared and finalized. The other grantees were contacted to seek clarifications. Upon obtaining appropriate responses, the agreements were finalized and sent. As of 25 March 2010, the SGP has signed 14 agreements, with 3 currently being pursued and 1 currently under negotiation.

The SGP continues to monitor the progress of grantees for the projects awarded under Round-I of the solicitations. In February 2010, the SGP team visited one local Delhi-based grantee that had received an award under Round-I. The team reviewed the progress of the



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project, the status of implementation; the milestones achieved against the milestones described in the Grant Agreement, and the technical and financial reports submitted over the course of the project.

The SGP also prepared a draft field monitoring and review procedure for site visits and continued reviewing the projects being implemented during Round-I. The procedure is expected to be finalized and put into operation in the second quarter of 2010.

### ONGOING AND FORTHCOMING ACTIVITIES

#### Cross-Border Trade

SARI/Energy continued to support regional cross-border trade with a full slate of activities in the first quarter of 2010. In the **Maldives**, SARI completed the *Island/Atoll Interconnection Pre-Feasibility Study and Carbon Neutral Plan*. The reports were issued to STELCO and presented in March. STELCO has decided to pursue the first phase of interconnection and SARI is evaluating its request for a full feasibility study and terms of reference for a turnkey project EPC tender offering. For **Pakistan**, SARI continued providing advisory services to the Ministry of Water and Power's *CASA 1000* working group. The Pakistan Cabinet has approved the Intergovernmental Governmental Agreement (ICG) that had been signed by the ministers of the four countries at the IGC meeting in Islamabad in August 2008. SARI is now assisting the Joint Secretary Power in preparing for the upcoming Dushanbe meeting of Ministers. In **Sri Lanka**, SARI issued the final report on *System Reliability* for the Ceylon Electricity Board (CEB), and is developing the subsequent training and development program for CEB staff. A meeting was held with CEB in March to finalize the program, which will be implemented over the next twelve months. SARI is now launching the South Asia Transmission Utility Regional Network (SATURN) and has issued a *Regional Transmission Characterization Report* to set the stage for an upcoming regional summit meeting of transmission utilities.

#### Clean Energy Access

SARI/Energy is finalizing the launch of the *Regional Centre for Excellence in Micro Hydro (RCEMH)*, which will be implemented in Nepal on 19 April 2010. The Centre, which is being established under the Alternative Energy Promotion Centre (AEPC) will promote micro hydro development in the South Asia region. It will work on a self-sustaining basis and will showcase the know-how gained by AEPC in the field of micro hydropower. The launch of RCEMH will be followed by a four-day Micro Hydro Power Workshop from 20-23 April 2010.

SARI/Energy is also working on the business plan for *Regional Centre for Excellence in Rural Electrification (RCERE)* in Bangladesh in partnership with the Rural Electrification Board (REB). The Centre will promote rural electrification in the South Asia region by showcasing the know-how gained by REB in the area of rural electrification. Its objective will be to promote rural electrification through Bangladesh's 'Palli Bidyut Samiti model'.

NREL is developing Geospatial Toolkits (GsTs) for Nepal and Bangladesh. The GsTs will incorporate the wind and solar resource data developed under the United Nations Environment Programme's Solar and Wind Resource Assessment (SWERA) Programme into a tool with GIS capabilities to enable stakeholders to explore renewable energy opportunities in these countries. The use of the GsTs will not require any specialized expertise or software, and it will be freely available for use by policy makers, planners, project developers and all other interested parties. The tools will help identify the areas in a country with the highest wind and solar resources that also are located near infrastructure elements such as transmission lines and roads. These tools will link to the HOMER model for analyzing off-grid hybrid system options for remote areas in each country. NREL is working with in-country renewable energy stakeholders to plan for an official launch and associated training workshop in each country to take place in August 2010.

#### Afghanistan Capacity Building Program (ACBP)

An ACBP master calendar for the year 2010 is in place. This calendar was prepared in conjunction with the capacity building requirements of the Afghan utility DABS.

In May 2010, a refresher program in distribution system loss reduction with a practical demonstration and practices at a utility and a web-based program in project management will be presented to DABS.



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### ABOUT SARI/ENERGY

USAID's SARI/Energy program promotes energy security in South Asia through three activity areas:

- 1) Cross-border energy trade
- 2) Energy markets
- 3) Regional clean energy access.

Through these activities SARI/Energy facilitates more efficient regional energy resource utilization; works towards transparent and profitable energy practices, mitigates the environmental impacts of energy production, and increases regional access to energy.

SARI/Energy countries include Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. SARI/Energy's implementing partners include PA Government Services, the United States Energy Association (USEA), and the National Renewable Energy Laboratory. SARI/Energy provides support to partners and stakeholders on pre-feasibility studies, technical assistance, advisory services, training, peer exchanges, mapping and project development in each of the three core areas.

#### SARI/Energy Daily News Roundup

USEA distributes a daily bulletin of energy-related news from the SARI/Energy countries, along with notices of SARI/Energy activities and special events. The bulletin is distributed via email and includes web links to related articles. To receive the South Asia Energy Daily Online News Roundup, contact [sarienergy@usea.org](mailto:sarienergy@usea.org).

#### SARI/Energy Web Page

For current information on our activities, please visit the SARI/Energy web page: [www.sari-energy.org](http://www.sari-energy.org)

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