



Task Order Final Report

South Asia Regional Initiative for Energy Cooperation and Development



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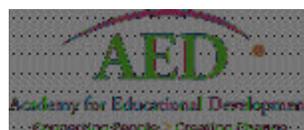


TABLE OF CONTENTS

| | |
|--|----|
| PROJECT BACKGROUND | 1 |
| A. PROJECT OBJECTIVES | 1 |
| B. PROJECT MANAGEMENT | 3 |
| C. PROJECT INFORMATION | 3 |
| TRAINING COURSES | 5 |
| A. TRAINING PARTICIPANTS | 5 |
| B. CLASSROOM TRAINING..... | 6 |
| C. DISTANCE LEARNING..... | 7 |
| D. ACHIEVEMENTS IN EACH PROGRAMMATIC AREA..... | 8 |
| E. TRAINING EVALUATION..... | 10 |
| INSTITUTIONAL CAPACITY-BUILDING..... | 12 |
| A. TRAINING INSTITUTION PARTNERS (TIPS)..... | 12 |
| B. INSTITUTIONAL LINKAGES/PAIRINGS | 13 |
| C. EVALUATION OF INSTITUTIONAL CAPACITY BUILDING ACTIVITIES..... | 16 |

PROJECT BACKGROUND

The Training Component of the initial phase of the South Asia Regional Initiative in Energy (SARI/Energy), funded by the United States Agency for International Development (USAID), was implemented by the Academy for Educational Development (AED), the lead agency, in association with its international partners: International Resources Group (IRG) and PA Consulting, and its South Asia partners E-gen Consultants Ltd. in Bangladesh, and Environment Management Lanka (EML) Consultants in Sri Lanka.

The Project functioned in six South Asian countries: Bangladesh, Bhutan, India, Maldives, Nepal, and Sri Lanka. The AED team coordinated the training component with SARI/Energy activities implemented by other contractors: Nexant (technical assistance), CORE (rural energy), the US Energy Association (regional partnership programs), the US Chamber of Commerce (business coalitions), and the US Department of Energy (regional energy statistics).

The Project period was October 2000 through June 2003, and was extended to 15 December, 2003, and further extended to 15 January, 2004.

A. PROJECT OBJECTIVES

The stated objective of the Project was to provide sufficient energy for economic growth in the South Asian countries, implying diversification of energy sources, improving energy efficiency, reforming their energy sectors, and expanding regional energy trade. This requires “a common vision of cooperation in energy issues for mutual benefit.” Cooperation and trade can lead to benefits in improved energy security, reduction of environmental impact, and advancement of reforms in policies and in energy efficiency. A regional approach would build regional partnerships and networks that promote trust, confidence, and opportunities for countries to work together to solve energy-related problems. An integrated grid system would increase the market potential for energy and facilitate energy security. Project goals include fostering cross-border dialogue and exchange of ideas and best practices, recognition of champions for change, and building trust and confidence between stakeholder groups and countries.

Key Project intermediate results included:

1. Assisting in the development of national energy plans and investments in infrastructure that facilitate regional energy exchange;
2. Supporting the development, adoption or modification of policies, laws, procedures, and regulations with private sector and civil society concurrence to facilitate regional energy trade and cooperation;
3. Increasing the capacity of regulatory bodies to support energy exchange
4. Adapting regional best practices and standards leading to energy efficiency and improved commercial practices
5. Adapting regional best practices that lead to improved rural energy services

6. Increasing private sector participation in and civil society support for sustainable energy development

For the training component of the overall SARI/Energy Program, USAID requested a focus on three main components.

1) Training Courses: The training team was requested to design course curricula and materials to promote the Project objectives. The training was expected to address course subjects related to the four Programmatic Areas. It was also assumed that getting energy professionals from the six countries to meet (mostly for the first time) and discuss each others' experiences and learn of their best practices, would lead to advantages such as new ideas for implementation as well as confidence about possible sale of Bangladesh gas to India, extension of electricity grids across borders, reforms in power sector management, and enhancement of energy security.

Four Programmatic Areas were assigned by USAID for the AED component of this Project: Regional Grid and Energy Exchange; Legal, Policy and Regulatory Frameworks; Regulation and Regulatory Bodies; and Energy Efficiency.

2) Institutional Capacity Building: The Task Order specified that training institutions or other entities in each of the SARI/Energy countries are to become "counterparts to deliver some or all of the courses... a type of hands-on-train-the-trainer effort to build local training capacity." The Task Order requested that the training team "identify additional appropriate in-country entities that could benefit from this type of collaboration and eventually offer follow-on courses on partial or full fee-for-service basis without USAID support."

3) Outreach Education: Finally, USAID requested that the training team "inform target audiences of key issues and private information derived from the course curricula... dissemination of printed reports and information materials such as Best Practices Guides, computer based interactive modules, CD-ROMS, and other print, electronic, or audiovisual materials, internet websites, alumni programs, alumni networks, or newsletters."

Working from these directives, AED developed Work Plans for 2001, 2002 and 2003 that included the development of training courses, distance learning, institutional capacity building activities, social marketing activities and collaborative efforts with the other SARI/Energy program components.

All the tasks to attain the strategic objectives and intermediate results of the Project were fulfilled by the AED Training Team:

- Developed and delivered 28 training courses and four distance learning courses promoting best practices and information sharing among energy leaders;
- Identified seven regional institutional partners and incorporated them into the training activities to support regional capacity building;
- Expanded information access and networking opportunities by maintaining an informative training web site as well as six electronic mailing lists or listservs;
- Developed an energy information resource for energy journalists in the region; and

- Conducted research on consumer willingness to pay for electricity and stakeholder views on key power issues at local, national and regional levels.

B. PROJECT MANAGEMENT

Regional Project coordination was based in New Delhi, India. The AED team reported to Robert Beckman, Regional Coordinator and Program Manager, and Kavita Sinha, Deputy Program Manager at USAID/India. In India, Bangladesh, Sri Lanka, and Nepal, USAID assigned Country Coordinators for the Project, who maintained official contacts, identified and invited course participants, and provided support to the Project in numerous ways.

For the AED team, the Project was managed by the Chief of Party (COP), Deputy Chief of Party (DCOP) and a staff of six operating from the main Project office in New Delhi, India. The COP and DCOP were responsible for managing all programmatic aspects of the Project. Donald Priestman served as COP until November 2002 and Clarence Maloney assumed the position in April 2003. Anurag Kuba served as DCOP in 2001 and was followed by Anupam Sircar as DCOP until the end of the Project. The other Delhi office staff provided services in finance, procurement, contractual management, training/event planning, web site and Project information management, monitoring and evaluation and all other standard project management activities.

In South Asia, besides the New Delhi office, AED established a project office in Kathmandu, Nepal and subcontracted with Egen in Dhaka, Bangladesh, and with ELM in Colombo, Sri Lanka, to ensure on-the-ground presence and Project support in each country. These offices and their staff were critical to working with each USAID office and local training recipient agencies in selecting and processing local participants for each training activity. Having a local presence enabled the AED training team to maintain positive working communications and relations with all local partners, an invaluable asset in ensuring smooth logistical planning for training as well as for information gathering for Project monitoring and evaluation and input for future Project planning. Activities in Bhutan were handled by the New Delhi office, and in Maldives by the Sri Lanka office.

From the AED Washington headquarters, Carol Mulholland and Wendy Aulakh providing additional technical and management support, and AED's financial, contractual and administrative departments provided standard backstopping support.

Key subcontractors, PA Consulting, and IRG, provided technical support to the design, development and delivery of training courses and other activities throughout the life of the Project.

C. PROJECT INFORMATION

The following Project reports and information was prepared and submitted to USAID throughout the period of performance.

- Annual Work Plans for 2001, 2002, and 2003.
- Annual “Calendars” of planned courses were printed and widely distributed in the region. This information also appeared on the Training Web Site.
- Course Notebooks containing all course presentations and materials were distributed to participants and USAID for each course. After 2001 this information was also circulated in CDROM version for every course. The information also appeared on the Training Web Site.
- Distance Learning course information was circulated by CDROM and also appeared on the Training Web Site.
- Course Reports were produced after each course, including information from Trainer Reports, and analysis of the Participant Evaluation forms.
- Quarterly Progress Reports.
- Monitoring and Evaluation narratives were collected during all Project years.
- Achievements toward Performance Indicators were produced for all Project years.
- Stakeholder Research Report.

TRAINING COURSES

Training was organized under four programmatic areas:

- (1) Regional grid and energy exchange.
- (2) Legal, policy, and regulatory frameworks.
- (3) Regulation and regulatory bodies.
- (4) Energy efficiency.

A list of all training courses is located in Annex I.

Training course subjects, dates and locations were proposed in each year's work plan. After approval from USAID, AED developed Course Brochures that were added to the training component of the web site and were circulated to USAID Regional Coordinators who worked with local entities to identify training candidates. AED also developed an annual Course Calendar information brochure for USAID. Each year's training Calendar was developed considering the major developments in the sector such as reforms planned and in process in the region, participant recommendations for courses, and discussions with USAID and the agencies sponsoring participants. Initial design of each training program was done as much as a year in advance for formulation of the Work Plan.

A. TRAINING PARTICIPANTS

USAID Regional Coordinators in each country oversaw the selection and approval of all course participants. To ensure geographic representation, events were scheduled throughout the region, and most courses had participants from all six SARI/Energy countries. Table 1 shows the number of participants and agencies deputing them:

Table 1: Participants in SARI/Energy courses

| Country | No. of participants/trainees | No. of agencies sending participants |
|---------------|------------------------------|--------------------------------------|
| Bangladesh | 219 | 32 |
| Bhutan | 77 | 4 |
| India | 166 | 65 |
| Maldives | 16 | 4 |
| Nepal | 196 | 40 |
| Sri Lanka | 160 | 39 |
| Totals | 834 | 184 |

These 184 agencies included electric utilities, government departments, training institutions, banks and financial institutions, appliance manufacturers, NGOs, etc. The job level of

participants was generally high (22% senior management, 72% middle-level management, and 7% technical/support).

B. CLASSROOM TRAINING

The training team developed and delivered 28 conventional classroom courses, mostly extending for five full days. Courses were designed for middle and upper management and technical professionals working in the energy sector.

For each classroom training course AED developed Course Notebooks containing all presentations and course materials. These notebooks were distributed to all course participants and USAID. After the first year of the program course materials were also put onto CDROMs and widely distributed. Throughout the Project course information was always available online on the training component of the SARI/Energy website.

The main objectives in design of each course were to:

- Familiarize participants with the objectives and goals of the SARI/Energy program.
- Improve individual and institutional skills and knowledge, with focus on sustainability.
- Instill confidence in the participants to carry through a plan of action.
- Equip participants with skills and knowledge to implement a plan/strategy.
- Motivate stakeholders to support/initiate change.
- Initiate and support ongoing participant networking.
- Inspire the participants to internalize difficult concepts and deal with real-life issues.
- Impact and influence the quality of decision-making by participants.
- Ensure the involvement of each participant in the course activities.
- Share experience within the region to avoid pitfalls and learn about global best practices.
- Increase understanding of neighboring country perspectives and options.

The above objectives were met through:

- Meticulous course design to challenge participants' application of mind.
- Selection of highly experienced/specialized expatriate and regional trainers.
- Working with USAID to select appropriate course participants-- the selection process was different in each country and was facilitated by host country partners.
- Course presentations, followed by participatory activities including structured group discussions and assignments, group presentations, role playing, and field visits.
- Country presentations by the participants, leading to formulation of recommended practical country policies and strategies which were also presented.
- Monitoring the daily training inputs during a training program to ensure that presentations and discussions hit the mark.
- Course reports by the trainers, and course evaluations by the participants.

During the first Project year, the courses tended to focus on programmatic and technical overviews, and in the second and third years went deeper into the topics, increasingly coordinated with partner activities, stressing critical regional reforms under discussion, leveraging of opportunities, and overcoming challenges.

During the second and third years of the Project, trainers from South Asia were increasingly utilized, and there was a wider range of specialized trainers. South Asian issues and case studies were brought into the training more effectively after year one as well. The regional institutional partners, discussed in more detail later in this report, increasingly hosted the courses and assumed more responsibility in managing them and in providing trainers.

Into the second year of the Project, it was realized that most senior energy sector officials could not leave their posts to participate in training programs. However, as key decision makers it is critical to have them engaged in the process. There was a need to take the recommendations from the courses to the Ministers, senior government officials, and utilities chiefs. To address this issue, “Executive Sessions” were introduced to the end of training courses to brief senior-most officials on the course topics and on the policy options and final recommendations made by the participant group from each SARI/Energy country. Wherever an Executive Session was not possible, an Action Plan or a Strategy Paper was prepared based on inputs from the participants and trainers.

C. DISTANCE LEARNING

AED produced four distance-learning courses, available to audiences on the web site as well as by CDROM. All four courses were designed with a South Asia regional focus and as introductory courses targeted to a wider audience of regional energy professionals requiring access to basic information on key technical and policy issues. The first two courses on Environmental Impact Assessment (EIA) and Independent Regulation, were launched individually in Bangladesh, India, Nepal and Sri Lanka to invited audiences. The courses were usefully designed and well received; the presentations generated vigorous and meaningful discussions during launching programs (as recorded in the respective Course Reports). These two launches were led by regional institutional partners working in the areas of environment and regulation.

During the launch interest was generated in developing a second version of the EIA course with regional case studies. The regional institutional partner on environmental issues took the lead on this activity.

Table 2: Participants in SARI/Energy distance learning CD launches

| Country | No. of participants | No. of agencies sending participants |
|--------------|---------------------|--------------------------------------|
| Bangladesh | 120 | 55 |
| India | 64 | 38 |
| Nepal | 81 | 37 |
| Sri Lanka | 72 | 26 |
| Total | 337 | 156 |

About 800 copies of each of these CDs were distributed during the course launches and afterwards. When accessing the information via the web site, users are asked to register; however they are not required to do so. Therefore it is difficult to fully track the number of users accessing this course information.

The other two distance learning courses on Contracts Design for Energy Trade and Financing for Energy Efficiency were completed at the end of the project and could not be publicly launched. The data was presented to USAID so that the courses can be accessed by anybody via the Project web site, similar to the first two courses.

D. ACHIEVEMENTS IN EACH PROGRAMMATIC AREA

Regional Grid and Energy Exchange Courses

- 1.1 Introduction to Cross-Border Energy Issues and Trade
- 1.2 Cross Border Energy Financial Issues
- 1.3 Planning & Implementing a Regional Electricity Grid in South Asia
- 1.4 Environmental and Social Impacts of Energy Trade
- 1.5 Reduction of Energy Costs in South Asia Region
- 1.6 Project Finance and Structure for Regional Energy Projects in South Asia
- 1.7 Strengthening Regional Energy Linkages in South Asia

Significant achievements from these courses:

- Appreciation of the potential and benefits of regional energy cooperation
- Consensus on technical issues regarding benefits of regional energy cooperation and trade
- Understanding of prerequisites in terms of interconnection requirements, cross-border transmission tariffs, compatibility of regional policy, legal and regulatory frameworks etc.
- Awareness regarding possible specific cross-border concepts and projects, such as the first regional transmission interconnection project, and a gas-based power plant in Bangladesh in a joint venture with India for export of electricity
- Shared knowledge of best practices in other regional interconnection (in South Africa, Europe, former Soviet countries, North America, etc), and development of linkages between South Asia and other regional pools
- Better appreciation by all concerned stakeholders of the issues involved in the export of natural gas from Bangladesh

Legal, Policy, and Regulatory Frameworks Courses

- 2.1 Energy sector Restructuring and Private Sector Participation
- 2.2 Transmission Grid Interconnection and Codes
- 2.3 Managing Organizational Change: Human Resource and Labor Issues
- 2.4 Billing and Collection Issues in the Reform of the Energy Sector
- 2.5 CD Course: Environmental Impact Assessments for Energy Sector Projects

- 2.6 Legal and Contractual Issues in Cross Border Energy Trade
- 2.7 Promoting Regional Policy Development and Energy Market Reform in South Asia
- 2.8 CD Course: Contracts Design for Energy Trade
- 2.9 Energy Sector Procurement & Investment
- 2.10 Communication & Outreach in Implementing Distribution Reforms

Significant accomplishments from these courses:

- Adoption of inputs from AED training courses for legislation on energy reforms in Bangladesh (Bangladesh Electricity Reforms Act, 2002), Bhutan (Bhutan Electricity Act, 2001), India (Indian Electricity Act, 2003 and Petroleum Regulatory Bill), and Sri Lanka (Public Utilities Commission Act, 2002)
- Formulation of Electricity Anti-Theft Acts by Nepal (Nepal Power Leakage Control Act, 2001) and many State Electricity Boards in India, following awareness created regarding the need for strong legislation with strict enforcement in reducing theft and technical losses
- Sharing of best practices within the region in billing and collection, customer service, customer relations, distribution management practices etc.
- Consensus on a common approach to cross-border tariffs, taxation, subsidies, exchange rates, and customs, with compatible accounting standards.

Regulation and Regulatory Bodies Courses

- 3.1 Applied Communications: Regulatory Issues in South Asia (for Regulators)
- 3.1 Applied Communications: Regulatory Issues in South Asia (for Journalists)
- 3.2 Overview of Legal Issues in Regulatory Reforms
- 3.3 Pricing and Tariffs Issues in the Reform of the Energy Sector
- 3.4 CD Course: Independent Regulation: Theory and Practice
- 3.5 Stakeholder Role in Successful Regulation
- 3.6 Regulatory Commissions: Management and Staff Functions
- 3.7 Incentive and Performance-Based Regulation
- 3.8 Oil and Gas Regulatory & Pricing Issues in South Asia

The significant impacts from these courses:

- Inputs to the drafting of the regulatory reform legislations in Sri Lanka, Bhutan, Bangladesh, and India mentioned above
- Understanding the functions and powers of regulatory commissions, the role stakeholders in regulatory decisions, advocacy and social marketing for regulators, etc.
- Appreciation of need for independence and autonomy for energy regulators in South Asia
- Sharing of the Indian experience in regulation for all the other countries to learn from

Energy Efficiency Courses

- 4.1 Energy Efficiency Standards and Labeling for Appliances
- 4.2 Consumer Outreach: Marketing Energy Efficiency
- 4.3 Efficiency Improvement in Distribution Systems in South Asia
- 4.4 CD Course: Financial Models for Implementing Energy Efficiency Projects

- 4.5 Designing and Managing Energy Efficiency Test Facilities and Protocols
- 4.6 Effective Development & Harmonization of Standards & Labeling Programs in S Asia

Some major accomplishments from these courses:

- Finalization of an agreement between India (Confederation of Indian Industries) and Sri Lanka (Lanka Transformers Limited) in July 2001 whereby the Indian would assist Sri Lankan agency in energy management, audit, energy conservation, and training
- Largely as a result of the training programs, there is now a network of energy sector professionals in the region expressing support for: 1) objectives and rationale for regional harmonization of test procedures; 2) a strategy and structure for regional harmonization in South Asia; and 3) endorsement of the Road Map for regional harmonization prepared by Nexant. We strongly believe that it will be possible for South Asian governments and industries to build on this agreement as a basis for moving forward
- Development of marketing plans by some South Asian utilities in promoting end-use efficiency of equipment and introduction of compact fluorescent lamps
- Design of a pilot project on compact fluorescent lamps by Bhutan Power Corporation in two districts of Bhutan

E. TRAINING EVALUATION

The quality of training was widely deemed as excellent (see evaluations in Annexes 3, 4, 5, 7, and 15), especially in the 2nd and 3rd years of the Project.

The AED component has achieved, as hoped, a critical mass of participants who could return to their jobs after training with individual or collective impact on their colleagues and institutions regarding energy sector reforms and regional cooperation in energy— which has influenced the reforms mentioned above. AED's training activities have provided opportunities for participants to interact with counterparts within the region; to increase understanding of neighboring country perspectives and options; and to strengthen networking with counterparts in other SARIE countries. Alumni from AED courses are now helping to spearhead policy changes by initiating dialogue, and bringing regional issues in focus. From the responses below and Project debriefing, it seems the effect of training has perhaps had its greatest effect in Sri Lanka, while it was also effective in Nepal, Bangladesh, and Bhutan; as for India, certain of the agencies, institutions, and states have specifically benefited.

Four survey tools were used to evaluate effectiveness of the courses.

1) Course Evaluation Form - At the end of each course, a form was completed by each participant. These forms were tabulated and assessed in the respective Course Reports, which also included input from trainer reports. The form is included in Annex 2.

2) Course Follow-up Evaluation Form - A few months after a course, each participant was sent a follow-up evaluation form. After repeated efforts, often including personal phone calls and visits, AED was able to get information from 261 respondents out of a total of 836, or approximately 31%. Problems in getting follow up information include: many participants are

transferred around agencies and become difficult to find or they end up working on different issues outside of energy which makes the assessment questions not applicable; some do not like to complete forms or give information; some have problems completing the forms in English; and some simply lack interest or enthusiasm for the topics or our concerns with monitoring and evaluation. Some of this lack of interest is a result of the way some agencies select participants for training – some come to courses very enthusiastic about participating, while others are not engaged.

Annex 3 presents the evaluation form used by AED in this process and includes tabulated results of the assessment. Of the 261 respondents, 80% indicated high or moderate application of the knowledge and skills gained in the course. The responses to Question 2 show the many ways in which this was applied. Most of the applied learning involved policy and legislation formation and implementation, also institutional reforms, contract negotiation, and new methods and procedures. A very useful component of the training courses appears to have been the lessons learned and case studies from other world areas, and sharing of information among the South Asian participants (Question 7). Approximately 28% of respondents used the learning in drafting new legislation or policies (Question 8). Respondents also listed additional topics and courses they desire, particularly financial and economic issues and planning, regional energy cooperation and marketing, contracts and legal issues, regulatory issues, etc— which should be considered in planning future training in the longer-term SARI/Energy activities.

3) Narratives of Effectiveness of the Courses – Annex 4 provides 23 examples (more are given in the yearly monitoring and evaluation reports of the Project), derived from the various evaluation forms, letters, and personal communications with participants. This is only a sample, showing the wide range of application of learning, in the six SARI/Energy countries. These examples support the assertions made earlier about the effectiveness of the courses in achieving Project objectives.

4) Evaluation of Training by Agencies Sending Participants - At the end of the Project, the questionnaire in Annex 5 was sent to officials of the agencies that sent training participants to courses. Forty-two officials responded, of whom 79% gave high or very high marks to the training as appropriate to the needs of their agencies. Highest marks (86%) went to the question of whether courses fostered regional energy cooperation and development. Most respondents listed the ways in which persons trained utilized or attempted to utilize the skills and knowledge gained from training in their organization, and also to improve policies (Questions 3 and 4). Most useful for future planning of training are the many responses to Questions 6 and 7 about further training and capacity-building needs, and desired direction of effort in the next phase of SARI/Energy.

INSTITUTIONAL CAPACITY-BUILDING

A. TRAINING INSTITUTION PARTNERS (TIPs)

The second component of this SARI/Energy Project focused on capacity-building efforts within the participating nations to promote knowledge transfer and exchange of “best practices” across a wide range of energy-related topics. In order to build institutional capacity within the region, in year two, AED developed an activity to help foster continuity in knowledge development. Working with USAID Regional Coordinators, the AED team selected eight technical areas important to the Project and then conducted a regional assessment of 40 prospective institutions to determine their capabilities and commitment to working with SARI/Energy. Out of this assessment, seven institutions were selected to work with the Project and assigned to the seven technical areas, as noted in Table 3.

Table 3: TIPs, SARI/Energy Programmatic Specializations

| Institution | Technical Specialization | Listserve Moderation |
|--|--|-----------------------------|
| Administrative Staff College of India (ASCI) - Hyderabad, India | Restructuring and regulatory issues | Regulation |
| Bangladesh University of Engineering and Technology (BUET) – Dhaka, Bangladesh | Regional interconnection | Trade |
| BMI Management Institute (BSES) – Mumbai, India | Distribution reforms | Distribution |
| Centre for Energy Studies (CEnS), University of Moratuwa – Colombo, Sri Lanka | Project finance, legal, and contractual issues | Policy |
| School of Environmental Management and Sustainable Development (SchEMS), Kathmandu – Nepal | Environmental issues | Environment |
| Sri Lanka Energy Managers’ Association (SLEMA) – Colombo, Sri Lanka | Energy efficiency | Efficiency |
| Indian Institute of Petroleum Management (IIPM) - Gurgaon/Delhi, India | Oil and gas | |

Memorandums of Understanding were signed between these institutions and the SARI/Energy Project to lay out roles and responsibilities for all parties. The long-term objective for SARI/Energy in working with regional Training Institution Partners (TIPs) is to help build the capabilities of these institutions to evolve into centers of excellence in their technical areas and create a network of entities and professionals committed to supporting regional energy cooperation, trade and reform.

With MOUs in place, AED worked to incorporate these institutions into the structure to develop and deliver the remaining Project deliverables. AED sought opportunities to work with all the TIPs in hosting, developing and delivering training courses, conducting studies and surveys and providing technical input to the distance-learning courses, and promoting professional networking and information exchange via electronic mailing lists.

TIPs took the lead in developing three of the four distance learning courses and led regional launching events around the region for two of these courses. The TIPs also took over managing electronic mailing lists or listservs that were created for training alumni and other energy professionals to communicate with each other about energy news and technical issues and questions.

Two TIPs meetings were held in February and October 2003. The first meeting was organized to create an opportunity for the institutions to meet and exchange ideas, and for them to meet with USAID, AED and the other SARI/Energy contractors to gain more knowledge about the objectives and work plan goals of the Project in the hopes of determining more ways for the TIPs to become an integral part of the Project beyond AED's training activities. The second meeting was organized to both reflect back on the progress, benefits and barriers of the TIPs participation and contribution to SARI/Energy during 2002 and 2003, as well as to look forward to the second phase of the Project and the potential roles these institutional partners could play in the future.

B. INSTITUTIONAL LINKAGES/PAIRINGS

In the 2003 Work Plan AED agreed to organize four institutional exchanges to further support capacity building for the TIPs. AED faced difficulties and the activities suffered delays in attempting to identify the right institutional relationships in terms of capacity, specializations, experience, and commitment. By the end of the Project, three relationships were established between South Asian and American institutions, and one relationship was established between a Sri Lankan and Indian institution. Each Partnership produced a Memorandum of Understanding or a Work Plan for short- and longer-term actions. Additional information can be found in Annexes 8-12.

ASCI with IP3

The Institute for Public-Private Partnerships (IP3) in Washington, DC is an international training provider focused on building legal, financial technical, regulatory and institutional enabling environments for successful public-private partnerships. IP3 delivers high-level professional development and certification programs in several regions of the world. IP3 is interested in working with ASCI to become the IP3 training provider for expanded programs in South Asia.

ASCI is a venerable institution established in 1956 offering advanced training in a wide variety of administrative, management, government, and policy areas. It has provided such training to over 50,000 senior and middle level managers in various sectors in India, including energy. ASCI is very interested in expanding its training capabilities, both in the breadth and depth of its technical subjects as well as in delivering training to a more regional audience that included

participants outside of India. Dr. Usha Ramachandra was the key expert and motivator in developing this exchange relationship as well as for other SARI/Energy activities.

Both ASCI and IP3 aim to provide commercially-driven training, so only partial support would be needed from donor sources. This Partnership has become immediately productive: IP3 in its 2004 Catalog has listed eight courses which are to be jointly held in Hyderabad.

BUET with Purdue University

Pairing of the Department of Electrical and Electronic Engineering, BUET, (Dhaka, Bangladesh) with the Institute for Interdisciplinary Engineering Studies, Purdue University (Lafayette, Indiana) is a good match. The focus will be on energy trade among the South Asian countries, which is a central objective of SARI/E. The MoU between the two institutes (Annex 9) describes the proposal for “Electricity Trade Analysis and Power Pool Infrastructure Building in South Asia.” Purdue has developed a computer model for such energy exchange among countries, based on similar work in several other world areas: the Southern African Power Pool; the West African Power Pool; in China; electricity and natural gas modeling capabilities for the Indiana Utility Regulatory Commission; and elsewhere in the Mid-Western USA.

This is a strategically important partnership for promoting detailed energy policy analysis in South Asia. Such energy exchanges within South Asia would save about 20% of costs. This exchange would also emphasize “regional energy security,” and of course would be linked with “regulatory reforms and restructuring” which is underway in all these countries.

Prof. Brian Bowen from Purdue visited BUET and participated in Course 1.7 (Strengthening Regional Energy Linkages in South Asia) in July 2003, and three Professors from BUET visited Purdue for one week in October 2003. While there, they were provided with high-end laptop computers containing the complex trade simulation model Purdue has developed, ready for input of energy data from the SARI countries so the actual economic and other benefits of energy trade among SARI/E countries could be calculated and objectively demonstrated. The MoU lists a number of activities to be promoted under this partnership (Annex 9; also letter in Annex 12).

This two-way visit of experts was Phase 1 of the proposed partnership. To proceed with the next phases, it will be necessary for the partners to collect considerable technical data from all the SARI countries, which may require official permission and so may be time-consuming. Phase 2 of the partnership will begin with a workshop in early 2004 for training in data collection. This phase will extend 2004 through 2006, collecting data mainly from the SARI countries and utilizing the computer model. Then, following a workshop, an interim Report will be issued. Phase 3 is proposed for the years 2007 and 2008, to involve data from all 7 SAARC countries (including Pakistan if possible), following which a Final Report will be issued.

SchEMS with University of Delaware

The link-up between SchEMS in Nepal and the Center for Energy and Environmental Policy (CEEP), University of Delaware, is also an apt one as both focus on energy and the environment. In SARI/E, SchEMS produced the distance learning CD on Environmental Impact Assessments for Energy Sector Projects. Representatives from each institution have travelled to visit the partner institution. Dr. Ram Khadka and Prof. Shakya Man Surya visited CEEP in October

2003, and Ms. Deborah Bleviss visited SchEMS, accompanied by Mr. Roger Gibian of AED, in January 2004. CEEP has already been involved in South Asia (in Sri Lanka, and in a project with TERI in Delhi where 70 experts were trained), and CEEP is very interested in pursuing this partnership with SchEMS.

The two institutions together will develop an Integrated Resources Planning (IRP) strategy for the energy sector (Annex 10). Most of the increase in electricity supply in Nepal will be hydro generation. Adopting the IRP strategy will assist Nepal in identifying alternative strategies for meeting future electricity demand. To develop the IRP tool, considerable survey work will be required. Present and future electricity end-use needs have to be identified, as well as new types of technical skills. A pilot IRP project is planned over the short term as the next step, to enable the benefits of this tool to be demonstrated to policymakers and other stakeholders in Nepal. SchEMS and CEEP have preliminarily selected a pilot semi-rural area; the IRP methodology would be applied to allocate investment priorities in such a region and to plan for further electricity resources, considering planned growth of the grid. This will be a pilot effort for the country in the application of the IRP approach for integrated off-grid and on-grid electricity resource planning. Lessons learned in China and in other projects in South Asia will be applied.

A 5-day workshop is planned for March 2004, which will result in a more detailed workplan. This approach then can be applied more widely within South Asia. SchEMS has stated that its priorities for the next phase of SARI/Energy are collaboration with CEEP for IRP, and initiation of a Strategic Environmental Assessment program (letter in Annex 12)

University of Moratuwa with Anna University

The Centre for Energy Studies (CEnS), University of Moratuwa, Sri Lanka, has agreed on a MoU with the Institute for Energy Studies (IES), Anna University, Chennai. Experts in each institution visited the other for 4 or 5 days and also made field trips. This is, we expect, the first of a series of SARI/E institutional linkages within the South Asia region.

This pairing is appropriate for the following reasons: 1) Tamil Nadu has over 1000 wind generators, with a system of guaranteed profit to the investor, and continual maintenance, which has been studied by the delegates who visited from Moratuwa as Sri Lanka has no such scheme or certification procedure for wind generation. 2) Anna University has a functioning biomass 12 MW generator, new for India, which has also been studied by the delegates from Moratuwa. 3) It has a solar energy training program, 4) It has been very successful in promoting co-generation, which Sri Lanka also wants, 5) Sri Lanka has some 200 functioning community-managed hydro-generators (which World Bank considers as an outstanding success), which has been studied by the Anna University visitors to Moratuwa; the recent Indian Electricity Bill has opened up possibility of such development in India. 6) The Institute for Energy Studies has been very successful in contract work such as energy audits (this income enables IES to employ about 30 persons), while CEnS, being a new center, also wishes to develop the capacity for this so as to become more self-sufficient. 7) There is a Nexant study of the feasibility of grid connection between Sri Lanka and South India, and this idea might become a reality after the atomic power plant at Kudankulam in southern Tamil Nadu comes on line. It is proposed by these two centers to bring Maldives into the linkage and conduct energy audits in its hotel industry.

We believe that this pairing of institutions will have considerable benefit to the energy sector on both sides. This exchange began only in late 2003 and its potential is just now being worked out (MoU, Annex 11, and letter in Annex 12).

C. EVALUATION OF INSTITUTIONAL CAPACITY BUILDING ACTIVITIES

In the 2nd TIPs meeting (Hyderabad, 21 October 2003) the officials and professors representing the institutions were asked to evaluate Project activities as regards their institutions; the tabulated responses include the comments from each institution (Annex 7). It is to be kept in mind that TIPs functioned essentially for only about 15 months, so the potential was only beginning to be perceived. In spite of this, fulfillment of expectations about the program, and integration with goals of the respective institutions, were reported as moderately good. High scores were given to facilitation of exchange among the participating countries (Question 5), and support of their countries' governments and officials as regards SARI/E activities (Question 15). As regards reforms and policy changes (Question 6), TIPs had not been functioning long enough to make much assessment. As regards the specializations of each institution under SARI/E, all were satisfied, except University of Moratuwa ("policy" as a topic is too broad and vague especially for a new and small center such as CEnS).

The highest score was in response to the question of whether TIPs should expand to include research (i.e. change into Energy Training and Research Partner Institutions- TRIPS); this was definitely wanted (Question 11). All respondents also thought it desirable to expand the network and bring in more institutions, and some which should be included are listed (Questions 3, 13). Linking of such a network of energy institutions under SAARC was also considered highly desirable (Question 14). The participants also gave several other useful suggestions relevant to planning for the next phase of SARI/E (Questions 16, 17), such as induction of some government agencies/officers, need for good media publicity, and analysis of energy-related disputes among South Asian countries.

Further positive appraisal of benefits to the respective institutions is mentioned in the letters from TIPs submitted at the end of this Project (Annex 12).