



South Asia Regional Initiative
for Energy (SARI/Energy)

SARI/Energy Small Grants

A quarterly newsletter of the SARI/Energy Small Grants Program with support from USAID

Editorial by Wendy Aulakh, *Managing Director, Clean Energy, Winrock International*

SARI/Energy Small Grants Program: Progress and Outreach



This SARI/Energy Small Grants project will end on 30 September 2006, and the work of all 38 grant projects will be complete. As we approach the end of this project, we congratulate the participating organizations once again on their successful work. It has been a pleasure working with all of you, and a rewarding experience for all of us to be a part of this program.

We will be showcasing all of the grant work in a published Outreach Report at the end of the project. This report will provide an opportunity for grantee organizations to share their important work achieved under this program. All grant recipients have been requested to complete evaluations that will highlight their project achievements, lessons learned and success stories. This information will be used to develop the Outreach Report to document the positive impact the grant activities have had on harmonizing regional markets and increasing clean energy access throughout South Asia. We would like to remind all grantees of the importance of completing these evaluations.

Other organizations that wish to receive a copy of the Outreach Report should mention this in the feedback form enclosed. The newsletter and feedback form are also available on the SARI/Energy website.

In this issue of the SARI/Energy Small Grants newsletter, we continue to focus on Afghanistan and Pakistan, highlighting the experiences and lessons learned from all six grants in the fifth and final round: (1) solar energy to support the silk and poultry industries in Afghanistan; (2) capacity building for energy conservation in schools; (3) promoting informed consumer choices for energy home appliances; (4) solar water pumping and home electrification for rural areas; (5) capacity building for the LESCO training institute; and (6) technical capacity building for the Regulatory Authority in Pakistan. We also offer an independent Viewpoint Article from the Sustainable Development Policy Institute in Islamabad on hydropower opportunities and strategies in Pakistan.

In the next and last issue of our newsletter, we will report on the final Regional Grantees Meeting, to be held in Kathmandu, Nepal from 29-30 August 2006. The newsletter will also highlight several of the most successful efforts from the overall program. Until then, please visit the SARI/E website to access additional information about the grant program (<http://www.sari-energy.org/smallgrants>).

Participating Nations

Afghanistan Bangladesh Bhutan India Maldives Nepal Pakistan Sri Lanka



Sharing Experiences & Lessons Learned

We have been covering the grantees' progress from earlier rounds in each newsletter issue. This time we present highlights of the progress made by Round 5 (awarded in late 2005) grantees (focusing on Pakistan/Afghanistan) in their endeavors to promote regional energy cooperation in South Asia. Some introductory details are also available in Vol 10.

Energy Home Appliances in Pakistan: Promoting Informed Consumer Choices

In Pakistan, an energy-scarce country, the household sector consumes 40.9% of the total electricity consumption¹ in the country.

This is partly due to the availability of cheaper electric home appliances, that not only cause inflated utility bills but also pose a serious threat to the environment and consumer safety. The increased energy consumption at the household level has also widened the gap between demand and supply of electricity at the national level. Therefore power shutdowns and low voltage are persistent occurrences, especially in rural areas of Pakistan. The Government of Pakistan has been striving to develop and maintain electricity resources and reduce system losses, but promoting labeled and energy-efficient electric home appliances does not seem to be on their agenda. This fact is quite evident from the findings of the survey conducted by the Consumer Rights Commission of Pakistan (CRCP) under an initiative to promote informed consumer choices on energy efficiency and labeling standards in home appliances in Pakistan. This project is being conducted with the Voluntary Organization in the Interest of Consumer Education (VOICE) India.

The market survey conducted a few months ago covered 500 retailers and 100 consumers of five electric products: Compact Fluorescent Lamps (CFLs), Ceiling Fans, Ballasts, Refrigerators and Air Conditioners, in Rawalpindi/ Islamabad and Lahore. The purpose of the survey was to map the level of existing knowledge and

preferences of retailers and consumers regarding electric home appliances. The survey revealed that six brands of

window-type and sixteen brands of split-type air conditioners were available in the market. The labeling information on the air conditioners mentioned the power consumption, cooling capacity, frequency and voltage range. Different levels of energy consumption ranging from 8 to 9.5 amperes (A) were being claimed. Nine brands of 'No-frost' refrigerators and ten brands of 'Direct-Cool' refrigerators were available in the markets. Each brand seemed to consume different amounts of power ranging from 1.0 to 1.35 A.

Information available on eighteen brands of CFLs included the energy consumption. Ten brands of ballasts were noted. Information provided on these included their power consumption, and Pakistan Standards and Quality Control Authority (PSQCA) and International Standards Organization (ISO) certifications. Only one manufacturer of ceiling fans, namely Climax Industries (P) Ltd. had mentioned its conformity with National Standards (PS.1) on the label.

During the survey, a number of issues emerged from the evaluation of various processes which warrant national standards bodies, enforcement agencies, policy makers, and manufacturers to take immediate steps to ensure the availability of good quality and energy-efficient electric products to consumers:

- National standards for refrigerators and air conditioners are still not formulated by PSQCA.
- The slow pace of policy making for development of new energy resources, poor implementation of national standards of products, lack of adoption of new technologies by manufacturers to produce energy-efficient appliances, and lack of awareness among consumers for selection of energy-efficient and environment-friendly home appliances, have all contributed significantly to aggravating the energy crisis in Pakistan.
- There is a dire need to formulate and implement energy efficiency standards and consumer awareness programs on using energy-efficient labeled electric home appliances.
- Manufacturers should conform to national energy standards and should use the latest technologies to produce energy-efficient products.

Courtesy: Muhammad Anwar, Research Associate, Consumer Rights Commission of Pakistan (CRCP), Islamabad, Pakistan; Email: ccrf@crcp.org.pk; Web: www.crcp.org.pk

¹ Economic Survey of Pakistan 2005-06



A sample packet/label from a ballast product in Pakistan



Solar Water Pumping & Home Electrification in a Balochistan Village

Under this pilot project, the National University of Sciences and Technology (NUST) and Islamic Relief Pakistan (IRP) are together providing solar water pumping and home electrification to around 50 households in the Haji Dost Mohammad Patkeen village that was selected due to the following:

- Meetings with community leaders highlighted their lack of electricity and clean water;
- There were 50 houses with a population of 329, one middle school and two mosques in the village;
- A road nearby made it suitable for demonstration as a 'renewable energy' village for the Balochistan Government;
- Very few homes had diesel generators; and
- The community leader was very active and responsive to problem-solving ideas.

Since this area gets enough sunlight all year round, it was decided to provide solar water pumping and home electrification. NUST provided the technical expertise while IRP took care of community mobilization, facilitation and civil work at the site.

The water tank construction was completed in May 2006, followed by the purchase of solar lights (a 14-W PV panel, two 6-W fluorescent lights and one 1-W night light supplied by Free Energy Europe Company), and a Lorentz PS600 pump (with a 350-W PV panel) to pump 5,000 gallons of water per day. The locals were very excited and did most of the installation work themselves.

Two villagers, Munir Ahmed and Muhammad Saleem, were selected by Islamic Relief for training to handle daily operation and maintenance issues.

The project resulted in significant improvement in the life-style of the villagers. Now water has been made available to everyone right in the middle of the village. Villagers are therefore planning to use it for agriculture purposes – a concept unthinkable just a month ago. They are already laying out another pipeline for this purpose.

Similarly the days of kerosene lighting are gone. This cost them about PKR* 15-20 to keep their lamps burning all night. Now indoor air pollution concerns have been removed, children are able to study longer, and women are able to do chores such as knitting and sewing at night.

The villagers expressed complete satisfaction at the lights and the water pump. They are continuously praying



1. PV panels over the water storage area
2. Barren Balochistan
3. A girl-child carrying water home earlier

for the well-being of the partner organizations! A few villagers had earlier refused to accept the systems and now are asking for these as well. Other villages enviously look at the Patkeen village as it stands out as a beacon of light at night. Some provincial ministers and other local politicians driving by at night stopped to find out what was going on. Islamic Relief is planning to hold an inauguration ceremony with the Chief Minister of Balochistan as the Chief Guest.

Sustainability

Islamic Relief has made arrangements with the villagers to save money regularly to cater for the maintenance of the civil works and equipment. This pilot project is expected to be replicated in other villages in Balochistan as well as other remote areas of Pakistan, thus giving a boost to the use of renewable energy in the country.

Courtesy: Saeed Kazmi, General Manager, NUST Consulting, Pakistan; Email: saeedk@nustconsulting.com

Capacity Building for LESCO Training Institute (Phase I)

A recognition of the benefits of a participatory electrification model has led to a number of innovations, including a shift from instructional to interactive, to the greater use of a participatory approach in training.

The Lahore Electric Supply Company (LESCO) understands the challenges of providing improved access and quality power supply to rural areas, and its plans include training of its staff, and local community involvement.

It is essential to note here that the idea of community-based rural electrification is totally new in Pakistan. Earlier visits to India and Bangladesh under this SARI/Energy small grant, and the collection of comprehensive data on rural electrification, have helped LESCO prepare the training program material.

The Regional Training Center (RTC) at LESCO will carry out the training. The aim is to improve RTC's capacity to understand and effectively participate in imparting rural electrification training to communities and technical staff



* US\$ 1 = Pakistan Rupees (PKR) 60.32 approximately



in improving both access and quality of electricity distribution to rural areas. Specific training objectives are:

- To increase the awareness of technical staff regarding the importance of their involvement in the development of a sustainable rural electrification system; and to
- Establish closer relationships between communities and technical staff in LESCO.

Computer-based Training (CBT) modules have been developed in English and Urdu, and all the training activities will be presented as video movies.

Expected Benefits

- A highly competent work force; and
- Cross-training and better relationships between the utility company staff and the community.

Also it would be a great opportunity to share related experiences of participants such as:

- Awareness of what it takes to be a good supervisor
- Provide participants with a proper understanding of the supervisor's role in an effort to help them to make the transition
- Sharpened practical, planning, evaluating, coordinating and record-keeping skills
- Updated participants' understanding of the construction of distribution lines
- Developed and refined organization's operation and maintenance (O&M) program
- Integrating modern techniques into corporate strategy
- Enabling participants to effect preventative

maintenance, as well as diagnose and trouble-shoot problems, on transformers, HT and LT lines.

- Enabling routine maintenance and testing of distribution systems
- Refreshing their knowledge of subjects related to distribution O&M principles

LESCO will impart this training in mid-August 2006 and continue to experience the following positive results from this training program:

- Employees will be more confident in their ability to properly and safely perform their jobs.

■ System performance will be enhanced. It is believed training will play a significant part in capacity building of the individual as well as the system.

■ After the programs' inception at LESCO, the company will experience lower accident rates.

■ This training will not only benefit the employees taking the courses, but also the employees who serve as assistant course administrators.

■ By administering the courses, those employees will be able to update their skills.

LESCO has selected the Ahadian village for renovation of the existing rural electric supply system, and its hamlets for new electrification systems, as a pilot project for implementing a community-based system. The estimates for execution of the electrification have been approved and LESCO will spend approximately US\$ 20,000 on this project. This project has been discussed with the villagers in terms of community involvement in the rural electrification system for the formation of a Village Electric Committee and appointment of a Village Contract Person, in the presence of a Member of the National Assembly. Now electrification of this village is under progress, and is expected to be completed by end-August 2006.

Courtesy: Mr Saqib Jamal, Deputy Manager, Regional Training Center, LESCO, Lahore, Pakistan; Email: saqibjamall@yahoo.com

Capacity Building to Support Regulatory Reforms in Pakistan

The SARI/Energy small grant awarded to the Lahore University of Management Sciences (LUMS) to build the technical capacity of the National Electric Power Regulatory Authority (NEPRA) and support the regulatory reform process in Pakistan through training programs is a most timely initiative.

Recognizing the need and importance of addressing emerging regulatory and competition issues in the power sector, LUMS has undertaken research in this area, and will offer training programs for industry stakeholders. Four themes for the training workshops have been identified that are topical and require immediate debate. These are:

- Power Sector Restructuring and Regulation
- Managing Regulatory Systems
- Tariff Structure and Analysis
- Consumer Advocacy in Regulation

Workshop on Power Tariff Structures/Regulations

Under the SARI/Energy small grant, LUMS will conduct a five-day workshop on power tariff structures and regulations in September 2006. This area has gained importance in recent years in South Asia because of the extensive power sector reforms that various countries in the region have undertaken. It has thus become imperative that key players in this sector, namely officials from state-owned *corporatized* distribution and transmission companies, regulators, and executives from private power



1. Renovation of transmission lines required in Ahadian village

2. Training before construction

generation companies in the region develop an understanding of tariff structures suitable for this environment. Official documents (power sector policies, privatization goals, etc.) of all South Asian countries have emphasized the restructuring of electricity tariffs to reflect the cost of services. This workshop therefore, aims to impart training in this particular area to equip key stakeholders with the knowledge and understanding necessary to achieve the desired policy objectives.

The course materials for these workshops have already been collected and are now being reviewed and tailored to meet the specific needs of the Pakistani regulatory environment. We at LUMS look forward to regional participation in our workshops so as to enrich the learning process through sharing of experiences.

Courtesy: Fahd Ali, Research Assistant, Departments of Economics & Law and Policy, LUMS, Pakistan; Email: fahdali@lums.edu.pk

Capacity Building Initiatives on Energy Conservation in Identified Areas of NWFP

This SARI/Energy small grant initiative involves training and building capacities of BEFARe school teachers and community members representing School Management Committees (SMCs) on energy conservation, and the efficient use of available resources in identified areas. The implementation staff of the sub-project was provided with necessary training before the initiation of field interventions.

The target group, in addition to training local Pakistani communities, has also encompassed Afghan refugees housed in different camps throughout Pakistan's North West Frontier Province (NWFP).

The project began in March and April 2006 with training of 717 individuals in Peshawar and Mardan who were representing 60 SMCs of BEFARe, on energy conservation techniques, with the help of a manual developed for the purpose. The manual on energy conservation has been designed to enrich the knowledge, skills and know-how of project stakeholders in the area of energy conservation. The exercises during the training sessions included the following:

■ Expectations from the workshop

- Objectives
- Environmental issues
- Techniques used to produce heat energy for domestic purposes



An energy efficient stove demonstration

- Energy-saving practices/advantages
- Application of low-cost materials as fuel in camp houses
- Application of low-cost techniques effectively in camp houses for energy conservation

In July 2006, BEFARe trained 12 male and 10 female SMCs in the sub office area of Timergara wherein 142 male and 115 female SMC members participated in the exercise.

The training sessions discussed specific techniques and measures to efficiently utilize available/limited energy resources. The trainees were also trained on the use of fuel efficient cooking utensils and their economical viability. Overall, a participatory approach was adopted during the workshop. Short presentations, group discussions and brainstorming techniques were conducted to involve participants actively.

Likewise, in July 2006, 250 male and female teachers of BEFARe were trained in areas of Peshawar, Mardan and Timergara, and a total of 257 SMC members were trained from Tergara (see tables below).

SMCs Trained in July 2006

Sub-Office	Total no. of SMCs trained		Total SMC members	
	Male	Female	Male	Female
Timergara	12	10	142	115
Total	22		257	

Teachers Trained in July 2006

Sub-Office	Teachers Trained	
	Male	Female
Peshawar	20	06
Timergara	17	00
Mardan	150	57
Total	250	

Courtesy: Sayyed Jonaid Shah, Divisional Manager, Programming and Implementation, BEFARe, Pakistan; Email: jonaid@befare.org

Solar Energy Supports the Silk and Poultry Industry in Afghanistan

Limited access to energy is a major constraint to revitalizing the private sector in Afghanistan. In the agricultural sector, where over 85% of Afghans are employed, productivity is five times lower than in neighboring countries. This challenge is especially true for entrepreneurs in rural areas. In



Training sessions in progress





Badakhshan province – a remote and infrastructure poor area in north-eastern Afghanistan – cottage industries have the potential to thrive if they have access to a reliable and affordable supply of energy. This is especially true for silk processing and commercial poultry farming that are highly dependant on light.

Silk Processing in Jurm, Badakhshan

Silk production and processing is a growing sector in Jurm. Using imported silk cocoons, entrepreneurs learned to weave traditional products, such as turbans, shawls, handkerchiefs, and *Quran* covers, that are in high demand in the local market.

Silk weaving is a delicate skill requiring a fine level of detail. Good quality lighting is therefore essential for the production of high quality products. Currently, the lighting equipment in silk weaving centers is powered by diesel generators that are expensive and contribute to high production costs. In addition, many families cannot procure diesel during the winter because they are isolated as a result of heavy snowfall.

The electricity requirement per silk processing unit is moderate and only for lighting; or, once the households start rearing silk worms, also for ventilation of the silk worm rearing sites during the hot summer. Solar energy is thus the ideal source for this cottage or household industry.

Commercial Poultry Farming in Badakhshan

Poultry and poultry products are in high demand in Badakhshan. Majority of the chickens and eggs currently available in the market are imported from other provinces. This supply is still insufficient to meet consumer demand. Recognizing this opportunity for additional income and employment, households are beginning to engage in commercial poultry production.

As in silk production, energy is a bottleneck issue in the management of small commercial poultry units – mainly between the end of September and April. Productivity in the poultry sector highly depends on an effective energy transfer from the feed into the meat and eggs. Light is an essential element to keep the chickens reasonably active and to achieve a good transfer. If the length of daylight declines to under 12 hours, the chickens feed less, grow slower, and the egg production declines considerably. By artificially extending daylight to 14-16 hours a day, productivity remains high throughout the year. For example, without artificial light, layers produce a maximum of 150 eggs/

hen/year with very low productivity during the winter months when the price of eggs almost doubles. With artificial light providing constant 14-16 hours of light per day, egg production remains high during the winter and reaches average numbers of 250-280 eggs per hen/year. Broilers take twice the time during the winter to reach the 1-kg sales weight and need to feed considerably more.

Energy is also essential for maintaining a stable climate in the poultry units. This is especially relevant to farmers in the Badakhshan province who experience cold winters. Farmers currently rely on diesel lamps to regulate the temperature of these units. To keep the centers reasonably warm, and the level of ammonium concentration in the air low, ventilation is important. Since sudden cold drafts by opening the windows can be harmful, a small ventilator providing controlled fresh air to the stable is a safer solution. Again this type of equipment is currently powered by diesel.

Promoting Solar Power

To address the need for a reliable and affordable source of energy, the Aga Khan Foundation–Afghanistan (AKF) collaborated to deliver solar power technology to silk and poultry entrepreneurs. Under a SARI/Energy small grant, this pilot project installed solar equipment at nine silk weaving centers and seventeen commercial poultry farm units, providing these businesses with the electricity needed for lighting.

The initiative also facilitated the training of four electricians from local communities interested in promoting solar energy and in providing maintenance services and training to direct users. Upon successful completion of the training, they were provided with basic tool kits and spare parts. By enhancing people's skills and knowledge, this project helps ensure that appropriately trained local people will be available in the market to provide electrical service to entrepreneurs.

Project Impact

Although it is too early in the project to determine its impact, this pilot project demonstrated to communities how solar energy technology can be used by micro enterprises, and that solar energy presents a viable alternative to energy sources currently available.

Courtesy: Sarah Bollozos, Program Grant Officer, Rural Development, Aga Khan Foundation (Afghanistan)
Email: sarah.bollozos@akdn-afg.org

An Agency of the Aga Khan Development Network
Website: www.akdn.org



Energy (lighting) required for weaving (top) and heating for poultry farms (bottom)

A Viewpoint Article

Hydropower in Pakistan: A Way Out



Arshad H Abbasi

The single renewable energy resource that Pakistan possesses in abundance is hydropower – the most environment-friendly and cheap source of energy. It has a potential of more than 41,722 MW. Despite this, Pakistan now is faced with a serious energy shortfall. The acute shortage of electricity has resulted in load shedding during the current summer season, costing the economy millions of rupees.

Facts & Figures

The installed power generation capacity at the end of 2005 was 19,560 MW, of which 65% was thermal, 33% hydroelectric and 2.4% nuclear. The 33% share of hydroelectric power amounts to only 6,595 MW. We should not forget the fact that the projected lifetime of existing natural gas and oil is just over fifteen and nine years respectively. Domestic coal reserves may be exploited only at great financial and environmental costs. 70% of Pakistan's oil needs are met through imports. The average cost of hydel energy generation in Pakistan was PKR 0.50 per kilowatt-hour in 2000-01. The annual per capita electricity consumption in Pakistan is around 320 kWh, and this only caters to 60% of the population. 40% of Pakistanis still have no access to electricity. In view of these facts, the best solution to Pakistan's energy/electricity crisis is hydropower. An abundant, cheap, environment-friendly and renewable source of energy has remained untapped.

The Strategy

To meet Pakistan's power requirement, the Water and Power Development Authority (WAPDA) and the Ministry of Water and Power developed a strategy called the Hydropower Development Vision-2025 in the year 2001. The strategy was based on an average annual demand increase of 3.7%. Recently though the demand for electricity rose sharply, in excess of 8% per annum during the last two years. In Vision-2025, a short-term plan was developed and the commissioning date of eight hydel projects with a total generation capacity of 716 MW was fixed in June 2006. These projects were proposed and designed as 'run-of-river' plants, meaning plants with little or no storage capacity, such as the Ghazi Barotha hydropower project, in which no big reservoirs are to be constructed. But unfortunately none of these projects could be completed. The root cause of the failure to provide the

required energy is the lack of strategy for implementation. The strategy prepared by the ministry fails to take into account ground realities and project management capabilities of executing agencies.

The World Bank rightly proposed institutional reforms in WAPDA for decentralization in order to increase efficiency in management. While preparing a future strategy the Ministry of Water and Power should keep in mind completed hydropower projects, such as Ghazi Barotha, and the lessons learned from them. The Ghazi Barotha project's feasibility survey was carried out in 1987 and the project finally commissioned on 19 August 2003. This means that 16 years are required for WAPDA to complete a run-of-the-river project.

Another cause of the present energy crisis is that the federal government has not taken small hydropower (SHP) projects in its own hands. Such projects are very viable as they do not require building large dams and do not pose deforestation, submergence or rehabilitation problems. Comparatively small capital investment and short gestation periods are required to complete these projects and they cause minimal transmission losses compared to WAPDA's current line losses, which are more the 25%.

In Pakistan, small hydropower projects up to 50 MW are the responsibility of the provincial governments, which cannot construct small hydropower projects due to financial constraints, among other reasons. In India, developing small hydro projects at a fast pace is one of the components of their energy policy. The central government there has completed 90 small hydro projects with 270 MW capacity in the past five years.

Changes Required

The state of affairs in Pakistan should change. Punjab has enough financial resources but it has made no real progress in small hydropower even though WAPDA has not only identified various locations with a potential of 350 MW but also completed the necessary design works. In Azad Jammu and Kashmir, which is endowed with abundant hydel potential, the AJK Hydroelectric Board has only completed hydro projects with a capacity of 36 MW against an identified potential of 5,329 MW. This

contd on pg 8





contd from pg 7

cannot even meet the electric demand of AJK itself, which is 250 MW; while the anticipated power demand by 2007 will be 350 MW. The AJK Hydroelectric Board is facing serious financial problem in starting the projects as funding is not available. International donor agencies are reluctant. Recently, twenty small hydro projects were commissioned by UNDP at various select sites in Kashmir. The Baglihar and Kishan Ganga hydropower projects are under completion.

The biggest problem is faced by our Northern Areas where the electricity demand is more than 100 MW but total power generation from hydel power stations is a mere 46 MW. To bridge the gap between demand and supply a diesel power plant with a total generation of 5 MW has been commissioned by the government. Instead of tapping ingenious hydropower potential, the Ministry of Water and Power has decided to construct a 765-kV transmission line that is 794-km long, to import 1,000 MW from Tajikistan via Afghanistan at a much higher rate.

For self-reliance in energy and for eradicating poverty, hydropower is recognized as a renewable source, which is economical, non-polluting and environmentally benign. In order to maintain a balance between hydropower and thermal power, the ministry should announce a policy to accelerate hydropower generation in the country. **Development of small hydro projects at an accelerated pace should be one of the tasks set by the policy to meet the present power crisis.** This is the only cost-effective solution to meet the increasing electricity demand.

Success here is possible only if public-sector funding is made available by the government. The financing of such projects remains a problem as funds from international donors for such projects are difficult to get, considering their commitment to facilitate investments in private thermal-based power plants. Instead of trying to imitate and compete with India in nuclear energy, we should consider the way countries like Laos, Thailand and China have developed small hydropower projects for development and economic prosperity.

Courtesy: Arshad H Abbasi, Adviser (Water and Construction), Sustainable Development Policy Institute (SDPI), Islamabad, Pakistan; Email: asi@gmail.com; Tel: +92-51-2278134; Fax: +92-51-2278135; Web: www.sdpi.org

REAN Web Page Launched

The Regional Energy Access Network (REAN) is the premier regional organization for promoting and developing **participatory approaches** to sustainable clean energy access, including renewable energy, throughout South Asia. REAN strives to be a Center of Excellence for the establishment, management, operation, and education of community and consumer-based approaches to improved energy access in marginalized communities. This will be achieved by expanding a regional network of organizations – including development and academic institutions, utilities, private companies, electricity associations and cooperatives, donor agencies and individuals – who are committed to realizing the goals of REAN through project demonstrations, information sharing, training and advocacy work.

If your organization can assist REAN, you may become a member by contacting them or filling up the membership form at www.sari-energy.org/REAN.

For further information please contact:

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Winrock in Pakistan

We wish to welcome Mr Bikash Pandey, who will now head the new Winrock office in Pakistan. Mr Pandey was earlier Country Director-Nepal, Winrock International. He brings with him over 20 years of South Asian and international experience in renewable energy and rural electrification. You may contact him at Islamabad at Tel: 051 265 2258; Mobile: 0301 509 4846; Email: bikashpan@gmail.com

Editor: Anita Khuller



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