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Report of Definitional Mission

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REPORT OF DEFINITIONAL MISSION

Prepared for

U.S. Agency for International Development

Under

South Asia Regional Initiative for Energy

Prepared by

Nexant

CORE International

List of Acronyms

ADB	Asian Development Bank
APDP	Accelerated Power Development Program
APDRP	Accelerated Power Development and Reform Program
BESCOM	Bangalore Electricity Services Company
CD	Compact disc
DVD	Digital Video Disc
GNP	Gross National Product
GOK	Government of Karnataka
GP	Gram Panchayat
GVP	Gram Vidhyut Pratinidhi
ICRISAT	International Crops Research Institute for the Semi-Arid Crops
ISO	International Standards Organization
IWMI	International Water Management Institute
JWG	Joint Working Group
KERC	Karnataka Electricity Regulatory Commission
KPTCL	Karnataka Power Transmission Corporation Limited
Km	kilometer
kV	kilovolt
MOU	Memorandum of Understanding
MoP	Ministry of Power, Government of India
MVA	megavolt-ampere
MW	Mega Watt
NGO	Non-Governmental Organization
RE	Rural Electrification
REB	Bangladesh Rural Electricity Board
Rs.	Rupees (Indian)
Rs. Crore	Rs. 10 million (US$ 212,766)
SARI/Energy	South Asia Regional Initiative for Energy
SASEC	South Asia Sub regional Economic Cooperation
TA	Technical assistance
TBD	To Be Determined
T&D	Transmission & Distribution
TUA	Transformers Users Association
US	United States
USAID	United States Agency for International Development
XIMB	Xavier Institute of Management, Bangalore

Contents

Section 1 Distribution Reform in the Rural Sector - from Best Practices to Best Opportunities

1.1 Background

This document reports on the definitional mission of a SARI/Energy assessment of rural energy services in the State of Karnataka. SARI/Energy (South Asia Regional Initiative for Energy) is a program of the U.S. Agency for International Development (USAID) that promotes mutually beneficial energy linkages among Bangladesh, Bhutan, India, Maldives, Nepal and Sri Lanka. SARI/Energy encompasses a range of energy issues: cross-border energy exchange, legal and regulatory frameworks, gas sector development, energy efficiency, renewable energy, rural energy supply, and more.

Since February 2001, SARI/Energy has been investigating best practices in rural energy supply in the region. South Asia generally has low per capita electricity consumption, reflecting limited access to reliable and affordable supplies. Further, across the region, the expansion of national electric grids has slowed in recent years due to financial constraints faced by utilities and the high financial cost of serving rural populations.

SARI/Energy's approach to rural energy supply issues has had two stages. The first was to identify successful experiences, or "Best Practices" among the SARI/Energy's member countries. The second step is to take the core factors or the most relevant aspects from these Best Practice models, and see how they may be adapted to invigorate or accelerate the progress of rural energy supply programs in other situations within the region.

Two studies to identify sustainable operational and management practices and the associated legal and regulatory requirements to transfer these practices elsewhere within South Asia were completed in mid-2002. These studies identified current "Best Practices" for rural electrification programs[1], and reviewed the legal and regulatory requirements needed to support improved electrification programs in the region.[2] Numerous issues and challenges threaten the sustainability of rural electrification and energy service programs throughout South Asia. In addition to legal and regulatory barriers, these include low load densities, weak purchasing power, modest institutional capacities, and capital constraints. By identifying, assessing, and sharing best practices, these challenges should be easier to overcome.

Within South Asia, many observers agree that the most successful model for a national rural electrification program is the Bangladesh Rural Electricity Board. The Bangladesh program is characterized by high collection rates, low losses, and a financially manageable and sustainable subsidy. Moreover, as the system has expanded, it has proven to be institutionally robust, taking over urban service areas with high losses and low collection rates and bringing them up to standard.

[1] Lalith Gunaratne, Rural Energy Services Best Practices, Nexant SARI/Energy Program**,** www.sari-energy.org, May 2002.

[2] Frederick Karlson. Rural Energy Services Legal and Regulatory Review, Nexant SARI/Energy Program, www.sari-energy.org**,** February 2002.

In March 2002, at the Delhi meeting of the Energy and Power Working Group of the South Asia Sub Regional Economic Cooperation (SASEC) Program sponsored by the Asian Development Bank (ADB), SARI/Energy offered to facilitate, in coordination with ADB, transfer of key management elements of the Bangladesh system to India and Nepal. This offer was accepted by the Indian and Nepalese delegations, which were at the secretary of government level. That agreement initiated the work that has led to this report.

India's case is, of course, unique in the region in several respects. In the fifty-five years since independence, India's installed power capacity has increased from a 1,362 MW to over 100,000 MW. Yet Indian consumers face frequent power cuts, and fluctuating voltages and frequencies. These problems are serious everywhere, but generally are most severe in rural areas. In addition, system losses are high throughout India's transmission and distribution (T&D) networks. Financial losses have been high, and continue to rise rapidly. In 1992-93, total financial losses attributable to T&D losses stood at Rs. 4,600 crore ($920 million). In 2001, these losses reached an estimated Rs. 26,000 crore (more than US $5 billion), and are estimated to exceed Rs. 45,000 crore (US $9 billion) per year during the next three years.[3] As large as these financial losses are, the indirect losses in lost productivity and trade, lowered economic activity, reduced domestic and foreign investment in the sector, uneconomical and misallocated investments in captive power, and reduced income generation are probably many times greater.

Both government and outside observers agree that India's power sector problems occur on both sides of the energy meter – the utility side as well as the consumer side. On the utility side, there are inefficient and overloaded distribution equipment, faulty and poor maintenance practices, a lack of investment in system upgrades, faulty meters, and poor commercial management and accounting practices. On the consumer side, obvious problems include the lack of meters, prevalence of flat rate tariffs over metered tariffs, non-payment, theft, illegal connections, and a lack of consumer education in the rural sector, rampant political interference, and inefficient electricity use.

The Ministry of Power's (MoP) March 2002 "Distribution Policy Committee Report" [4] stresses that any solution to India's distribution reform problems should be multi-faceted, combining technical interventions with commercial practices, corporate governance, regulatory reform, social marketing, policy reform, and political commitment.

In line with MoP's efforts to encourage states to undertake reforms, the Accelerated Power Development Program (APDP) has been redesigned and enhanced to create the Accelerated Power Development Reform Program (APDRP). The Rs. 35 billion APRDP will provide financial assistance to states mainly to strengthen distribution in selected circles or districts. States that agree to specific reform milestones would be eligible to draw funds for specific projects, partly as grant and partly as loan.

[3] Montek S. Ahluwalia, et al, "Report of the Expert Group on Settlement of SEB Dues "(May 2001), published in Academic Foundation, Reports on India's Power Sector, 2002, New Delhi.
[4] Ibid.

The State of Karnataka is recognized as a leader in electricity sector reform and restructuring. Currently, the Government of Karnataka (GOK) is in the process of implementing The Karnataka Power Sector Restructuring and Privatization Program. The key objective of this reform Program "is to improve efficiency in order to reduce costs of electricity supply". Under this program, the unbundling began formally on 1 June 2002, when the distribution functions of the Karnataka Power Transmission Corporation Limited (KPTCL) were divided among four autonomous, though still government-owned, distribution companies. The four companies are: Bangalore Electricity Supply Company (BESCOM); Mangalore Electricity Supply Company (MESCOM); Hubli Electricity Supply Company (HESCOM); and, Gulbarga Electricity Supply Company (GESCOM). According to GOK's *Karnataka Electricity Distribution Privatization Strategy Paper*, the GOK will attempt, by early 2004, to privatize the four ESCOMs simultaneously and as currently constituted. The privatization is not to be limited to certain urban centers.

One of the most complex aspects of the electricity distribution privatization process in India is realizing sustainable, commercial operation for rural electricity supply. To partially address this aspect of privatization, the GOK is attempting to involve the rural Gram Panchayats (GPs) in supporting or taking over low-voltage rural electricity distribution operations. This is a unique approach and grows out of the difficulties encountered in other states in dealing successfully with the rural dimension of electricity distribution privatization.

GOK's approach to potential GP involvement in rural electricity distribution is embodied in a Model Memorandum of Understanding (MOU). As currently structured, the Model MOU would be signed by individual GPs, the signing GP's Zilla Panchayat, and the signing GP's electricity distribution company. GOK is planning to execute MOUs with approximately 1,000 of Karnataka's 5,600 GPs by July 2003.

In November 2002, USAID staff met with senior state officials in Bangalore, to explore mutual interests in possibly conducting a set of pilot activities in the State of Karnataka to demonstrate sustainable rural electricity distribution reform. Drawing upon resources available through the SARI/Energy program, USAID was willing to consider an intensive effort over a six to nine-month period starting in early 2003 to adapt a set of managerial approaches and capacity building activities for several GPs in a pilot program, perhaps in two or more *talukas* (sub-districts). These pilot programs would draw upon and adapt from the successful techniques used by the Bangladesh cooperative system. The adaptation and installation of these techniques would be sequenced with feedback built in at each stage, to ensure that recommended procedures are practicable and effective. Training would be both at site for GP staff and possibly for BESCOM. The effort would be supported by a joint team of international and local consultants.

One of the attractions for applying such a pilot program in Karnataka was the fact that the state is in the process of building up communication and training programs for the GPs. These will make it possible to take successful pilot phase activities and extend them state-wide.

Given the mutual interests of SARI/Energy and GOK in consumer driven rural electricity distribution reform and the advanced status of the GOK Power Sector Restructuring and Privatization Program, a Definitional Mission to define potential SARI/Energy support to GOK was initiated on 10 February 2003. Additional reasons for SARI/Energy consideration of support to GOK in advancing rural electricity distribution reform are a major, new

electricity distribution reform project being planned by the USAID India Mission and the success of USAID's Water-Energy Nexus in Agriculture Project (Project WENEXA) under conditions analogous to those prevailing in Karnataka. The Mission's new electricity distribution reform project is considering Karnataka as a site for demonstration projects implementation.

Section 2 Defining Opportunities: February 2003 Definitional Mission

2.1 The Team's Meetings and Field Visits

As agreed during initial discussions between USAID and the Government of Karnataka (GOK) in November 2002, the definitional mission was to review the situation, and develop a detailed work plan outlining a pilot program of work efforts designed to improve the operational performance of rural electricity delivery (on-grid). The pilot program work efforts were to focus on improving the quality and performance of several operational areas including but not limited to:

- Customer service and response to customer complaints
- Billing practices
- Collection practices

The SARI/Energy team for the mission included several international experts from CORE International[5] and both international and Bangalore-based experts from Nexant[6]. Team members are listed in Annex A. USAID staff responsible for SARI/Energy and for other USAID energy programs in India also participated in the kick-off and review sessions for the definitional mission.

The definitional mission team began work in Bangalore on February 10. A summary schedule of their meetings and field visits over the two-week period through February 25 is presented in Annex B. A list of principal contacts is presented in Annex C.

At the kick-off meeting, held at BESCOM's central office on February 10, the Government of Karnataka was represented by both Rural Development Secretary Mr. T.R. Raghunandan, and Special Secretary for Energy Reform Mr. Vijay Kumar. The then BESCOM Managing Director Mr. P.B. Ramamurthy, together with senior staff, represented BESCOM.

USAID proposed to work with the GOK and BESCOM to:

- Enhance communications,
- Train GPs in electric supply business best practices, and
- Demonstrate with BESCOM that enhanced rural electricity supply will improve revenue generation.

The meeting picked up directly from the previous conversations with USAID. It was agreed that the team should visit and consider up to four talukas as representative sites for potential pilot activities. These were:

- Taluk Doddaballapur, Bangalore Rural District,

[5] CORE International, Inc., is the Rural Energy Services Training Contractor for the SARI/Energy program. For further information, see www.sari-energy.org and www.coreintl.com.

[6] Nexant Inc. provides the Technical Assistance component of the SARI/Energy program. Nexant is a Bechtel-Affiliated Company that provides comprehensive energy services worldwide. For further information, see www.sari-energy.org, and www.nexant.com.

- Taluk Chintamani, Kolar District,
- Taluk Molakalmooru, Chitradurga District, and
- Taluk Gubbi, Tumkur District.

Key information on these talukas are summarized in Table 2-1.

In addition, the team accepted an invitation to visit Taluk Nittur, also in Bangalore Rural District. Taluk Nittur has been the site of a pilot program conducted by the Xavier Institute of Management to work with village transformer associations to understand local electric power service issues and options for improving customer service.

Table 2-1 Representative Talukas Targeted for Site Visits and Planned for Pilot Intervention Activities

Taluk	District	No. of GPs	No. of Villages	Population	No. of Electricity Consumers	No. of IP Sets
Doddaballapur	Bangalore Rural	29	294	170,038	73,298	9,352
Chintamani	Kolar	34	429	205,000	37,585	4,097
Molakalmuru	Chitradurga	16	74	103,072	25,313	4,410
Gubbi	Tumkur	33	346	250,000	36,516	10,317
Total		112	1143	728,110	172,712	28,176

The study team visited each of these sites, talking with taluk staff and GP members, as well as with local villagers, BESCOM field staff, and power consumers. Additional meetings were held in Bangalore with central BESCOM staff, watershed assistance and NGO representatives, and other with experience on rural power distribution in the state.

On Monday, February 24, the team met again with senior GOK and BESCOM staff to present and discuss their findings, including an outline of proposed pilot intervention activities.

2.2 Observations

During the kick-of meeting, Secretary Raghunandan described the situation faced in rural areas. The team's visits confirmed his description of fundamental problems facing rural farmers. These issues are far beyond the scope or effort of the SARI/Energy project, but underlie anything that is done in the rural power supply sector.

Long-term stresses on Karnataka's current agricultural/rural development situation include:growing population, water intensive cropping,

- increasing borewells,
- declining water table, and

- (Probably) worsening climate. These trends are exacerbated by immediate stresses that include:
- the two-year drought,
- a dramatic fall in crop prices, and
- Uncertain water supplies – in large part because of uncertain power service.

These are the immediate stresses on farmers. Many farmers – currently -- do not have income to pay for power. Even obtaining drinking water is becoming difficult in some areas.

To summarize the situation:

- BESCOM has inherited a cycle of mutual mistrust and mutual under-performance that has built up over many years.
- Dysfunctional rural electricity service threatens privatization.
- Privatization threatens rural electricity service.

The core issue is, how to break the cycle of mutual mistrust and perceived mutual under-performance?

There are serious constraints to improving the rural electricity system in the near term. BESCOM has minimal financial resources to invest in providing improved rural service. There is little time to implement change; privatization is scheduled to be completed by March 2004. And there is very limited capacity at GP level to undertake the 3-Phase MOU approach that is being proposed by the GOK and BESCOM.

The team noted that there are half a dozen programs currently underway or planned for Rural Customer Billing & Collections:

- BESCOM's standard billing service, which is on-going;
- XIMB's work with TUAs – at 3 locations;
- a simple MOU for collections -- underway in 2 GPs since Nov 2002;
- GVP collections – target 47 GPs, for which the public tender closed on February 28;
- a private company collections (mainly urban), for which a tender was recently issued; and
- the 3-Phase MOU for GP's.

Of these, the team proposed the SARI/Energy efforts be focused on the first, and the last. The others are also of significant interest, and should provide experience of direct use to the efforts of SARI/Energy to strengthen the capacity of the GPs to implement the planned 3-Phase MOUs.

2.3 Main Assumptions, Criteria for Interventions

The USAID SARI/Energy consultants and capacity building specialists, both international and local, would work over the next 6 months with a small group of GOK and BESCOM counterparts to assist the four targeted talukas --- and pilot GPs as identified by the taluk administrations. However, some intervention effort in the private sector and at KERC may be beneficial. Each of the identified interventions needs to be implemented over the next 3-6 months and within SARI/Energy's resources limits. All pilot activities will need to be completed before November 2003.

Some of the GPs within the target talukas are likely to negotiate participation with BESCOM to implement the basic activities associated with Model MOU. The efforts to build capacity of the GPs will support this.

The team has focused on interventions that are simple and targeted. Each intervention should yield quantifiable results. The identified interventions should have potential to be replicated throughout Karnataka State.

Additional Pilot Project activities will likely be defined as the first set of intervention activities are implemented, and experience is gained.

The preliminary set of proposed programs for technical assistance (TA) interventions and training activities that were presented to the GOK-USAID mission review session on February 24th are appended to this report as Appendix E and Appendix F, respectively.

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Monday, February 10	Kick-Off Meeting at BESCOM with GOK and Senior BESCOM staff
Tuesday, February 11	Team meetings and work
Wednesday, February 12	Site Visit to Nittur, Bangalore Rural District
Thursday, February 13	Team meetings Karnataka Watershed Society BESCOM
Friday, February 14	Site Visit to Taluk Doddaballapur, Bangalore Rural District
Monday, February 17	Site Visit to Taluk Chintamani, Kolar District
Tuesday, February 18	Site Visit to Taluk Molakalmooru, Chitradurga District
Wednesday, February 19	Teleconference reviews with USAID
Thursday, February 20	Site Visit to Taluk Gubbi, Tumkur District
Friday, February 21	KERC R. Sridharan, Y.G. Muraldharan Energy Dept., GOK Vijaykumar
Monday, February 24	Presentation of Findings and Review Session at BESCOM

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Appendix E Proposed SARI/Energy Technical Assistance Activities For Participatory Rural Energy Services Pilot Project In Karnataka

1 Identify and Profile Opportunities for Improvements in the Water/Energy Nexus in Rural Settings

This activity will involve accumulation of information from both the field and from published reports and on-going studies and projects. Issues for focus include such topics as: assessing opportunities for minimizing financial risk for using more efficient pump sets, such as the feasibility of capital subsidy – how to target subsidy, how to channel more accurate delivery, and other topics. The objective is to clarify the dimensions of an approach that, if implemented, would open up acceptance in a broader area with economic savings in resource use. Work to be carried out by international and local consultants.

PHASE ONE: MODEL DEVELOPMENT

TA 1.1 Contact information sources. *Schedule: Week 1 to Week 3*
- Bangalore institutions and agencies;
- ICRISAT, IWMI, PA Consultants (Hyderabad watershed);
- Paper on flat rate vs. metering (Indo-French effort);
- Tamil Nadu study (power and pump sets, ref: Padu);

TA 1.2 Collect information. *Schedule: Week 2 to Week 5*
- Meetings at offices, institutes and interviews in B'lore;
- Visits to GPs for local information, interviews and feedback;

TA 1.3 Develop model. *Schedule: Week 4 to Week 6*
- Awareness contacts;
- Farmer exchange/tours;
- Energy Audit Center(s) (ESCOs)
- Credit system/equipment financing (E2I approach)

TA 1.4 Presentation of model/approach. *Schedule: Week 7 to Week 8*
- JWG
- GPs
- Taluka committees
- IWMI roundtable on water-energy nexus

TA 1.5 Incorporate feedback. *Schedule: Week 9*
- Approach modification;

TA 1.6 Final presentation. *Schedule: Week 10*

PHASE TWO: MODEL IMPLEMENTATION

TA 1.7 Establish one or more Energy Audit/Finance Centers, perhaps one in each taluka. *Schedule: 4 to 8 weeks' time*

TA 1.8 Follow through with financing/equipment for one or more farmers as demonstration (ideally the program will not require demonstrating, but will be enthusiastically embraced by pump set users) *Schedule: 2 to 4 weeks' time*

2 Develop Baseline for the Rural Communities and their Potential for Rural Electrification

There is an extremely limited body of work available to planners to suggest means of measuring the effectiveness of development initiatives involving rural energy services. This activity will focus on design of and testing of an approach that can be used in a more systematic fashion by BESCOM, the GOK, regulators and other rural and social development planners.

The goal of this task is to develop a prototype social and economic "snapshot" of the Talukas and GPs under consideration. In developing this profile, information will be collected from statistics, interviews and site visits. In addition, attempts will be made to catalog and track records for such activities as: past and on-going management of and adaptation to change; community attitudes and willingness to take on challenges; entrepreneurship spirit; interest and abilities in micro-enterprises; hazards and barriers that have been identified and overcome and other factors. The objective is to develop a set of indices for communities against which some simple generalizations can be made about program successes – what the community was like in the beginning, what is the direction in which they're moving now as a result of the project and what can be said regarding the effectiveness of capital improvements, or lack thereof, and to evaluate the approach for application to wider national and regional venues. The work is to be carried out by international and local consultants.

Activity

TA 2.1 Collect statistics and reports. *Schedule: Week 1 to Week 2*
- Taluka/GP plans (5-year? Annual?);
- GOK agencies for statistics/reports;

TA 2.2 Visit talukas and GPs. *Schedule: Week 3 to Week 5*
- Interview taluka committees, GP members, self-help groups, special interest groups, micro-enterprises, and others;
- Identify social and economic characteristics that make a profile of the areas under consideration;

TA 2.3 Develop a set of socio-economic indices. *Schedule: Week 6 to Week 9*
- Construct profiles of the communities – selected talukas and/or specific GPs;

TA 2.4 Measure program effectiveness. *Schedule: Week 10 to Week 20*
- Begin to evaluate the communities' progress in the project against their social and economic baseline to determine the effectiveness of improvements;
- Prepare documentation of findings;

TA 2.5 Approach evaluation. *Schedule: Week 21 to Week 24*
- Adjust evaluation with respect to feedback;
- Consider feasibility of approach for application to wider venues;
- Prepare final documentation.

3 Consumer Advocacy Support for Improved Electric Service(s)

This activity is to profile successful approaches used elsewhere to that effectively provide consumer feedback to public and private providers of services (and perhaps products – depends on the model that has worked). The issues to be addressed include:

- How were stakeholders organized; what was that catalyst for organizing consumer advocacy; what outside contributions and support were available or critical to the success (i.e., how did others come in and organize consumers to get satisfaction/improvement from services/products).
- Means of communication, sources and types of information
- Organizational framework, methods of operation, motivations.

The objective in this activity is to build up enough information on experience to eventually design one or more centers for consumer advocacy that provide information on not only electricity issues, but other topics of rural interest – agriculture, water resources, financial opportunities, crop prices, marketing information, all having to do with the economic well-being of the rural communities and therefore, with financial soundness of rural electrification.

Options to build upon an existing center will also be explored (e.g., perhaps in education or healthcare sector), that is having great success and support. Work is to be carried out largely by local consultants.

Activity

TA 3.1 Meetings and discussions to understand motivation and cost effectiveness *Schedule: Week 1 to Week 4*
- Established consumer organizations;
- Central Govt/GOK agencies;

TA 3.2 Assessment of grievances normally given *Schedule: Week 3 to Week 5*
- Classification according to ease of handling

TA 3.3 Assessment of consumer profile vis-à-vis cost of service *Schedule: Week 4 to Week 8*
- Establishing costs of service for delivering grievances
- Cost effectiveness of delivering grievances

TA 3.4 Options for establishing centres of consumer advocacy *Schedule: Week 8 to Week 10*
- Feasibility of cost advocacy centres for handling large grievances

4 Measures to Improve Customer Relations

This activity aims at building a more positive relationship between BESCOM and its rural customers. The focus will be on improvements in BESCOM operations and approaches that will enhance greater mutual understanding and trust with its customers.

The activities envisioned in this task may include attending public hearings, reviewing customer correspondence, and identifying and evaluation means to more effectively reach rural customers. Attempts will be made to identify the needs for change in dealing with customers in a range of topics and to provide sufficient information to design one or more courses for BESCOM training in customer relations.

Activity

TA 4.1 Collect information from BESCOM records. *Schedule: Week 1 to Week 3*
- Stakeholders
- Profile of rural consumers

- Distribution network infrastructure
- Manpower employed in rural divisions

TA 4.2 Assessment of grievances normally received *Schedule: Week 2 to Week 6*

- Classification according to ease of handling

TA 4.3 Visit talukas and GPs. *Schedule: Week 5 to Week 8*

- Interview BESCOM officials posted at rural divisions, taluka committees, GP members, and others;
- Assess technical and managerial capability of BESCOM officials to handle types of grievances received

TA 4.4 Options for improved rural services
Schedule: Week 7 to Week 10

- Establishing licensing procedures for local youth
- Modules for regular training activity

5 Development of Indicators for Measuring Programmatic Success

The activity attempts to look at communities undergoing change as a result of the Karnataka rural energy project and developing measures of success of those changes. Focus here may include economic indicators – increase in durable goods purchases, increase in collections, purchase of new seeds and water conservation equipment; social indicators – self-help groups active in promoting best practices of rural electrification; administration indicators – successful management of rural electrification, and others. The objective here will be to record the successes and failures, to document lessons learned that could be folded back into the project and to any follow-on and to provide guidance to future efforts in India and South Asia. Work is to be carried out by local and international consultants.

Activity

TA 5.1 Overview of similar experiences. *Schedule: Week 1 to Week 4*

- Collect documentation of change resulting from electricity distribution reform in other parts of India;
- Visit other areas to view social, economic, agricultural impacts;
- Interview persons engaged in similar studies

TA 5.2 Collect information in specific sectors of project talukas and GPs. *Schedule: Week 3 to Week 7*

- In communities collect information on education, health, commerce, agriculture, water, communications, entertainment, public services and other sectors;
- Focus on time series data for specific organizations and businesses;

TA 5.3 Develop indices. *Schedule: Week 8 to Week 9*

- Break data out by sectors and look for changes; Construct linkages to electricity distribution reform;
- Prepare a set of indicators that have relevance to the project

TA 5.4 Document indicators. *Schedule: Week 10 to Week 12*

- Draft assessment of indicators, based on successes, failures, lessons learned;
- Conduct workshop or Delphi session to evaluate and revise indicators;

TA 5.5 Final documentation. *Week 13 to Week 15*

- Develop final version, which includes feedback and feasibility of a guide to future efforts in India and South Asia.

6 Peer Exchange of Senior Managers: Successful Rural Energy Distribution Models

An exchange of senior level managers is proposed for participants from one or more host organizations and BESCOM and the Department of Energy. The purpose will be to provide participants exposure to a successful rural electrification program in order to demonstrate viable approaches for electricity distribution reform that may be considered for adoption in Karnataka. The participants, senior managers and decision-makers, would focus at their respective host organization on effective implementation of policy, procedures and regulation. **N.B.** If possible, consideration could be given to staging this exchange in a timely fashion with respect to the ISO 9000 certification TA in order to optimize senior management exposure to the eight ISO Guidelines of: customer focus, leadership, involvement of people, process approach, systems approach to management, continual improvement, factual approach to decision-making and mutually beneficial supplier relationships. These principals, taken from ISO 9000:2000 and ISO 9004:2000 guidelines, are designed for use by senior management as a framework to guide their organizations toward improved performance.

Activity

TA 6.1 Contact potential sites for exchange. *Schedule: Week 1 to Week 3*

- Bangladesh, India, Philippines, US, Costa Rica, etc.;

TA 6.2 Identify candidate participants. *Schedule: Week 1 to Week 3*

- Coordinate through Ministries and Departments for selection of appropriate senior managers and decision-makers;

TA 6.3 Preparation of substance of exchange. *Schedule: Week 2 to Week 3*

- Taylor exchange to participants – policy, regulation, executive procedures and other key topics;

TA 6.4 Develop logistics of exchange. *Schedule: Week 3 to Week 5*

- Arrange with appropriate host organization(s);
- Prepare travel and funding arrangements;

TA 6.5 Conduct exchange. *Schedule: Week 6 to Week 8*

- Visit sites, organizations, agencies;
- Collect contacts and information/videos/CDs/DVDs;

TA 6.6 Debrief. *Schedule: Week 9*

- Evaluate exchange – successes and failures and implement improvements for future exchanges(s);
- Follow up with participants periodically to determine effectiveness of the exchange on change within the GOK organizations;

7 Peer Exchange of Operational Personnel: Successful Rural Energy Distribution Models

A peer exchange is proposed for selected GP staff and other relevant personnel to gain more in-depth exposure to operational practices used in providing rural electricity distribution services. The candidate participants of this exchange would tend to be those involved or

likely to be involved in the establishing new electricity services in their zilla and operational counterpart members in the exchange organization(s).

Activity

TA 7.1 Identify candidate participants. *Schedule: Week 1 to Week 4*

- GP staff and other personnel (perhaps BESCOM, water user groups, watershed protection groups, agricultural officers/extension agents); **N.B.** this last candidate would not be directly involved in operational responsibilities of electricity services, but is a key person to the water-energy nexus that makes the system work in Karnataka;
- Emphasis would be placed on individuals involved or likely to be involved in operation of new electricity services;

TA 7.2 Identify host organizations. *Schedule: Week 2 to Week 5*

- Candidate locations may be found in India or elsewhere in South Asia, but the key here is to find a suitable host with relevant experience and a similar culture, so that the exchange isn't overwhelmed with too much to learn;

TA 7.3 Brief candidates. *Schedule: Week 5 to Week 6*

- Prepare candidates for the job they will do when they return, the key factors to learn in the exchange, logistics, room, board and travel and funding;

TA 7.4 Affect the exchange. *Schedule: Week 6 to Week 12*

- Depending upon the position requirements, the time involved will vary;
- Consider repeating the process, i.e., a two to four week exchange, a return home to implement and then a return to the host for a second time to either reinforce learning or to practice operations at a different/higher level and likewise the host staff would return to the new organization to reinforce lessons and procedures;

TA 7.5 Prepare documentation. *Schedule: Week 12 to Week 14*

- Document the process and experiences and identify lessons learned that can be folded back into the process for more effective future exchanges.

8 ISO 9000 Certification of BESCOM

This is the requirement standard used to assess an organization's ability to meet customer and applicable regulatory requirements and thereby address customer satisfaction. It is now the only standard in the ISO 9000 family against which third-party certification can be carried.

Activity

TA 8.1 Initial briefing meeting with BESCOM management. *Schedule: Week 1*

- Discuss the process – timing – requirements of BESCOM (personnel, files, etc.);

TA 8.2 Establish the presence in BESCOM of the ISO 9001:2000 Requirements necessary for the internal audit. *Schedule: Week 2 to Week 6*

- System requirements;
- Management requirements;
- Resource requirements;
- Realization requirements;
- Remedial requirements;

TA 8.3 Conduct Gap Analysis, if needed. *Schedule: undetermined, depending upon what is needed – up to 8 or 10 weeks*

- Remediate gaps in requirements

TA 8.4 Conduct internal audit, considering all standards and procedures. *Schedule: Week 16 to Week 20*

- Audit all requirements;
- Develop summary, evaluation report, file review and implementation report;

TA 8.5 Conduct external (third party) audit by Registrar. *Schedule: Week 21 to Week 30*

- Introduction – audit profile, overview, procedure and plan;
- Audit process – the five requirements;
- Conclusion – summary, evaluation, report, file review, implementation coordination;

TA 8.6 Certification. *Schedule: Week 31*

- Registration as ISO 9001:2000 Quality Management System

Appendix F Building Capacity for Gram Panchayats to Implement the Government of Karnataka MOU Process: Preliminary Work Plan for Training Activities

SARI/Energy and other USAID experience with South Asia rural electricity distribution reform demonstrates that local involvement is essential to sustainable, commercial rural electricity supply. Since its inception, SARI/Energy under its RES component has been exploring approaches to and providing training for obtaining appropriate levels of rural consumer buy-in as a prerequisite for successful rural electricity distribution reform. The current GOK approach to attempt to mobilize the involvement of rural consumers in electricity distribution reform through their GPs mirrors many of the concepts being advanced by SARI/Energy. If GOK can successfully demonstrate its approach to addressing the rural dimension of electricity distribution privatization it will be extremely relevant to distribution reform throughout the South Asia region.

1 Basis for Gram Panchyat Electricity Supply Capacity Building Design

The Definitional Mission sampled twelve GPs in the four SARI/Energy Taluks and met with Taluk Panchayat officials form all four Taluks. From these meetings, meetings with BESCOM and GOK officials, and other South Asia rural electricity distribution reform experience, the following has been concluded as a basis for planning the *Building Capacity for GPs to Implement the GOK MOU Process* pilot project:

1.1 The GOK Model Memorandum of Understanding Between the Electricity Supply Company Limited, Zilla Panchayat, and Gram Panchyat

The Model MOU sets out GOK's planned strategy for progressively involving the GPs in low-voltage electricity distribution within their respective jurisdictions. The MOU provides for a three-phased approach to eventual complete take over of area electricity distribution by a GP. Exhibit I reproduces the Model MOU's phased involvement of the GPs in electric power sector reform.

Exhibit 1
Model MOU Gram Panchyat Provisions

I Phase of participation

a) To arrange regular payment of monthly electricity bills directly to ESCOMS without given scope for enforcement of discontinuation of power supply.
b) Will educate rural public, especially rural consumers on energy conservation measures to be adopted.
c) To under-take Meter Reading and Billing of all installations in the G.P. area except H.T. category of consumers and L.T. industrial Consumers.
d) Persuade consumers for prompt payment of electricity charges.
e) To assist in metering of IP Set installations.
f) To assist in enumeration of IP set installations.
g) To assist in identification of Idle Lines/electricity assets.
h) To assist in conversion of BJ/KJ installations where the beneficiaries are using more than one bulb connection.
i) To assist in identification of Theft and misuse of Electricity, unauthorized installations/loads, and disconnections thereof.

II Phase of participation

a) To take up Actual Revenue collection for the energy billed.
b) To attend consumer complaints and maintenance of Distribution Network by employing qualified technicians.
c) To assist Escoms to disconnect IP set/ rural consumers who do not pay up regular charges.

III Phase of participation

a) To purchase bulk Energy from ESCOMS and distribute in the G.P. Area.

Note: The above Model MOU information was provided directly to SARI/Energy by the GOK Energy Department

As stated in Exhibit I, the proposed approach progresses from a GP primarily assisting its electricity distribution company with billing, bill collections, and rectifying outstanding issues to actual electricity distribution over its jurisdictional area. For a typical GP, this would represent a significant transition in its utility service provision responsibilities. It should also be noted that some of the requirements being proposed for the GPs, such as metering of IP sets, bills collection from rural customers, and electricity theft reduction, have been long-term responsibilities of the ESCOMs and their processors, KTPCL and the KEB. These government companies, with resources far in access of those of the GPs collectively, have tried for at least a decade to address these issues without success.

A contributing factor in GOK adopting the Model MOU approach, in addition to attempting to enhance the attractiveness to potential investors of electricity distribution privatization, is the matter of electricity payment arrears from rural consumers, particularly IP sets and BJ/KJ consumers. When the four new electricity distribution companies were formed, these arrears

amounted to over Rs. 400 crores. Of this amount as part of financial structuring of the four new electricity distribution companies, Rs. 295 crores was transferred to a GOK account along with Rs. 148 crores in interest. GOK is planning to recover some of these arrears through the Model MOU process and is offering the GPs a share in any recovered arrears on a sliding scale tied to the actual amount collected by a GP.

A potential weakness of the Model MOU process is that it appears that GOK has developed the MOU terms and conditions with only limited inputs from and review by the GPs. In fact, most of the GPs met with during the Definitional Mission were not aware of the Model MOU plan, let alone its provisions. It also appears that there has only been limited input into the Model MOU development process from the rural management of the four ESCOMs.

1.2 GPs Ability to Effectively Respond to the GOK Model MOU

Electricity distribution, even at low-voltage levels, is a specialized business and one that appears to be outside of the current experience and capabilities of most GPs, at least in the four SARI/Energy Taluks. Given this situation, it is doubtful that most GPs can effectively respond to the requirements of the Model MOU. Even if, for whatever reasons, a GP signs the MOU, it will likely not have a clear understanding of the full set of actions or the possible consequences to it of becoming involved with rural electricity distribution operations.

From the small sample of GPs met with in the Definitional Mission, it is judge that considerable capacity building will be required for the GPs to be able to make sound decisions concerning their future roles in rural electricity distribution and be able to implement any actual operations on a sustainable, commercial basis. From the Definitional Mission, it appears that the operational component of a typical GP in the SARI/Energy Taluks consists of twelve board members elected by the GP electorate (it appears that about half of the board members are women), a permanent Secretary funded by GOK, and 5 - 10 employees. The employees are mainly involved with operating village water supply systems, taxes and fees collections, and accounting/reporting and the maintenance of GP physical facilities. The estimated annual total revenue of a typical GP in the SARI/Energy Taluks is approximately Rs 1 million.

One measure of the change that would be required if a GP were to undertake either Phase II or III of the Model MOU is the potential increase in its revenue. It is estimated that if a GP collected 100 percent of likely billed amounts for electricity in its jurisdiction at prevailing tariffs its annual revenue flow would double. This would require a significant increase in the number of GP employees and likely improvements in a GP's accounting and cash management abilities. As a further sign of the level of change that could be required, it appears that most GPs currently have difficulties in collecting more than 50 percent of the operating cost of their water supply operations. The latter operations do not use metering nor have significant billing operations.

Critical issues that the Model MOU ignores are those of electricity availability and supply quality. Because of a lack of generating capacity, the ESCOMs have been forced to ration electricity in recent years. This has resulted in rural consumers having access to electricity for only limited periods commonly without knowledge of when supply will be available and during inconvenient time periods, such as early morning. Even when electricity is supposed to be available, there are frequent supply curtailments. These conditions combined with the very poor quality of the electricity supplied are principal reasons that many rural consumers

use to justify non-payment for electricity. Without addressing both electricity availability and supply quality it is unlikely that an organization, but particularly GPs, will be able to cope with the critical electricity payments issue and associated need for metering IP sets.
The entry of GPs into any aspect of substantial rural electricity distribution will not be a trivial undertaking. Significant GP capacity building will be required for the GPs to make an informed decision to sign the Model MOU let alone explore options with GOK and/or an ESCOM better suited to their capabilities and conditions. This capacity building requirement needs to be clearly recognized if the Model MOU process is likely to succeed with a critical mass of GPs and if it is to achieve true buy-in from the GPs. Even if a GP decides not sign the Model MOU as the result of such capacity building, there will likely still be significant value in building the rural level of understanding necessary to eventually achieve the goal of realizing sustainable, commercial rural electricity supply.

It will also be necessary to develop capacity at the Taluk Panchayat level with regard to the requirements necessary for GPs to participate effectively in electricity distribution operations. It may also be necessary for a Taluk level entity to coordinate actions if multiple GPs combine forces to create a multi-jurisdiction electricity distribution entity of some type and/or contract with the private sector for electricity supply services.

1.3 Need to Build GP Understanding of the Water-Energy Nexus

Rural Karnataka is a major agricultural state with approximately 60 percent of its population living in its rural areas. Many of these rural areas, are experiencing severe water supply problems due to a combination of depleted ground water resources from overuse and drought. A particularly acute problem at the moment in the SARI/Energy Taluks is the inadequacy of village drinking water supply.

In rural India there exists a clear nexus between adequate water supply and electricity supply. This has been clearly demonstrated under USAID/India's Project WENEXA. Because for the constituents of many GPs, water rather than electricity supply is seen as their major economic problem, it is extremely important that the water-energy nexus be clearly understood by GPs in formulating practical responses to the Model MOU process. This is both an immediate and future issue for the GPs to appreciate and factor into their decisions on involvement with electricity distribution operations. It is immediate because of critical current water shortages – for both drinking and irrigation water. It is important for future planning because it is becoming clear that Karnataka's farmers cannot continue to chase the water table much longer. In the near future, ground water development must be replaced by water resource management if economic catastrophe is to be avoided.

The importance of the water-energy nexus is reflected in SARI/Energy's decision to include in the *Participatory Rural Energy Services in Karnataka Project* the Assess Water-Energy Opportunities pilot project.

1.4 Potential for GPs to Interact to Implement Model MOU Electricity Distribution Operations

The Model MOU is directed at individual GPs. However, given the economies of scale and specialty professional expertise required for electricity distribution operations, even at the rural distribution level, this may be counter productive. A more productive and efficient solution to the problems of rural electricity distribution might be the cooperation of multiple

GPs in a region to form entities that can capture economies of scale and afford to retain professional managers and employees. The cooperative dairies currently operating successfully in the four SARI/Energy Taluks are one example of the type of potential cooperation possible.
As with understand of the Model MOU and its potential implications, capacity needs to be built with the GPs with regard to all of the options available to them for participation in electricity distribution operations.

1.5 Likely Initial GP Business Ventures Related to Electricity Distribution Operations

The Definitional Mission has identified two operational areas where it is indicated that capacity building would likely be needed once a decision is made by a GP and/or group of GPs to implement the provisions of the Model MOU and appropriate operating entities have been established by one or more GPs. These are: 1) Metering, Billing, and Bill Collection; and, 2) Customer Relations Management (CRM). These two areas are currently viewed as the most likely areas that GPs would initially decided to become involved with and this is consistent with the provisions of the Model MOU.

As far as could be determine in the Definitional Mission, none of the GPs in the four SARI/Energy Taluks are currently ready for such capacity building. This will be confirmed once actual interaction with the GPs is initiated. As a result, it will likely be necessary to first build capacity among the GPs in decision making with regard to the Model MOU and the formation of electricity distribution business entities prior to capacity building in the two identified business operational areas.

1.6 Use of Mysore Institute for Rural Development for Capacity Building

The Abdul Nazeersab State Rural Development Institute, Mysore (the Mysore Institute for Rural Development), part of the GOK Rural Development and Panchayat Raj Department (RDPR), is currently responsible for training of GPs in basic governance and administrative procedures. The Principal Secretary for the RDPR Department has recommended that the Mysore Institute for Rural Development be considered as the primary deliverer of *Building Capacity for GPs to Implement the GOK MOU Process.* In the Project planning process, it was agreed that SARI/Energy would meet as soon as practical with the Mysore Institute for Rural Development to plan design of the initial required capacity building.

Realization of actual rural electricity supply capacity building delivery capability within the Mysore Institute for Rural Development could facilitate capacity building among GPs throughout Karnataka under GOK sponsorship.

2 Proposed GP Rural Electricity Distribution Capacity Building Approach

The proposed approach to building required GP capacity is targeted at working directly and primarily with the GPs in the four SARI/Energy Taluks. The proposed capacity building consists of two phases:

- Phase 1 – GP Decision Making and Business Planning Capacity Building
- Phase 2 - GP Electricity Business Skills Training.

The two-phase approach is proposed because of the current perceived capacity building needs of the GPs and SARI/Energy Project implementation planning requirements.

The objectives of Phase 1 are to:

- Prepare a set of GPs in the four SARI/Energy Taluks to make sound, considered decisions with regard to their participation in electricity distribution operations based on the provisions of the Model MOU

- For GPs that decide and/or show interest in direct participation in electricity distribution operations, capacity building to appreciate the full business requirements of such participation and assess the potential impacts of participation on overall GP operations

- For GPs that decide and/or show interest in direct participation in electricity distribution operations, capacity building to initiate implementation of such operations including development of business plans, obtaining professional assistance, and obtaining financing.

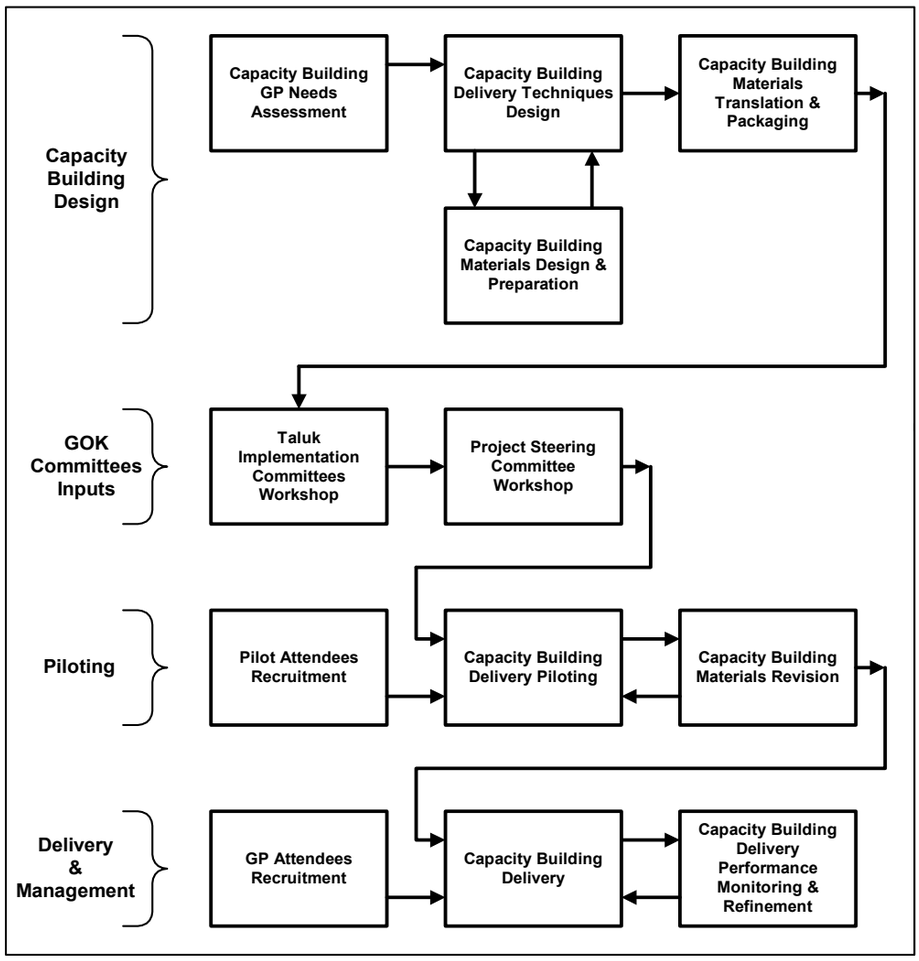
Phase 2 will support the GPs that have decided to implement electricity distribution operations in acquiring the professional management skills required for such operations. It will provide professional training to the managers and support employees of new GP electricity distribution entities. As previously indicated based on the Definitional Mission, two areas for such training have been tentatively identified: 1) Metering, Billing, and Bill Collection; and, 2) Customer Relations Management (CRM).

It is proposed that each phase consist of two capacity building activities that will primarily involve GP members (elected members) and current or new GP employees, such as the GP Secretary. (The contents of the four proposed capacity building activities are discussed in the next section.) A common approach is proposed for the design and delivery of each of the planned four capacity building activities. This approach is presented in Exhibit II. The proposed approach is based on information obtained during the Definitional Mission. As more information is obtained from direct interaction with the GPs, Taluk Panchayats, and others it may be necessary to revise the approach to better fit actual conditions, such as GOK electricity distribution privatization requirements, refined understanding of GP capabilities and capacity building requirements, and the capabilities and delivery capacity of Karnataka capacity building institutions.

Presently, it is planned to attempt to retain a single capacity building institution for the delivery of all four planned capacity building activities. At minimum, it is planned that a single institution delivers the two Phase 1 activities. CORE International will work closely with this institution to design effective, fully tested capacity building techniques and materials and train its trainers who will then deliver the actual capacity building in Kannada at the GP level. As previously indicated, the current candidate institution for capacity building delivery is the Mysore Institute for Rural Development. Accordingly, meetings will be held to with the Institute immediately upon Project implementation to assess its capacity building capabilities in terms of rural electricity supply and abilities to work with GP and Taluk Panchayat personnel. There will also be a thorough inspection of the Mysore Institute for Rural Development's faculties for actual capacity building delivery and the boarding of capacity building attendees. If necessary, additional capacity building skills and/or facilities

will be retained from other Karnataka institutions to supplement or strengthen those of the Mysore Institute for Rural Development.

Exhibit II
Proposed GP Capacity Building Approach



A primary reason for the decision to attempt to use a single Karnataka capacity building institution is the desire for capacity building activities replication beyond the level that can be supported by SARI/Energy. It is intended that the selected institution deliver the SARI/Energy developed capacity building activities outside of the *Building Capacity for GPs to Implement the GOK MOU Process* pilot project. CORE International intends to negotiate this form of cost sharing as part of retaining the Karnataka capacity building institution(s) for capacity building activities delivery. The use of a single capacity building institution will also likely reduce capacity building costs, compress development times, and help provide for consistency between the four planned capacity building activities.

As presented in Exhibit II, the common approach to each capacity building activity consists of four parts: design, GOK committee's inputs, piloting and delivery and delivery management. The initial task in design will be a Capacity Building GP Needs Assessment targeted to a specific capacity building activity. In this assessment, the specific information required for effective design of each activity will be acquired through direct interaction with

GPs in the four SARI/Energy Taluks and with other entities as required, such as the Taluk Panchayats, the RDPR Department and BESCOM. There may also be benefits for some capacity building activities to involve rural NGOs and institutions, such as XIMB, that are working with GPs on water, energy, and governance issues. A key aspect of the Capacity Building GP Needs Assessments will be assurance that GP requirements have been clearly defined and that the full range of resources required for effective, sustainable capacity building have been identified. The Karnataka capacity building institution professionals that will be delivering the actual capacity building will be an integral part of the Capacity Building GP Needs Assessment teams.

Following the Needs Assessment and building on past rural energy capacity building experience, both delivery techniques and presentation materials for each capacity building activity will be developed in parallel. The delivery techniques and presentation materials will be developed jointly by CORE International and the retained Karnataka capacity building institution(s) delivery team. Incorporated into the presentation materials will be the results of the SARI/Energy pilot project's TA work and demonstrations, as appropriate.

Both capacity building activity delivery techniques and presentation materials will be developed initially to a stage where feedback is beneficial. Then feedback will be obtained from both the Taluk Implementation Committees and the Steering Committee in the form of workshops. Following, this the techniques and materials for a capacity building activity will be revised as required and then translated into Kannada for pilot testing. The materials will consist, at minimum, of slides, roll playing exercises, videos, charts, evening work assignments, and short monographs on specific topics.

Thorough pilot testing of each capacity building activity is a critical step in the proposed capacity building approach. In the piloting of each activity, a group of approximately 30 testers from proactive GPs, Taluk Panchayats, and others, as appropriate, will be used to thoroughly analyze and critique both the capacity building techniques and materials. In the pilot testing, the deliverers would in general deliver specific capacity building modules (each activity will consist of a number of discrete modules) as initially designed. After each module is presented, the testers would critique the presentation techniques and materials used and recommend specific potential improvements for consideration. This delivery of individual capacity building modules followed by testers critiques would be undertaken for each module in its planned deliver sequence.

After all of the capacity building activity modules have been presented and individually critiqued there would be a general analysis of the effectiveness of the overall techniques and presentation materials. To conduct the piloting, the testers would be brought to the actual capacity building delivery facilities and be resident there throughout the pilot testing. During the Capacity Building GP Needs Assessment, special effort will be made to identify the GP and other personnel to participate as testers in the pilot testing.

Following the pilot testing of a capacity building activity, the results would be used to revise both capacity building techniques and materials and finalize the activity for routine delivery. Also, in parallel with the pilot testing and partially using inputs from the testers, recruitment of GP capacity building attendees would be initiated to allow the initiation of capacity building routine delivery as soon as practical after completion of the Capacity Building Techniques and Materials Revision Task.

The Karnataka capacity building institution retained will be responsibly for routine delivery of each capacity building activity. But during their delivery, interpreters will be used by CORE International to monitor delivery performance and obtain direct feedback for activity refinement. The Capacity Building Delivery Performance Monitoring and Refinement Task will continue throughout the *Building Capacity for GPs to Implement the GOK MOU Process* pilot project.

3 Planned Activities for Building Capacity in Gram Panchyat to Implement the Government of Karnataka MOU Process

Exhibit III presents an overview of the four planned capacity building activities and workshops with the Taluk Implementation Committees and the GOK Steering Committee. Capacity building activities 1 through 4 constitute Phase 1 and activities 5 and 6 Phase 2.

Exhibit III
Planned Capacity Building for GPs to Implement the GOK MOU Process

Capacity Building Activity	Activity Phas	Activity Level (No	GP Participatio Level [1]	Total Participatic Level (No. Attendees)
Phase 1 – GP Decision Making and Business Planning Capacity Building				
1. Taluk Implementation Committees Model MOU Process Capacity Building Workshop (1 day)	NA	2 Minimum	8 GPs	28 - 32
2. Pilot Projects Steering Committee Model MOU Process Capacity Building Workshop (½ day)	NA	2 to 4	TBD	TBD
3. Understanding and Decision Options for Implementing the Model MOU	Pilot [2]	1	10 GPs [3]	30 [4]
	Delivery	2	30 GPs	60
	Subtotal	3	40 GPs	90
	Potential Cost Sharing	2	Additional 30 GPs	Additional 60
4. Requirements and Procedures for Forming GP Rural Electricity Supply Business Entities	Pilot [2]	1	10 GPs [3]	30 [4]
	Delivery	1	15 GPs	30
	Subtotal	2	25 GPs	60
	Potential Cost Sharing		Additional 15 GPs	Additional 30
Phase 2 – GP Electricity Business Skills Training				
5. Metering, Billing, and Collections Business Processes Training	Pilot	1	10 GPs	30
	Delivery [4]	2	20 GPs	60
	Total	3	30 GPs	90
6. Customer Relations Business Processes Training	Pilot	1	10 GPs	30
	Delivery [4]	2	20 GPs	60
	Total	3	30 GPs	90

Notes:
(1) Typically, each GP would be represented in a capacity building activity by two of its constituents (members, Secretary, and employees).
(2) Currently, the pilot activity is estimated to have a 10-day duration, but this may change as activities development proceeds.
(3) The pilot involves training of master capacity building implementers and activity materials refinement using GP and other Taluk personnel as test participants.
(4) Includes GP and approximately 10 Taluk level other personnel.

As presented in Exhibit III, it is planned to deliver a minimum of 15 events including Taluk Implementation Committees and Steering Committee workshops. It is estimated that 40 - 50 GPs would participate in these capacity building events and that the number of actual participants would range from 90 to 120. Cost sharing on the part of the Karnataka capacity building institution(s) could significantly increase the number of GPs impacted by the SARI/Energy capacity building.

Also, as presented in Exhibit III, it is planned under SARI/Energy to deliver the *Understanding and Decision Options for Implementing the Model MOU* capacity building activity three times. It is estimated that this would result in provision of initial capacity building to 40 individual GPs in the four SARI/Energy Taluks; a coverage of **35%** of the total GPs in these Taluks. This includes GPs that would participate in the capacity building activity pilot testing. Two costs shared, additional capacity building deliveries would raise the coverage to **60%**.

The second activity under Phase 1 would be directed primarily at GPs that attended the first capacity building activity. Hence, it is planned to deliver under SARI/Energy the *Requirements and Procedures for Forming GP Rural Electricity Supply Business Entities* twice. It is estimated that this would result in provision of capacity building to 25 individual GPs that had decided to become involved with electricity distribution operations in some form.

3.1 Taluk Implementation Committees Model MOU Process Capacity Building Capacity Workshops

GOK is to establish Implementation Committees in each of the four SARI/Energy Taluks. For the *Building Capacity GPs to Implement the Government of Karnataka MOU Process* pilot project, the Implementation Committees will provide information on their respective GPs and their perspectives and insights on GP and Taluk Panchayat capacity building requirements related to the Model MOU process. They will also provide coordination for the four capacity building activities GP Capacity Building Needs Assessments.

After initial completion of the Design Tasks identified in Exhibit II, for at least the two Phase 1 capacity building activities, workshops bringing together all four Implementation Committees would be convened. The objectives of these workshops are to:

- Present to the Committees the techniques and presentation materials planned for each capacity building activity

- Obtain feedback from the Committees on changes to both proposed capacity building activity topics, delivery techniques, and presentation materials

- Obtain advice from the Committees on the recruiting of GPs for capacity building
- Identify Taluk level capacity building activity pilot testing participants
- Provide for communications between SARI/Energy and GPs following specific capacity building activities
- Identify any issues to be discussed with the GOK Steering Committee related to the workshop capacity building activity.

3.2 Pilot Projects Steering Committee Model MOU Process Capacity Building Workshops

GOK is to establish a Steering Committee for the Participatory Rural Energy Services in Karnataka Project. This Steering Committee will coordinate Project activities with various GOK entities and provide inputs to SARI/Energy and its implementing contractors.

It will be important to communicate and coordinate with the Steering Committee on all aspects of capacity building. Part of such communication and coordination will occur as the result of normal Steering Committee meetings. However, to ensure that the Steering Committee is fully briefed and has full opportunity to provide its inputs related to specific capacity building activities, it is planned to hold a Steering Committee workshop for each of the four planned capacity building activities. These workshops will be scheduled immediately after the analogous Taluk Implementation Committees workshops.

The objectives of the Steering Committee workshops are to:

- Present to the Committee the techniques and presentation materials planned for each capacity building activity
- Present to the Committee feedback received from the Taluk Implementation Committees
- Obtain feedback form the Committee on changes to both proposed capacity building activity topics; delivery techniques, and presentation materials.

3.3 Understanding and Decision Options for Implementing the Model MOU

This will be the first GP capacity building activity to be designed and delivered. Key objectives of this activity are to:

- Significantly increase GP understanding of the Karnataka electricity supply industry, its operations as they affect rural consumers, and economics and current problems
- Build GP awareness of electricity supply as a business, the water-energy nexus, and the ramifications thereof for rural electricity distribution
- Explain, analyze, and discuss the GOK Model MOU proposal
- Provide understanding of the rural electricity distribution business options open to GPs to participate in consistent with the GOK Model MOU and the required resources

- Provide information, analysis, and communications coaching required to allow GPs to respond responsibly to the GOK Model MOU

- Strengthen GP member/employee communication skills so that the capacity building participants can present what they have learned when they return to their GPs

- Build confidence in SARI/Energy as a source for unbiased information regarding rural electricity distribution reform.

The Capacity Building GP Needs Assessment Task will determine the actual material to be covered in the *Understanding and Decision Options for Implementing the Model MOU* capacity building activity. However, topics that may be addressed include:

- Electricity industry overview and cost of rural electricity supply
- The current Karnataka rural electricity supply situation
- The Karnataka electricity distribution privatization program
- Basic understanding of rural electricity subsidies
- Rural electricity supply as a commercial business
- Electricity distribution regulation overview
- General business options for rural electricity supply and rural experience with these options
- Rural electricity supply planning concepts
- GP level rural governance and decision making
- Water-energy nexus overview
- Understanding the requirements of the GOK Model MOU
- Assessing the actual rural electricity supply opportunities and requirements
- Understanding the potential risks associated with rural electricity supply options
- Communicating issues
- Sources of business models development and technical support
- Steps to move forward with the GOK Model MOU
- GP capacity building presentations preparation with critiqued examples presented by GPs.

A requirement for capacity building attendance will be that each GP, as part of the activity, develop a presentation to present to its GP members, employees, and constituents on return. Selected GPs will present and have their presentations critiqued as part of the capacity building activity.

The anticipated duration of the *Understanding and Decision Options for Implementing the Model MOU* capacity building activity is 3 to 5 days.

3.4 Requirements and Procedures for Forming GP Rural Electricity Supply Business Entities

This capacity building activity deals with how to form actual GP led, sustainable, commercially based rural electricity distribution business entities. It is anticipated that most of the GPs that will attend this second capacity building activity will have attended the *Understanding and Decision Options for Implementing the Model MOU* capacity building

activity. The decision to attend will be a consequence of a GP deciding to move forward toward implementing, individually or in cooperation with other GPs, some type of electricity distribution operation as a business enterprise.

Key objectives of this activity are to:

- Provide GPs with the information and planning tools that they require to finalize decisions on actual formation of electricity distribution business entities
- Provide GPs with an understanding of business planning concepts and development of business plans appropriate to their likely electricity distribution businesses
- Identify key issues that the GPs will need to address in establishing electricity distribution business entities
- Identify sources of support in establishing electricity distribution business entities.

As with all capacity building activities, the activity Capacity Building GP Needs Assessment Task will determine the actual material to be covered in the *Requirements and Procedures for Forming GP Rural Electricity Supply Business Entities* capacity building activity. However, topics that may be addressed include:

- Business fundamentals
- Structuring of a business from the GP perspective and available business structure options
- Business accounting fundamentals overview
- Business planning and business plans
- Economies of scale in rural electricity distribution operations
- Rural electricity supply business model case studies
- Electricity distribution operations issues and opportunities analytical techniques
- Financing analysis and sourcing
- Business risks assessment overview
- Legal requirements and counsel sources
- Combining GP services including water supply
- Customer relations management overview
- Water resources management and demand side management overview
- Resources requirements estimation and sourcing
- Services outsourcing options.

The anticipated duration of the *Requirements and Procedures for Forming GP Rural Electricity Supply Business Entities* is 5 days.

3.5 Metering, Billing and Collections Business Processes Training

This capacity building activity is part of Phase 2 and will depend on decisions made by the GPs and, possibly others, with regard to direct GP participation in electricity distribution operations and the role of metering, billing, and bills collection in the selected operations. The objective of this specialized training will be to train the GP managers and support staff that will be responsible for the actual establishment and management and operation of

metering, billing, and bill collections operations. The training will allow the managers to determine the specific types of systems they will need in their operations, the types of personnel they will need to employ, and how to manage the required resources.

The scope of the training will be developed at the beginning of Phase 2. Some likely training areas include:

- Metering approaches and relevant rural experience in India and other appropriate developing nations (includes both retail and distribution system metering)
- Billing and collections approaches and relevant experience in India and other appropriate developing nations
- Integration of metering, billing, and bill collections
- Customer relations management concepts
- Establishment of local bodies to support revenues collections and actual revenues collections (includes capture of XIM rural support model and experience in Karnataka)
- Metering and billings performance monitoring, reporting, and analysis
- Establishment of Customer Registers
- Establishment of a Revenue Collections Baselines
- Metering systems options including commercial hardware and software
- Billing systems options including commercial software
- Metering and billing systems training requirements
- Cash management concepts
- Options for dealing with non-payments
- Human resources management concepts.

3.6 Customer Relations Business Processes Training

This capacity building activity is part of Phase 2 and the same qualifications cited for the *Metering, Billing, and Collections Business Processes Training* also apply to it.

The scope of the training will be developed at the beginning of Phase 2. Some likely Customer Relations Management (CRM) training areas include:

- CRM concepts and relevant experience in a rural electricity supply context – the importance of the customer
- CRM systems for small electricity distribution operations
- Design and costing of rural CRM programs, including complaint centers
- Creating customer awareness of CRM
- CRM quality assurance and quality control
- CRM training requirements
- Approaches to IP set enumeration
- Integration of CRM with other utility operations.

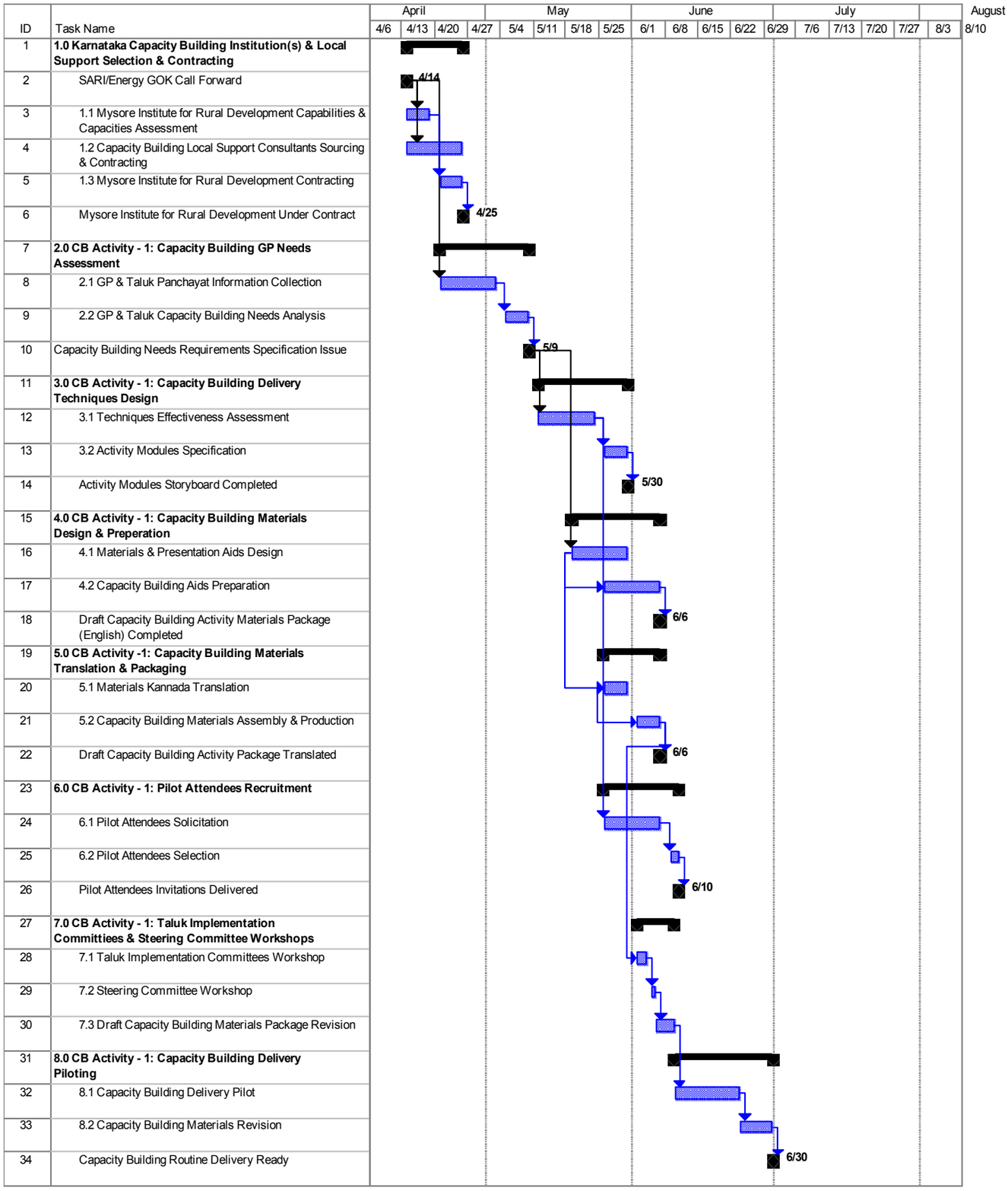
4 Proposed Building Capacity for Gram Panchyat to Implement the Government of Karnataka MOU Process Schedule

Exhibit IV presents the proposed schedule for implementing Phase 1 of the *Proposed Building Capacity for Gram Panchyat to Implement the Government of Karnataka MOU*

Process pilot project. This schedule will be used to track and report on pilot project Phase 1 implementation progress.

With the proposed schedule it will be possible to realize significant GP capacity building within the first 90 days of the pilot project. Routine delivery of the critical first capacity building activity - *Understanding and Decision Options for Implementing the Model MOU* - would commence at the end of June.

Exhibit IV
Proposed Building Capacity for Gram Panchyat to Implement the Government of Karnataka MOU Process Schedule



ID	Task Name
1	**1.0 Karnataka Capacity Building Institution(s) & Local Support Selection & Contracting**
2	SARI/Energy GOK Call Forward
3	1.1 Mysore Institute for Rural Development Capabilities & Capacities Assessment
4	1.2 Capacity Building Local Support Consultants Sourcing & Contracting
5	1.3 Mysore Institute for Rural Development Contracting
6	Mysore Institute for Rural Development Under Contract
7	**2.0 CB Activity - 1: Capacity Building GP Needs Assessment**
8	2.1 GP & Taluk Panchayat Information Collection
9	2.2 GP & Taluk Capacity Building Needs Analysis
10	Capacity Building Needs Requirements Specification Issue
11	**3.0 CB Activity - 1: Capacity Building Delivery Techniques Design**
12	3.1 Techniques Effectiveness Assessment
13	3.2 Activity Modules Specification
14	Activity Modules Storyboard Completed
15	**4.0 CB Activity - 1: Capacity Building Materials Design & Preperation**
16	4.1 Materials & Presentation Aids Design
17	4.2 Capacity Building Aids Preparation
18	Draft Capacity Building Activity Materials Package (English) Completed
19	**5.0 CB Activity -1: Capacity Building Materials Translation & Packaging**
20	5.1 Materials Kannada Translation
21	5.2 Capacity Building Materials Assembly & Production
22	Draft Capacity Building Activity Package Translated
23	**6.0 CB Activity - 1: Pilot Attendees Recruitment**
24	6.1 Pilot Attendees Solicitation
25	6.2 Pilot Attendees Selection
26	Pilot Attendees Invitations Delivered
27	**7.0 CB Activity - 1: Taluk Implementation Committiees & Steering Committee Workshops**
28	7.1 Taluk Implementation Committees Workshop
29	7.2 Steering Committee Workshop
30	7.3 Draft Capacity Building Materials Package Revision
31	**8.0 CB Activity - 1: Capacity Building Delivery Piloting**
32	8.1 Capacity Building Delivery Pilot
33	8.2 Capacity Building Materials Revision
34	Capacity Building Routine Delivery Ready

ID	Task Name
35	**9.0 CB Activity - 1: Capacity Building Routine Delivery**
36	9.1 GP Capacity Building Routine Delivery No. 1
37	9.2 GP Capacity Building Routine Delivery No. 2
38	9.3 GP Capacity Building Capacity Building Monitoring & Refinement
39	9.4GP Capacity Building Effectiveness Review Workshop
40	GP Capacity Building Effectiveness Analysis Issued
41	**10.0 GP Capacity Building Cost Share Delivery**
42	10.1 GP Capacity Building Cost Share Delivery No. 1
43	**11.0 CB Activity - 2: Capacity Building GP Needs Assessment**
44	**12.0 CB Activity - 2: Capacity Building Delivery Techniques Design**
45	**13.0 CB Activity - 2: Capacity Building Materials Design & Preperation**
46	**14.0 CB Activity -2: Capacity Building Materials Translation & Packaging**
47	**15.0 CB Activity - 2: Pilot Attendees Recruitment**
48	**16.0 CB Activity - 2: Taluk Implementation Committiees & Steering Committee Workshops**
49	**17.0 CB Activity - 2: Capacity Building Delivery Piloting**
50	**18.0 CB Activity - 2: Capacity Building Routine Delivery**
51	**19.0 CB Activity - 2: GP Capacity Building Cost Share Delivery**