

**TECHNICAL ASSISTANCE FOR
RURAL POWER FOR POVERTY REDUCTION II PROGRAM**

USAID Contract No. 388-C-00-02-00124-00

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RPPR II WORK PLAN YEAR #2

1 October 2003 Through 30 September 2004

(Approved By USAID)

Prepared By

NRECA INTERNATIONAL, LTD.

In Partnership With

RURAL ELECTRIFICATION BOARD OF BANGLADESH

And

USAID MISSION TO BANGLADESH

WORKPLAN FOR YEAR #2
October 1, 2003 to September 30, 2004
Technical Assistance for Rural Power For
Poverty Reduction II Program

TABLE OF CONTENTS

- I. RPPR II Program Overview

- II. Major Accomplishments Under Annual Work Plan Year #1

- III. Program Activities with Tasks
 - Program Activity A: Planning and System Engineering**
 - Task A.1: Service Territory Database.
 - Task A.2: PBS Short and Medium Range Planning

 - Program Activity B: Operations and Maintenance Programs**
 - Task B.1: Preventive Maintenance Programs
 - Task B.2: Material Supply for O&M Program

 - Program Activity C: Strengthen Utility Performance**
 - Task C.1: Strengthen Training Program and Procedures
 - Task C. 2: Enhance Computerization in REB and PBSs

 - Program Activity D: Supplemental Tasks**
 - Task D.1: Updating Engineering and Construction Standards
 - Task D.2: Socio-Economic Impact Assessment

- VI. Annual Work Plan Exhibits
 - A. Implementation Schedule
 - B. Staffing Pattern
 - C. Budget Information

I. RPPR II PROGRAM OVERVIEW

General Description of RPPR II Program:

The objective of the RPPR II is to continue USAID's support of rural electrification in Bangladesh by concentrating on strengthening business operations and sector management so as to ensure institutional self-sufficiency and sustainability. Ultimately, the RPPR II will support USAID's overall objectives of poverty reduction in Bangladesh. The activities undertaken by REB and NRECA during this first year of the RPPR II program will be aimed at beginning the process of strengthening management and technical capability of the a group of selected PBSs. These activities will promote credibility and viability among these entities so that IFI and MDB donor funding will continue to be available for infrastructure and ongoing technical assistance; and will assist in preparing the REB system for the changes in the Bangladesh electric industry.

RPPR Mission Statement:

"To reduce rural poverty by enhancing the capacity of the PBSs to provide efficient user-owned electric service for the benefit of the customers."

RPPR II Program Objectives:

The overall RPPR II Program will promote the sufficiency and sustainability of the RE Program as a means of ensuring that the gains made over the last twenty five years will be continued with a reduced need for foreign assistance. Specifically the RPPR Program involves the completion of a eight specific Tasks under four Program Activities that support the following four main objectives:

- **Planning and System Engineering:** This Activity involves the completion of two tasks, including extending the geographic information systems (GIS) to an additional seven PBSs beyond the four systems developed under RPPR; developing improved planning capabilities at REB and the consulting engineering firms serving two PBSs. These efforts will be led by a long term Engineering and Operations Advisor supported by two short-term specialists. The GIS Specialist will provide specific technical support for development of the GIS task. The Planning Specialists will provide training to the consulting engineers in advanced analysis techniques. The expertise developed from the work in these limited number of PBSs will be expanded to additional PBSs.
- **Operations and Maintenance Program:** The focus of this Activity will include undertaking two tasks - strengthening preventive maintenance programs at two PBSs and working with the REB to institutionalize maintenance materials procurement and warehousing at REB and the PBSs. This Activity will be led by the Engineering and Operations Advisor and will be supported by two short-term specialists. The Maintenance Systems Specialist will provide specific guidance on execution and planning of line and equipment maintenance tasks. The Materials Specialist will work with REB and the PBSs to streamline maintenance material acquisition and warehousing.
- **Strengthening Utility Performance:** This focus area will involve two tasks. NRECA will work to strengthen the REB training function and complete the computerization task begun under RPPR I. The effort will be guided and managed by the Team Leader. The Team Leader will be supported by two short term specialists with expertise in training and computerization. Because of the demands on the Team Leader's time and the limited funding available to support the specialists, the bulk of the

responsibility for execution of both the training support and computerization programs will fall to seasoned local professionals, all of whom are long term NRECA employees

- **Supplemental Tasks:** This focus area includes Tasks of a specific nature which have been requested by REB and which do not fall into any of the categories above. One task consists of a review and updating of the engineering and construction standards in use at REB with an eye to adapting them both to changing times and to new requirements for such things as construction of primary line in densely populated urban areas taken over from BPDB. In addition, the need for a socio economic assessment of the impact on rural poverty of electrification has been recognized for some time, and this focus area will include the further institutionalization at REB of capability for evaluating such impacts. The standards review will be carried out by an Engineering Specialist under the supervision of the Engineering and Operations Advisor, while the socio economic assessment will be conducted by local professionals on NRECA's staff under the supervision of the Team Leader.

RPPR Program Elements:

- Implementing Agency: Rural Electrification Board
- Duration: Five Years: Sept 26, 2002 through September 30, 2007
- Total Amount: US\$ 9.69 million (Tk.56.2 crore)
- Donor Funding: US Agency for International Development (USAID) - Contract

Program Implementation Strategy As "Partnership"

The design and development of the original RPPR I Program was through a "partnership" between the REB, USAID, and NRECA International, Ltd, and this partnership arrangement will continue in RPPR II. The design of the Program was completed under a *Tripartite Agreement* between the partners. With the approval of the RPPR Program by the GOB and the execution of the *Results Package Agreement* between the GOB's Economic Resource Division (ERD), the partners have entered into a *Trilateral Agreement* that provides direction for the implementation of the RPPR II Program. This Agreement outlines the various responsibilities of the respective partners.

Development of Annual Workplan Year #1

Activities undertaken during Year #1 of RPPR II will focus specifically on the initial RPPR II framework as it was developed. As of the date this is written, the Government of Bangladesh has not approved the Technical Assistance Project Proforma (TAPP). It is assumed that this will occur momentarily and the work plan is based on an assumption that the delay in the TAPP approval will not affect project activities.

Technical assistance efforts for Year #1 will include some activities that are completely new, as well as activities that are continuations of the work initiated under RPPR I. For the tasks, which are completely new, the activities of Year #1 will tend to be organizational and logistical in nature in preparation for establishing proper foundations for the real implementation that will occur in the following years of the Program. In a number of cases, mainly new activities and tasks, it will be necessary to define the roles of REB, NRECA and the PBSs in the light of project requirements. Appropriate contact points will be assigned and any delegations of authority necessary to undertake the projects tasks will have to be made. In light of the incorporation of the consulting engineering firms as having significant focus of assistance in two

project tasks, it is assumed that REB will successfully conclude discussions with the firms regarding compensation for the new services being provided to the PBSs and that such issues will not delay implementation of the project tasks. In the event where REB and the consulting engineers cannot arrive at acceptable arrangements for compensation in a reasonable timeframe, then project delays will likely ensue and alternative financial arrangements will have to be discussed.

For some project activities that are continuations of the work done under RPPR I, such as training support and computerization, RPPR II requires an assessment of needs for future support and subsequent activities will be tailored to the results of the needs assessment. In each case, development of the needs assessment has been incorporated into the work plan. Some specific sub-tasks that will emerge from the Needs Assessment and as such it is not possible to reflect all of these sub-tasks in the Work Plan at this time.

II. MAJOR ACCOMPLISHMENTS UNDER ANNUAL WORKPLAN YR #1

Program Activity A: Planning and System Engineering

Task A.1: Service Territory Database.

- Geographic Information System (GIS) completed for two PBSs Natore and Pabna using a team of four consulting engineering firms with significant progress in the formal development of the actual data base for each PBS.
- Additional refinement of macros within the GIS package was completed to improve the accuracy of the financial analysis process that is utilized to analyze proposed projects.
- Draft Policy Instruction for development of Geographic Information System (GIS), including the division of responsibilities amongst the stakeholders was prepared and submitted to REB for review and finalization.

Task A.2: PBS Short and Medium Range Planning

- Completed thorough review of the planning process that was being used by the REB and the Consulting Engineering firms providing engineering services to the PBSs.
- Proceeded with significant data gathering required for inclusion into the planning model that was developed for the preparation of the planning document using the Milsoft engineering package for Manikganj PBS, which is the first PBS selected for this planning task.
- Successfully resolved various compatibility issues to allow for the utilization of the GIS database with the Milsoft models for running system studies (voltage drop, load flow, etc.) as part of the planning process.
- Participated with NRECA Computer Team in support of the development of a new Electronic Equipment Card (EEC) software package designed for tracking the installation and maintenance of all system equipment (e.g., transformers, voltage regulators, capacitors, etc.), which is complementary to Task B.1.

Program Activity B: Operations and Maintenance Programs

Task B.1: Preventive Maintenance Programs

- The Short Term Maintenance Specialist completed two assignments and proceeded with work on the following tasks:
 - Formulation of a preliminary plan for approaching this Task
 - As a result of numerous field visits, various obstacles were identified which are hampering the implementation of an effective maintenance program for the PBSs.
 - Development of an initial training plan for improving the O&M skills of PBS and REB personnel was initiated.
 - Various preliminary options were identified as appropriate interventions to help eliminate the backlog of work that sometimes occurs at the REB Savar Work Shop.
 - Began initial conceptualization of the use of a software package for implementing an appropriate maintenance program for both REB and the PBSs.
- A thorough review of REB & PBS maintenance guidelines was initiated and the development of recommended revisions is currently underway.

- Participated with NRECA Computer Team in support of the development of a new Electronic Equipment Card (EEC) software package designed for tracking the installation and maintenance of all system equipment, which is complementary to Task A.2.

Task B.2: Material Supply for O&M Program

- Progress on with this Task was limited due to delays in the recruitment of a qualified ST Materials Management Specialist.
- Some of the material supply problems that REB and the PBSs are faced with were identified during various visits to PBSs that were related to other tasks.
- Investigations by the ST Maintenance Specialist confirmed that the inadequate supply of O&M materials to both REB and the PBSs is severely hampering the maintenance work at the PBSs and at output from the REB Workshops.

Program Activity C: Strengthen Utility Performance

Task C.1: Strengthen Training Program and Procedures

- Curriculum development activities included work on the design, development, pilot testing, finalization of curriculum materials (Trainer and Trainee Manuals), which was followed by implementation of the following training programs:
 - Records Management for REB and PBS officers staff (M115 and M116) – English and Bangla
 - Office Management for REB and PBS officers staff (M110) – English and Bangla
 - Management: Its Nature and Scope for REB and PBS officers staff (M105 and M106) – English (Note: Bangla versions for both are in process.)
 - Operation & Maintenance of Automatic Reclosures (ACRs) for Lineman (TL040) English and Bangla
 - Operation & Maintenance of Automatic Reclosures (ACRs) for Engineers (TO220) English
 - REB General Accounting Manual for REB officers staff (IF500) - English
 - REB Accounting Procedures for REB officers staff (IF505) – English and Bangla
- Curriculum development activities included work on the design and development of approved Curriculum Outlines, with work currently in process on the development of the curriculum materials (Trainer and Trainee Manuals) for the following training programs:
 - Operation & Maintenance of Voltage Regulators for Lineman (TL 044) – English and Bangla
 - Operation & Maintenance of Voltage Regulators for Engineers and Sub-Assistant Engineers (TO235 and TO237) – English
 - PBS General Accounts Manual for PBS officers staff (IF300, IF305, IF310) – English
 - PBS Accounting Procedures for PBS officers staff (IF315) – English and Bangla
 - Planning and Acting: Getting the Job Done for PBS Billing Supervisors (IM121) – English and Bangla
 - Performance Appraisal and Employee Development for PBS Billing Supervisors (IM141) – English and Bangla
 - Controlling: Keeping Plans on Track for PBS Billing Supervisors (IM135) – English and Bangla
 - Inter-Personal Communication Skills for PBS Billing Supervisors (IM152) – English and Bangla

- Curriculum staff supported a Continued work on revisions of the following training materials that were previously developed but never finalized in the standard training manual format:
 - Installing & Maintaining Solar Home Systems for the REB PBS Technical Personnel
 - Managing A Solar Home Systems Program for the REB PBS Management Personnel
- Support was provided to NRECA Computer Team for review and finalizing of documentation manuals for various software packages that were developed for REB and PBSs.
- Training support staff provided extensive for preparation of materials for RPPR II Program events including Socio-Economic Conference in July and America Week in September.
- A total of 7,602 persons received training through REB and NRECA conducted programs during the reporting period. Of these 7,602, there were 1,140 female participants.

Task C.2: Enhance Computerization in REB and PBSs

- Completed significant work on the assessment of the current levels of computerization at REB and PBSs which will be incorporated into the Strategic Plan being developed for Information Systems within the RE Program.
- Installed internet facilities at all 67 PBSs and provided some basic training for 276 REB PBS employees on the internet and use of email. Some PBSs now sending 550 Form to REB electronically over internet and REB Project offices communicating with REB Headquarters via email.
- The REB Statistical Database software package was upgraded with necessary revisions and the new package was fully deployed to all 67 PBSs. A final crosschecking was completed between new database and old Lotus system which allowed for a formal transfer to the new database for the preparation of the MIS Report for month of June 2003.
- The previously developed REB Materials Management software that integrates all concerned Directorates (Accounts, Procurement, Clearance, Storage & Movement (CS&M), and Material Planning, Standards, & Specifications (MPSS)) began formal testing with the establishment of a mini-LAN at REB for this purpose.
- Initial draft of Strategic Plan for Information Systems was prepared with plans to conduct a strategic planning workshop in first quarter of Year #2.
- Deployment of PBS Payroll software package was completed at the remaining 28 PBSs with necessary training having been provided. All 67 PBSs are fully functional with the Payroll package.
- Completed design, development and testing of REB General Ledger software package using the REB Chart of Accounts. Some modifications were made to the software to accommodate changes made in the Chart of Accounts and system now functioning with REB's new Chart of Accounts.

Program Activity D: Supplemental Tasks

Task D.1: Updating Engineering and Construction Standards

- Continued field assessment and analysis to determine impact of loss of neutral in support of the development of a report on recommended system changes required to deal with neutral theft that continues to be widespread in many PBS areas.
- Participated in various meetings with REB and made recommendations relating to changes in the current Material Specification and installation requirements for various types of distribution equipment (e.g., combination bypass disconnects switches, surge arrestor mounting and minimizing the lead length from the surge arrestor to the protected equipment, safety features of ACRs, etc.).

- Met with PBS, REB and local consultants at Dhaka PBS 1 to discuss expansion options at EPZ-1 Substation.
- On behalf of REB, continued investigations related to significant changes in the ratings of the Australian Slash Pine species that are being proposed for use as wooden pole in RE Program and the use of "weight per unit volume" versus "weight/weight" methods of establishing CCA retention. This involvement included the following:
 - An extensive review of the data provided by the Australian supplier and preparation of report that did not substantiate the change in the rating.
 - An indepth review of the appropriate methodology used for determining CCA retention requirements for various species used for utility poles with a report being prepared and submitted to REB with the recommendation to return to it previous "weight per unit volume" method instead of the newly adopted "weight weight" method that can not be supported by proper scientific research.
 - Attended meeting with REB senior officials where decisions were taken on these two issues as per the recommendations made in the NRECA reports.
- At REB's request, initiated a review of the bid submitted for wooden poles under the World Bank tender that for South African Eucalyptus species to determine if these poles are suitable for the Bangladesh RE Program.

Task D.2: Socio-Economic Impact Assessment

- Continued implementation institutionalization of the Socio-economic Baseline Database System(SEBDS) to eight model PBSs and completed initial works for extending the SEBDS in nine more PBSs. In this connection, continued modification of the existing documents materials through incorporating lessons/experiences gained in during practice of the SEBDS and performed training to more than 565 PBS staff regarding operation of the SEBDS.
- Responded as per needs for technical assistances to the Socio-Economic Monitoring & Evaluation Cell(SEMEC) of REB, including providing input on the selection of the local firm which will be involved with REB in providing socio-economic activities specific to the new \$200 World Bank project. The approval of the TAPP for the World Bank's funding to help support this new Cell was just recently obtained so this has slowed the formal development of this Cell.
- Continued to work with REB, HDRC and concerned donor agencies for further dissemination of the findings of the Economic and Social Impact Evaluation Study(ESIES).
 - Provided a number of hard copies of the ESIES report and 100 CDs including to the NRECA office, Arlington, USA. Copies of the CDs were made with some having only the Study Report, while others contained both the Report and the data.
 - Worked with HDRC and others to support presentation of Study findings at NRECA's Forum on Sustainable RE as well as a briefings held at the World Bank and USAID in Washington.
 - Organized a major conference entitled "*Economic & Social Impact Evaluation of the Bangladesh Rural Electrification Program -Study Findings and Implications for Future*", which served as a forum to present findings of the study report: "*Economic and Social Impact of the Bangladesh Rural Electrification Program*", October 2002.
- Participated in a number of discussions with many professionals (local and abroad) on Social and Economic Impact of the Bangladesh RE program. Specific involvement with JBIC's small study.
- Provided input to the Dutch-funded team developing a gender strategy and Action Plan for the RE Program.

III. PROGRAM ACTIVITIES WITH TASKS

Focus on Project Yr. #2

Program Activity A: Planning and System Engineering

Task A.1: Service Territory Database

Advisor Assigned: Ray Thayer, Engineering and Operations Advisor
Specialist Assigned: Daniel Waddle, GIS Specialist
Local Professional: A.T.M. Selim, GIS Specialist Local
Local Professional: Khan Kamruzzaman, GIS Specialist Local

Phase 1, the pilot demonstration of GIS for four PBSs, was completed during RPPR I. The second phase, which is included in RPPR 2, is building upon the work done in Phase 1. During year one of the second phase, the field work at Natore-1 and Pabna-2 were completed. In addition, the process of incorporating this data into usable GIS Data bases for these PBSs was substantially completed, and will be completed during the second year of the project. This will include the provision of current GIS-generated maps to REB and these two PBSs.

The nature of the GIS work requires that the in-depth training on developing and using GIS be provided to the consulting firms, while REB's needs relates more to overseeing this work and knowing how to utilize the information that is an output of the GIS. These roles and responsibilities were outlined in a policy instruction that was drafted during Year #1. During Year #2 we plan to begin the task of training some of the participating local consulting firms and REB GIS Cell staff in the use of Arc View. While more sophisticated work on the Arc Info software will remain with NRECA local GIS professionals for the immediate future, efforts will begin to formalize the roles as outlined in the policy instruction as currently drafted.

Significant third party actions affecting NRECA's ability to complete the proposed work plan for year #2 will include the need for REB to purchase the computer hardware and software for the new GIS Cell that is currently being established at REB. In addition, arrangements will have to be made so that the computer hardware and software for this new GIS service will be available for use by the consulting engineers, by either having this supplied by REB or some other alternative. To accomplish this, the consulting engineers that do not have the necessary hardware will be responsible for data gathering only and will be trained on use of the software after their equipment is available. The participating consulting firms that have the necessary hardware will be provided with training when the Arc View software is available to them. In addition there is a need for REB to purchase, or otherwise make available to consulting engineering firms GPS receivers to be used in updating of the GIS for their respective PBSs. Specific tasks and sub-tasks are to be addressed include:

- 1) Select PBSs and consulting engineers to participate in this phase.
 - Select one other PBS in addition to Dhaka PBS 1 and Mymensing PBS 2, both of which have already been selected for GIS activities during Year #2. This selection process will be ongoing throughout Phase 2 of GIS. The consulting engineers selected during the Phase 1 GIS task of RPPR I and those selected during the first two years of Phase 2 GIS, will likely be utilized during the remainder of RPPR II, and additional PBSs contracted with those consulting firms will be added during years 3-5.

- 2) Complete incorporation of GIS field data into the GIS data base for Natore-1 and Pabna-2 and provide the final maps to both REB and the respective PBSs. (Note: The incorporation of data was nearly completed during year 1).
- 3) Develop GIS for three additional PBSs.
 - Supervise field data gathering process at Dhaka-1, Mymensing-2, and on additional PBS to be selected.
 - Develop landbase, and incorporate field data into GIS data base for Dhaka-1, Mymensing-2 and the third PBS, including provision of final detail maps for both REB and the respective PBSs.
- 4) Provide advise and assist REB in regard to making the necessary arrangements for equipping consulting engineering firms with the hardware and or software requirements for this GIS task.
 - Provide support as needed to facilitate REB's taking necessary action regarding the required computer hardware and or software for consulting engineers, as well as acquisition of GPS Receivers for use consulting engineers.
- 5) Train participating consulting engineers for various GIS tasks.
 - Conduct refresher training for the consulting engineering firms of RPPR 1 in the use of the GPS receivers and Arc View for updating purposes.
 - Provide training to TSL, along with other consulting firm personnel new to the GIS task in the use of GPS Receivers for geo referencing electric line features.
 - Conduct training for the consulting engineers and concerned REB officers to demonstrate necessary features of Arc View, which will be used by the consulting engineers for GIS updating for their respective PBSs.
- 6) Incorporate Electronic Record Card Data, which was developed under Task C.2 (Computerize the REB and PBSs) in support of Tasks A.2 and B.1 into the GIS data base.

The GIS Specialist assisted by the Engineering and Operations Advisor will be responsible for implementation, monitoring and evaluation. The Local Professionals will be responsible for execution of training of consulting engineering firm personnel and for data gathering.

◆ LTA -Engineering and Operations Advisor	1.0 MM	Oct. 2003 - Sept. 2004 (PT)
◆ STS - GIS Specialist	3.0 MM	Oct. 2003 - Sept. 2004 (PT)
◆ LPS - GIS Specialist-Local (2)	24.0 MM	Oct. 2003 - Sept. 2004 (FT)
◆ LPS - GIS Associate-Local	8.0MM	Oct. 2003 - Sept. 2004 (PT)

Task A.2: PBS Short and Medium Range Planning

Advisor Assigned: Ray Thayer, Engineering and Operations Advisor
 Specialist Assigned: Colin Jack, Planning Specialist A
 Specialist Assigned: Michael Smith, Planning Specialist B
 Local Professional: To be named -Electric Utility Engineering Specialist

The Manikganj PBS Short Range Planning Document which was begun during year 1 will be completed during the first half of Year #2. Subsequent to the completion of this document.

Project Year #2 will begin the process of training consulting engineers from two PBSs to carry out short and medium range work plans. More specifically, the consulting engineers and REB will be given an in depth presentation on how the Manikganj PBS Short Range Planning Document (Work Plan) was developed. They will also receive training in the use of some of the system analysis software that was used in the development of the Manikganj Work Plan. The consulting engineering firm (TSL) whose client is Dhaka PBS 1 will prepare a load flow analysis under the direction of NRECA personnel, as their part of the development of the short range planning document for Dhaka PBS 1. The actual preparation for this document will begin during Year #2. During the development of the next Short Term Planning Study to be done for a PBS which is also retaining TSL, the consulting engineering firm will complete other modules under the guidance of NRECA. This is the method that will be utilized to train the consultants on the preparation of various modules that are included in the actual planning document. The same method will apply for Manikganj PBS's consulting engineering firm, ECBL. As with Task A.1, in most cases, the training related to this planning methodology will focus primarily on staff from the consulting engineering firms, however opportunities will be available for REB personnel to participate where appropriate. Being that these firms are responsible for providing engineering services to the PBSs, the in-depth training on these methodologies and this engineering software will be provided to the consulting firms, while REB's needs relates more to overseeing this work and knowing how to review the work plans when they are submitted by the PBSs for approval.

As was the case for Task A.1, significant third party actions will affect NRECA's ability to complete these elements of the proposed Work Plan for Year #2. The primary action includes the need for REB to negotiate compensation agreements with the consulting engineers that allow them to participate in the project using these new planning methodologies. The present compensation rates are based on criteria that may not readily adapt to the new planning methods, but at a minimum will necessitate review and possible revision of the rates. In the interests of long-term sustainability, it will be the responsibility of the PBSs to compensate the respective consulting engineers in the future for providing these enhanced technical services to their respective PBS clients. However, as in Task A.1, REB sets the compensation rates for the various consulting services provided by the firms to the PBSs. A rate will need to be established for these enhanced planning methods that will now be available to the PBSs.

Specific tasks and sub-tasks are to be addressed include:

- 1) Conduct recruitment of local specialist to support activity
 - Many prospective local engineers have been interviewed, however no one has been hired to date. One suitable candidate was identified and interviewed at the end of Year #1, and will likely join NRECA during the first quarter of year 2.
- 2) Complete the first draft of the Short Range Planning Document for Manikganj PBS, which was 75% complete as of the end of Year #1.
- 3) Develop an in-depth presentation on the methods used in the development of the Draft Manikganj PBS Short Range Planning Document.
 - This document will be used for making presentations to the REB, PBS, and Consulting Engineers in addition to the donors.
 - The dual purpose of these presentations will be 1) to train the REB, PBS, and Consulting Engineers, in the development of this style of planning document and 2) to review the process of final project selection with REB, PBS and donors in order to discuss issues surrounding the selection criteria used to determine which projects will

- be placed in the work plan. (i.e. include only those projects that yield a (+) NPV according to analysis, or include some socio-economic and political considerations into the selection process.)
- 4) Complete the final Short Range Planning Document for Manikganj PBS and make formal presentations to the REB, PBS and Consulting Engineers.
- 5) Install the Milsoft engineering software packages on the computers of the participating consulting engineering firms and provide training on the Windmil feature of the Milsoft package, which will be used by personnel from the consulting firms.
- 6) Continue the development and implementation of automated Electronic Record Cards (ERCs) program for the PBSs.
 - This was begun during year 1 and will be installed at Dhaka-1 as a prelude to the planning project there. (Also refer to Task B.1)
 - Advise the Dhaka PBS 1 personnel during the stage of updating of their transformer record card information and its conversion to the computerized process while also monitoring progress to help ensure accuracy. (Note: The value of applying new technologies (e.g., GIS, Milsoft, etc.) to the planning process is only relevant if the initial data is accurate and reliable.)
 - Install the ERCs at Dhaka PBS 1.
- 7) Implement process related to collection of data for work plan for Dhaka-1 PBS
 - Review maps and transformer cards for accuracy.
 - Obtain operational performance data on outages, system loading and voltage regulation.
 - Prepare analytical models and incorporate field data.

The Engineering and Operations Advisor, assisted by the Local Professional will be responsible for implementation, monitoring and evaluation. Planning Specialist B will conduct training in the development of work plans and Planning Specialist A deliver training in the use of Milsoft analysis software.

◆ LTA -Engineering and Operations Advisor	4.0 MM	Oct. 2003 – Sept. 2004 (PT)
◆ STS - Planning Specialist A	2.0 MM	Oct. 2003 – Sept. 2004 (PT)
◆ STS - Planning Specialist B	3.0 MM	Oct. 2003 – Sept. 2004 (PT)
◆ LPS - Electric Utility Engineering Specialist	10.0 MM	Dec. 2003 – Sept. 2004 (FT)

Program Activity B: Operations and Maintenance Programs

Task B.1: Preventive Maintenance Programs

Advisor Assigned: Ray Thayer, Engineering and Operations Advisor
 Specialist Assigned: E. D. Stanley, Maintenance Systems Specialist
 Local Professional: To be named, Maintenance Engineer

The focus of Year #2 for this task will be the selection of a second PBS to participate in the preventative maintenance program, and continue working to the various elements that will provide an enhanced preventative maintenance and corrective program. This effort will strive to enhance the capacity the PBS capacity to implement the basic functions of an effective

maintenance program. This work will include improving the work procedures included in the proper maintenance of substations, routine line inspections, monthly substation inspections, and interruption reports. This will include working with REB and PBS personnel in order to develop an improved understanding of the importance of completing the paperwork properly and providing instructions on the procedures for properly filling out the paperwork associated with these tasks.

Proper record keeping is a very essential part of any successful maintenance program. Based on reviews that were conducted during Year #1, it has become obvious that the PBSs need to improve their focus on the task of updating their records associated with the PBS distribution system as this information is important not only for operations and maintenance but also for the planning function. In this age of computers, it is also necessary to increase the utilization of computers in order to better manage the information needed for implementing a successful PBS maintenance program. For this reason, a very necessary sub task is to continue with the development and implementation of the computerized equipment record card (ERC) software for the PBSs that was initiated during Year #1. The use of this ERC software is complementary with the planning function that is being addressed under Task A.2.

As with other RPPR II Tasks, significant third party actions affecting NRECA's ability to complete all of the elements of the proposed Work Plan for Year #2. One of the key actions includes the need for REB to strongly support NRECA personnel in having the PBSs gather the required data, and providing oversight and follow up to assure that the PBS records are initially updated and continuously thereafter. In addition, REB must support the procurement of many spare parts that are not presently being stocked and also support the distribution of these needed spares parts when they are do become available. Other recommendations for these procurements will be made in Task B.2.

Specific sub-tasks to be addressed in Year #2 include:

- 1) Continue the development and implementation of Equipment Record Cards for line and substation equipment.
 - This software is being developed by the NRECA computer team with direction from the E&O personnel, including STSs.
 - Most of the software modules are in the testing phases at one of the two PBSs participating in the maintenance task.
 - Implement the ERC software at Dhaka-1
- 2) Advise and assist the participating PBSs during the process of updating their records associated with the E&O phases of their business.
- 3) Select the additional PBS that will participate as a model for the preventative maintenance program.
 - Identify potential PBSs and work in consultation with REB as the selection is finalized.
- 4) Conduct hands-on training for substation maintenance personnel from the two participating PBSs during the annual maintenance work that occurs during the winter season.
 - The overall plan includes using the trained personnel of the two participating PBSs for dissemination of the newly acquired techniques and skills to personnel from other PBSs.
 - These training sessions for PBS personnel will also involve the concerned REB personnel associated with the various System Operations field offices.

- 5) Continue the training on proper routine substation inspection methods including the proper procedures for filling out the associated paperwork. This sub task was begun during the latter part of year 1.
 - It will be necessary to mentor and provide ongoing training for the PBS and REB personnel in these practices over the next 2-3 years in order to institutionalize this capacity.
 - This will also be important for preparing these pilot PBSs as training sites for other PBS personnel in order to disseminate these elements of a quality preventive maintenance program to other PBSs.
- 6) Perform on-site reviews of current line maintenance practices.
 - Review vegetation control options including the investigation of a blanket national tree-trimming permit.
 - Prepare necessary revisions to line maintenance guidelines and procedures
- 7) Conduct a seminar for REB and PBS personnel on the findings of the assessment of current line maintenance practices and present recommendations and options for addressing deficiencies that were identified.
- 8) Following the complete review of the related policy guidelines that was initiated during Year #1, provide recommendations to REB for necessary revisions to the policy guidelines on substation and line maintenance.
- 9) Initiate a review of possible initiatives to improve both quality and through-put at the REB Savar Workshop.
 - This will include looking into outsourcing possibilities that may exist for the repair of Power Transformers and other substation equipment.
 - Examining options for providing training for Workshop personnel on the use of test equipment available in the Workshop in Savar.
- 10) Recruit the local NRECA staff to support activity.
 - Many prospective local engineers have been interviewed, however no qualified candidate has been found as yet, thus this post was vacant as of the end of Year #1. One candidate was interviewed and found suitable and may be hired during the first quarter of year 2.

The Engineering and Operations Advisor will be responsible for coordination, logistics, scheduling, monitoring, and monitoring of all phases. The Maintenance Systems Specialist will be responsible for execution, supported by the local professional.

◆ LTA -Engineering and Operations Advisor	3.0 MM	Oct 2003 - Sept. 2004 (PT)
◆ STS - Maintenance Systems Specialist	3.0 MM	Oct 2003 - Sept. 2004 (PT)
◆ LPS - Maintenance Engineer	9.0 MM	Jan. 2004 - Sept. 2004 (FT)

Task B.2: Material Supply for O&M Program

Advisors Assigned: Ray Thayer, Engineering and Operations Advisor
 Specialist Assigned: To Be Named, Material Specialist

Overall objective of this task is to ensure that the PBSs participating in Task B.1 have access to necessary materials to be able to carry out maintenance tasks as needed and planned. The activities of Year #2 will accelerate rapidly when a Specialist is recruited. The year's activities will be aimed at developing the required framework of authority delegations and responsibilities between REB, the two participating PBSs, and NRECA to allow for the timely acquisition and efficient distribution of maintenance materials.

Planned sub-tasks to be addressed in Year #2 include:

- 1) Continue the evaluation of the needs for maintenance materials for the two participating PBSs
- 2) Continue the identification of needed changes to related policies with regard to delegations of authority and assigned responsibility to allow for streamlined maintenance material acquisition.
 - Continue interviews with PBS and REB personnel to evaluate the work related to O&M materials that was completed under RPPR I, as well as the current process for maintenance material acquisition and distribution.
 - Prepare the necessary revisions to the related policies with regard to delegations of authority and assigned responsibility according to results of findings.
 - Prepare plan of action and obtain REB approval to proceed.
- 3) Continue evaluating PBS warehousing and issuance practices for maintenance materials and propose changes to be implemented in RPPR II.
- 4) Follow up on stock levels and material usage issues identified during Year #1.
 - Review initial procurement cycle for O&M materials that was to be completed during Year 1 and identify problems and recommend changes to improve the process.
 - Follow up on the distribution of this material to the various PBSs.
 - Advise and assist REB in regard to a second procurement that will be required in order to maintain appropriate stock levels that will be depleted quickly because of the previous gaps in supply and inventories that existed.

Coordination, scheduling, logistics and monitoring will be the responsibility of the Engineering and Operations Advisor. The Material Specialist will be responsible for execution. The local Maintenance Engineer who will be working on Task B.1 on an as needed basis may also provide some support.

- ◆ LTA – Engineering and Operations Advisor 3.0 MM Oct 2003 - Sept. 2004 (PT)
- ◆ STS – Materials Specialist 6.0 MM Oct 2003 - Sept. 2004 (PT)

Program Activity C: Strengthen Utility Performance

Task C.1: Strengthen Training Program and Procedures.

Advisor Assigned: James Ford, Team Leader
Local Professional: Bashir Ahmed, Director of Curriculum Development & Training
Specialist Assigned: To be Named, Training Specialist

Most the sub-tasks related to this Task will be ongoing from Year #1 with major focus being on the completion of the Training Needs Assessment, as well as continuing with the major curriculum development effort that is providing the REB Training Directorate with quality training materials for conducting all types of training programs (e.g., engineering technical, management, and finance). Progress on both of these subtasks is providing significant benefits towards strengthening the REB training program and procedures. In addition advise and assistance continues to be provided to REB with regard to the development of the proposed Training Academy, however the approval process for this Academy has been very slow and still remains within the government bureaucracy.

As indicated in the Work Plan for Year #1, the Training Needs Assessment will evaluate the performance issues related to various REB and PBS positions and determine what activities can be addressed through training interventions. The Training Team of NRECA has thus far been working in collaboration with the concerned Training Directorate personnel in the initial development of the process to be used for the Assessment. Actually conducting the Assessment itself will require interacting with numerous officers and supervisors and staff of both REB and PBS. The methodology of this assessment will entail task job analysis and conducting interviews with REB and a sampling of PBS staff using a series of questionnaires. The evaluation will assess the expectations of management for a the various positions and will evaluate the level of preparation of the incumbents in those positions with regard to fulfilling those expectations. In addition, the planned progression of development resulting from the training interventions as outlined in the REB Curriculum Plan. However, it will not specifically address individual performance issues of personnel, merely the appropriateness of the proposed incumbent's training and experience with respect to the expected levels of performance.

With regard to this Training Needs Assessment, it is again noted that while this Assessment will be supporting the development of the proposed Training Academy, the RPPR II Program does not have adequate resources that would be required to complete the full Feasibility Study that may be necessary to support the government approval process leading to the development of the proposed Training Academy whose construction is to be funded by the ADB. The submission of the Training Needs Assessment is scheduled for March 2004.

The on-going curriculum development effort will continue in Year #2 as a means for addressing the enormous requirement for the revision and updating of existing curriculum materials and the development of curricula for programs that have yet to be offered by REB's Training Directorate. In addition, the translation of materials from English to Bangla required to support selected training programs that have PBS personnel, as the target populations will also be included. Due to its importance, the NRECA training staff will provide support for the delivery of computer training that will continue to target both REB and PBS personnel. This is particularly important with regard to assisting with the implementation of the computerization effort being directed by NRECA under the RPPR Program.

Various sub-tasks identified for completion during Project Year # 2 include:

1) Continue with the established curriculum development process design process in support of the following curriculum development activities:

(Note: The curriculum development process includes: design of Curriculum Outline, review and approval of Curriculum Outline, development of materials, review and approval of materials by concerned Curriculum Committee, pilot testing, and finalizing. English to

Bangla translation will also be completed as needed. Curriculum materials include both Trainer and Trainee manuals along with necessary visuals (overhead transparencies, etc.).

- Complete the development of the curriculum materials (Trainer and Trainee Manuals) for the following training programs that were initiated during Year #1:
 - ☐ Operation, Maintenance and Repair of Voltage Regulator for Engineers (TO 235)
 - ☐ Operation, Maintenance and Repair of Voltage Regulator for SAE Jr. Engineers (TO 237)
 - ☐ Operation, Maintenance and Repair of Voltage Regulator for Technician Lineman (TL 044)
 - ☐ PBS General Accounts Manual (IF 300, IF 305, IF 310)
 - ☐ PBS Accounting Procedures Manual (IF 315)
- Develop the curriculum materials (Trainer and Trainee Manuals) after obtaining the approval of REB's Curriculum Review Committee on the "draft" Curriculum Outlines submitted in the last quarter of Year #1:
 - ☐ Planning and Acting Getting the Job Done (IM 121)
 - ☐ Controlling – Keeping Plans on Target (IM 135)
 - ☐ Performance Appraisal and Employee Development (IM 141)
 - ☐ Interpersonal Communication (IM 152)
- Complete the English to Bangla translation of the previously approved training manuals for the following training programs:
 - ☐ Management: Its Nature and Scope aim at the REB PBS Officers (IM 105)
 - ☐ Management: Its Nature and Scope for REB PBS Accountants Personnel (IM 106)
- Conduct the necessary analysis and prepare the Curriculum Outlines of the following training programs and following approval of the concerned Curriculum Committee, proceed with for developing the training materials (Trainer and Trainee Manuals) for the following programs:
 - ☐ Planning and Acting Getting the Job Done (IM 121)
 - ☐ Maintenance and Repair of Transformer (TO 230)
 - ☐ Maintenance and Repair of Transformer (TO 232)
 - ☐ Maintenance and Repair of Transformer (TL 042)
 - ☐ Maintenance and Repair of Transformer (TL 042)
 - ☐ Basic Supervision (IM 100)
 - ☐ Performance Appraisal and Board Development (IB 345)
 - ☐ REB Financial Audit Procedure (IF 545)
 - ☐ Introduction to REB Audit Procedure (IF 550)
 - ☐ REB Internal Audit Procedure (IF 555)
- Complete the English to Bangla translation of the Trainer and Trainee Manuals as determined by REB based on the target populations of the various programs.

(Note: The particular sequence of programs identified for curriculum development may change depending on REB requirements.)

- 2) Conduct the Training Needs Assessment to determine the current and future needs for the REB and PBSs through the completion of the following:
 - Finalize the strategy for completing the assessment in consultation with the REB concerned authority;
 - Complete the development and preparation of the assessment tools (e.g., job task analysis questionnaires, reporting formats, etc.) and other materials to be used for training needs assessment;
 - Complete the necessary Task Job Analysis for the various positions;

- Conduct interviews with the assistance of REB and PBS concerned officers and managers;
 - Conduct the workshop with the concerned personnel to review the initial findings of the assessment;
 - Develop preliminary assessment report and present to stakeholders
 - Finalize the report and submit as deliverable (3/04).
- 3) Support the development of the Financial Management Information System (FMIS) that is being prepared for REB under Task C.2..
- As a member of the development team, the NRECA Curriculum Development Specialist (Finance) will continue to work with REB and NRECA personnel on activities associated with the ongoing development of this new automated system because this new system will impact the finance related training materials being developed in support of the Task
- 4) Continue to support the development of different communication materials associated with the RPPR II Program and other aspects of the rural electrification program. (Note: NRECA Training Team has expertise to prepare hardcopy and softcopy mechanicals in-house to meet commercial production requirements.)
- 5) Complete implementation of one US tour/consultation and develop plan for one regional observation tour consultation to occur in Year #2.
- Conduct regional Program to investigate Training Academy facilities in Pakistan and Malaysia. (12/03)
 - Schedule and implement US Program (Spring 2004)
 - Identify another appropriate regional Program for implementation in Summer 2004.

This Task will be under the direction of the Team Leader with the day to day coordination being managed by the Director Curriculum Development. The details regarding personnel directly associated with this Activity during this Program Year include:

◆ LTA - Team Leader	5.0 MM	Oct. 2003 - Sept. 2004 (PT)
◆ LPS - Director of Curriculum Development	12.0 MM	Oct. 2003 - Sept. 2004 (FT)
◆ LPS - Curriculum Developers (3)	36.0 MM	Oct. 2003 - Sept. 2004 (FT)
◆ LPS - Support Staff -Training (3)	36.0 MM	Oct. 2003 - Sept. 2004 (FT)
◆ STS - Training Specialist	3.0 MM	Jan. 2004 - Sept. 2004 (PT)

Task C. 2: Enhance Computerization in REB and PBSs

Advisor Assigned: James Ford, Team Leader
 Local Professional: Nurul Islam, Director Computer Systems Development
 Specialist Assigned: Mike Kays and Other To be Named, Computerization Specialist

This task will continue with the computerization efforts that began under RPPR I and progressed significantly during Year #1. While work continued on the development and installation of various new automated systems during this past year, work also was initiated on assessing the current levels of computerization at REB and the PBSs and the expected needs as this automation process expands into the future. A decision was taken to develop a more comprehensive Strategic Plan for the overall IT sector that will help better define the direction in which this computerization effort should be proceeding. The plan will provide consideration

for sustainability of the IT sector when NRECA is no longer available to provide consulting services to REB. The deployment of new automated systems will continue to be done through the "cluster approach" that was so successfully developed and utilized during previous rollouts of the various software packages. Computer training will continue to be provided to PBS personnel with a significant effort being made to enhance the capacity of the PBSs to move more quickly into the automated systems. The following specific initiatives and sub-tasks are to be included in Yr #2 activities:

- 1) Complete the Assessment of the computerization of REB and PBSs that was initiated during Year #1 and incorporate the findings of this Assessment into an overall Strategic Plan for the IT sector within the RE Program.
 - Update the assessment information regarding the current status of computerization at REB and the PBSs including an inventory of critical elements (e.g., #s of computers, types of applications installed and utilized, numbers of people trained and designations, levels of competence, etc.);
 - Continue giving consideration for the need to identify potential strategies with the overall objective being adequate support mechanisms that will sustain the computerization effort over the long term and in absence of NRECA technical support;
 - Prepare assessment report with findings including some potential preliminary support strategies for the long term sustainability.

- 2) Prepare a Strategic Plan for IT sector of the RE Program.
 - Conduct a Information System Planning (SISP) Workshop with participation of most of the REB senior officials and PBS representatives in order to present findings of the Assessment Report and to identify key requirements for the ongoing overall development of the IT sector within the RE Program.
 - Prepare the Strategic Plan based on the results of the Workshop and the Assessment Report and present it to the REB management for taking necessary decisions on the most appropriate short and long range strategies that will impact the framework for the RPPR II computerization efforts and the future IT sector

- 3) Continue to advise and assist REB with regard to its ongoing efforts to enhance the computerization of REB's operations including work related to the following:
 - Support the implementation plan for REB's Computer Cell in their design of computerization scheme for REB HQ;
 - Assist REB Computer Cell in administering and further developing the phased implementation a LAN WAN at REB HQ with proper utilization of the funding being provided under the new World Bank loan agreement. (Ongoing and as needed based on World Bank procurement cycle – TAPP was approved at end of Year #1)
 - Continue with design, development, modification and deployment of various software packages within REB and continue to advise and assist REB personnel with the implementation of these automated systems in the following areas:
 - REB Materials Management System: Continue working on testing of software package within the concerned Directorates using the mini LAN system set up for this purpose and supporting needs that will evolve with the eventual establishment of REB LAN WAN.
 - REB Statistical Database (Form 550): Continue ongoing support to REB's Rates and Contracts Cell with regard to the full implementation of the new Statistical Data Base software package that is now being utilized for uploading monthly PBS Form 550 data required for the preparation of the monthly MIS Report and other customized report generation.

- Statistical Data Base (Form 550) - New Module: complete development and testing of a new module that provides for an additional data entry facility to accommodate a provision for a 13th Month (Auditor's period) in preparation for deployment to PBS Statistical Data Base systems deployment and deploy to all PBSs (01-04).
 - Performance Target Agreement (PTA) Module (associated with REB Statistical Database: Conduct the required testing and cross-checking for accuracy and begin implementation. (12-03)
 - REB Payroll System: Complete necessary updates of the package to accommodate Benefits and other related sub-modules. (June, 2004)
 - REB General Ledger Module: Conduct testing of this module of FMIS using the new REB Chart of Accounts, which is expected to be finalized in late 2003. (12-03)
 - REB Material Management: Continue with testing of data and report validation with the live data from the concerned Directorates. This will be followed by actual deployment into the concerned Directorates with hand-over to REB users delivery of training for the relevant users. Organize a demonstration with the participation of the concerned senior officials. (03-04)
 - Material Accounting Package: Proceed with design and development of software which will be integrated with the Material Management with targeted deployment in early Year #3
 - Revolving Loan Fund Financial System: Complete remaining module for this package Revolving Loan Fund and deploy the system for managing the accounting requires for the newly activated REB Revolving Fund (03-04)
- 4) Continue to advise and assist the PBSs with regard to the ongoing efforts to enhance the computerization of various PBS operations into an integrated system with specific work related to the following:
 - Continue with design, development, modification and deployment of various software packages for the PBSs and continue to advise and assist PBS personnel with the implementation of these automated systems in the following areas:
 - PBS Payroll: Complete upgrades and modifications to the existing package to include Benefits and other related modules and deploy to at least 30 PBSs (06-03)
 - PBS module of Statistical Database (Form 550): Complete deployment of system upgrade that includes provision for 13th month (auditor's period) and complete deployment in all PBSs, including training. (12-03)
 - PBS module of Statistical Database (Form 550 with new additions): Complete development of system upgrade containing an additional data entry facility that will accommodates new data requirements being added to the 550 Form and complete deployment in all the PBSs and train the relevant users. (01-04)
 - PBS General Ledger: Utilizing the General Ledger (GL) module of the Statistical Database, proceed with develop of this upgraded version and proceed with deployment to the PBS with necessary training being provided. (09-04)
 - PBS Equipment Record Card: Continue with pilot-testing at the four PBSs which was underway at the end of Year #1 and finalize the software package and begin the process of deployment to additional PBSs. (01-04)
- 5) Continue with Introductory Computer Appreciation training for the PBS employees, many of who have not received any formal computer training with target to train at least 400 employees (20 sessions of 20 participants) during Year #2. (Ongoing – average of five sessions per quarter)

- 6) Miscellaneous subtasks: in addition to the above subtasks, the NRECA Computer Unit will be involved with providing support to PBSs and REB for hardware and software related problems.

(Note: Completion of some of the subtasks (e.g., REB General Ledger, REB Financial System for Revolving Loan Fund, PBS equipment record card etc.) is dependent on the timely feedback from REB and PBSs, depending on the types of decisions to be taken.

The Activity for Project Year #2 will continue to rely significantly on the utilization of NRECA's LPSs. The Team will receive its direction from the Team Leader and the expatriate Computerization Specialist who will provide input on various issues including assessment tasks. Details on personnel to be involved during this project year include:

◆ LTA - Team Leader	3 MM	Oct. 2003 - Sept. 2004 (FT)
◆ STS - Computerization Specialist	2 MM	Jan. 2003 - Sept. 2004 (PT)
◆ LPS - Director of Computer Systems	12 MM	Oct. 2003 - Sept. 2004 (FT)
◆ LPS - System Analysts (4)	48 MM	Oct. 2003 - Sept. 2004 (FT)
◆ LPS - Computer Training Specialist	12 MM	Oct. 2003 - Sept. 2004 (FT)

Program Activity D: Supplemental Tasks

Task D.1: Updating Engineering and Construction Standards

Advisor Assigned: Ray Thayer, Engineering & Operations Advisor
 Specialist Assigned: James VanCoevering, Utility Engineering Specialist

The overall objective of this Task is to review and revise the existing engineering, construction and procurement standards used by REB in light of the requirements for updating technology and responding to previously unanticipated requirements. The transfer of BPDB and DESA areas to REB has created a need for construction standards that can be applied in urban areas, for substations of capacity greater than the normal 10 MVA REB rural substation, and for modified approaches to system design to address the prevailing theft of neutral conductors.

During Year #2 of RPPR II, the emphasis will be on the continuing review of existing standards and on recommendations of needed changes based on load requirements, needs for updates to reflect changes in technology, and on developing modified system designs that respond to neutral theft and the particular needs of urban construction. Development of specific documents and standards will be carried out during the second project year. Planned sub-tasks to be addressed in Year #2 include:

- 1) Complete report on recommended system changes required to deal with neutral theft based on the assessment work that was completed during RPPR I.
 - All back ground work is complete on this task. The written report will be completed and submitted during the first quarter of year 1.
- 2) Examine selected taken over areas as requested by the World Bank and recommend construction standards for substations, and power lines. These revised construction standards will be specifically designed the meet the needs of REB in the more densely populated, urban areas that are being taken over and absorbed into their systems.

- 3) , Continue the review of distribution construction standards applicable in the less urbanized areas, in light of available materials and equipment, including an evaluation of the adequacy of materials actually in service.
 - Select local engineering firm and contract services for updating and revising engineering and line construction drawings and preparing new ones as required.
 - 4) Continue the review of equipment specifications in light of current practice and performance experience and present recommended changes where necessary.
 - This will include the development of any new equipment specifications that may be needed as a result of item #2 immediately above.
- | | | |
|--|------|-----------------------------|
| ◆ LTA - Engineering and Operations Advisor | 1 MM | Oct. 2003- Sept. 2004 (PT) |
| ◆ STS - Utility Engineering Specialist | 3 MM | Oct. 2003 - Sept. 2004 (PT) |

Task D.2: Socio-Economic Impact Assessment

Advisor Assigned: James Ford, Team Leader
 Local Professional: Kamal Dey, Socio Economist

The overall objective of the Task continues to be the ongoing development of a "system" (Socio-Economic Baseline Database System – SEBDS) by which the PBSs can gather relevant socio-economic data that will be incorporated into a data base that can be used to measure the impact of the RE program and provide useful information to REB, the PBSs, GOB and members of the donor community. This effort will include completing tasks related to assisting with the development of REB's new Socio-Economic Monitoring & Evaluation Cell (SEMEC). This work will also include continued efforts to disseminate relevant socio-economic impact information that has been obtained during both Year #1 of RPPR II and RPPR I.

As indicated in the Workplan for Year #1, the Socio-Economic Baseline Database System (SEBDS) is designed to ensure the collection and preservation of data from an average of approximately 100 new connection holders of four consumers classes in each month from the participating PBSs. Based on field testing and input from the PBSs, a statistically valid minimum sample size was incorporated into the system to minimize the workload of the PBSs, while still maintaining the provision for having the system statistically valid. During RPPR I, the system was established in the 8 "model" PBSs on a pilot basis, and efforts to strengthen the capacity of these PBSs has continued into Year #1 of RPPR II. Initial work on the deployment of the will be extended to more nine PBSs and this effort was started during Year #1 under RPPR II and will continue in Year #2. The phased sub-tasks for Year #2 are as follows:

- 1) Continue with ongoing implementation of the SEBDS in the initial eight "model" PBSs (includes 41 Zonal offices) through providing continued support as needed in order to institutionalize the baseline data collection and data preservation system at PBS level. (Ongoing – 9/04)
- 2) Initiate the formal implementation of the SEBDS in nine additional PBSs (includes 13 Zonal offices) and provide the necessary training, installation of the "data entry software" and support as needed. (10/03 – ongoing)
- 3) Compile and management the SEBDS database that has continues to be populated with information collected by the involved PBSs over the course of both RPPR I and Year #1 of RPPR II. (10/03 – ongoing)

- 4) Prepare and disseminate the "Consumer Benchmark Report" that presents information on consumers before getting access to electricity. (12 03)
- 5) Continue to assist with the overall strengthening of the monitoring and socioeconomic analytical capability in REB's Socio-Economic Monitoring and Evaluation Cell. (10 03 - ongoing).
 - Assist with the development an appropriate policy instruction related to the function of this Cell and in support of the implementation of various socio-economic monitoring activities, including the ongoing implementation of the Baseline Database System and support its formal approval by REB.
 - Continue involvement of SEMEC personnel in establishment of the SEBDS activities at PBSs and Provide technical assistance and training as needed to strengthen the Cell's overall capacity to successfully perform the duties assigned to the Cell.
 - Assist with the Cell's establishment of an automated system that includes installation of software for preservation and data management analysis, including providing the required orientation training of the relevant personnel on use of the software for data preservation/compilation and data analysis using the SPSS software package.

(Note: The delay in the GOB's formal approval of the TAPP being funded by the World Bank project had a negative impact on what was to be accomplished during Year #1 as the approval was not received until the very end of Year #1.)
- 6) Continue sharing ideas on the RE Program's Socio-economic aspects with various stakeholders including officials from the GOB and the donor community. (10 03 - ongoing)
- 7) Assist USAID's support to the Bangladesh Islamic Foundation in implementing a two-days slot out of a 45 days course for the IMMAMs. (10 03 - ongoing)

The Socio-Economist (LPS) will be the primary local professional responsible for this Task. NRECA's Team Leader with 1 MM of effort will provide general guidance and oversight for this Task throughout the life of the RPPR II Program. Another local professional who will function as the data management administrator will also support this Task. All of these LPS personnel are currently scheduled to work full-time on this activity through the end of Year #3. Personnel to be involved during this project year include:

◆ LTA - Team Leader	1.0 MM	Oct. 2003 - Sept. 2004 (PT)
◆ LPS - Socio-Economist	12.0 MM	Oct. 2003 - Sept. 2004 (FT)
◆ LPS - Data Management Administrator.	12.0 MM	Oct. 2003 - Sept. 2004 (FT)

IV. WORK PLAN EXHIBITS

A. Implementation Schedule

The Work Plan presents Program activities and subtasks for Year #2 of the five years program. The implementation Schedules have been developed using *Microsoft Project* in order to monitor progress and modify as necessary. These are also used in the Quarterly Reports.

B. Budget Information

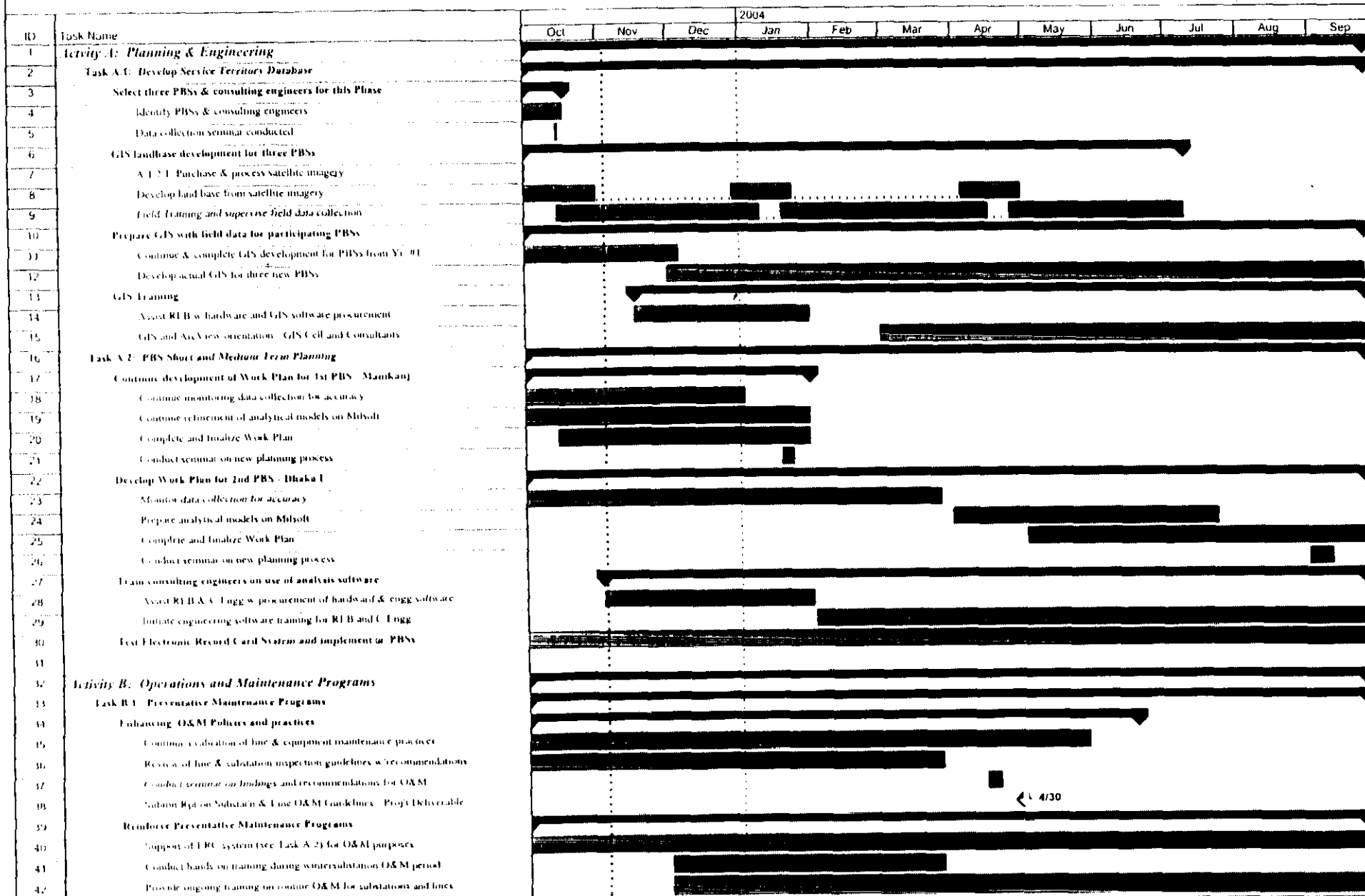
The Budget Information is presented as projected expenditures for Year #2 funded for USG FY 2003, covering the Program period of 11/01/03 through 9/30/04.

EXHIBIT - A

IMPLEMENTATION SCHEDULE

Focus on Year #2

RPPR II Second Year Workplan and Implementation Schedule



RPPR II Work Plan
Year #2
10/01 to 09/04

Task ██████████ Progress
Milestone ██████████

Summary ██████████ External Tasks ██████████ Deadline ██████████
Project Summary ██████████ External Milestone ██████████

RPPR II Second Year Workplan and Implementation Schedule

ID	Task Name	2004											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
43	Task B.2: Material Supply For O&M Program	[Task bar]											
44	Continue evaluation of needs for materials under O&M work	[Task bar]											
45	Identify delegations of authority & responsibility for material acquisition	[Task bar]											
46	Acquire materials in accordance with delegations plan	[Task bar]											
47	Evaluate warehousing & issuance practices	[Task bar]											
48		[Task bar]											
49	Activity C: Strengthen Utility Performance	[Task bar]											
50	Task C.1: Strengthen Training Program & Procedures	[Task bar]											
51	Continue and complete training needs assessment	[Task bar]											
52	Finalize tools and conduct assessment surveys	[Task bar]											
53	Submit Training Needs Assessment Report - Project Deliverable	[Task bar]											
54	Curriculum development improvement program	[Task bar]											
55	Continue curriculum development in collaboration with RFB	[Task bar]											
56	Support implementation of newly developed programs	[Task bar]											
57	Support training academy development - As required by RFB	[Task bar]											
58	Conduct Regional & other training tours	[Task bar]											
59	Task C.2: Enhance Computerization Program	[Task bar]											
60	Prepare Strategic Plan for IT Sector within RE	[Task bar]											
61	Continue and complete computerization assessment with Report	[Task bar]											
62	Conduct Strategic Planning Workshop for IT Sector in RE	[Task bar]											
63	Continue preparation & submit Strategic Plan for IT sector within RE	[Task bar]											
64	Continue to support computerization at RFB	[Task bar]											
65	Develop and implement integrated software packages for RFB	[Task bar]											
66	Advise & assist plan for HQ LAN per World Bank funding	[Task bar]											
67	Support internet communications between HQ and PHSs	[Task bar]											
68	Continue to support computerization at PBSs	[Task bar]											
69	Develop and implement integrated software packages for PBSs	[Task bar]											
70	Advise & assist plan for PBS LAN per World Bank funding	[Task bar]											
71		[Task bar]											
72	Activity D: Optional Programs	[Task bar]											
73	Task D.1: Engineering and Construction Standards	[Task bar]											
74	Recommend system changes required to deal with neutral theft	[Task bar]											
75	Review distribution construction standards	[Task bar]											
76	Review equipment specifications	[Task bar]											
77	Task D.2: Socio-Economic Impact Assessment	[Task bar]											
78	Develop baseline data collection at PBSs	[Task bar]											
79	Continue to support baseline data collection at 6 model PBSs	[Task bar]											
80	Implement baseline data collection system at 9 new PBSs	[Task bar]											
81	Strengthen monitoring and socio-economic analytic capabilities at RFB	[Task bar]											
82	Work with Socio-Economic Monitoring Cell at RFB	[Task bar]											

RPPR II Work Plan
Year #2
10/01 to 09/04

Task	[Solid black bar]	Progress	[Dotted black bar]	Summary	[Dotted black bar]	External Tasks	[Dotted black bar]	Deadline	[Arrow]
Split	[Dotted black bar]	Milestone	[Diamond]	Project Summary	[Dotted black bar]	External Milestone	[Diamond]		

EXHIBIT - B

BUDGET INFORMATION

Focus on Year #2

RURAL POWER FOR POVERTY REDUCTION (RPPR) II PROGRAM

Monthly Financial Projection and Budget For Year #1 (Oct. 2003 to Sept 2004)

Budget Information -- For Use with Year #2 Work Plan

Revision Date: 10/31/03; Supersedes:

Financial Category	Budget October 2003	Budget November 2003	Budget December 2003	Budget January 2004	Budget Feb 2004	Budget March 2004	Budget April 2004	Budget May 2004	Budget June 2004	Budget July 2004	Budget August 2004	Budget September 2004	Total Amounts	
P A	\$ 138,239	\$ 117,495	\$ 124,464	\$ 123,153	\$ 102,823	\$ 111,688	\$ 134,816	\$ 106,708	\$ 107,458	\$ 140,405	\$ 109,948	\$ 109,198	\$ 1,288,153	
I C	\$ 51,286	\$ 32,837	\$ 50,016	\$ 46,187	\$ 43,197	\$ 60,366	\$ 56,083	\$ 49,587	\$ 44,387	\$ 35,426	\$ 47,577	\$ 45,377	\$ 511,039	
*GOB (TK)	\$ 805	\$ 805	\$ 805	\$ 805	\$ 805	\$ 805	\$ 805	\$ 805	\$ 805	\$ 805	\$ 805	\$ 805	\$ 8,851	
Total	\$ 190,329	\$ 151,137	\$ 175,282	\$ 170,145	\$ 146,825	\$ 172,859	\$ 191,704	\$ 157,099	\$ 152,649	\$ 176,636	\$ 158,329	\$ 155,379	\$ 1,808,042	
USAID	Monthly FY Qtrs		\$ 150,332	\$ 174,477	\$ 169,340	\$ 146,020	\$ 172,054	\$ 190,899	\$ 156,295	\$ 151,845	\$ 175,831	\$ 157,524	\$ 154,574	\$ 1,799,192
			1st FY 04	\$ 324,809		2nd FY 04	\$ 487,415		3rd FY 04	\$ 499,038		4th FY 04	\$ 487,930	

Notes: All figures shown for P A, and I C for all months are budget figures for Grant Funding and in line with budget incorporated into the Contract between USAID and NRECA. Budget figures are in line with information provided to RFB for inclusion in the TAPP prepared to RPPR II that is in the approval process of the GOB. The GOB charges are estimates for VAI, Insurance, etc. and equal a total of \$ 6 lac for the year and are spread equally over all the months and included in the TAPP. NRECA Arlington office indicates that as of August 2003, the amount expended from the RPPR II Budget equals \$1,478,259.

RURAL POWER FOR POVERTY REDUCTION (RPPR) II PROGRAM

Monthly Financial Projection and Budget For Year #1 (Oct. 2003 to Sept 2004)

Budget Information -- For Use with Year #2 Work Plan

Revision Date: 10/31/03; Supersedes
In Lac Faka @ TK 58/US\$

Financial Category	Budget October 2003	Budget November 2003	Budget December 2003	Budget January 2004	Budget Feb 2004	Budget March 2004	Budget April 2004	Budget May 2004	Budget June 2004	Budget July 2004	Budget August 2004	Budget September 2004	Total Amounts
P A	78.80	68.15	72.19	71.43	59.64	64.78	78.19	61.89	62.33	81.43	63.77	63.33	747.13
I C	29.23	19.05	29.01	26.79	25.05	35.01	32.53	28.76	25.74	30.55	27.59	26.32	296.40
*GOB (TK)	0.46	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	5.11
Total	108.49	87.66	101.66	98.68	85.16	100.26	111.19	91.12	88.54	102.45	91.83	90.12	1,030.58

Notes: All figures shown for P A, and I C for all months are budget figures for Grant Funding and in line with budget incorporated into the Contract between USAID and NRECA. Budget figures are in line with information provided to RFB for inclusion in the TAPP prepared to RPPR II that is in the approval process of the GOB. The GOB charges are estimates for VAI, Insurance, etc. and equal a total of \$ 6 lac for the year and are spread equally over all the months and included in the TAPP. NRECA Arlington office indicates that as of August 2003, the amount expended from the RPPR II Budget equals \$1,478,259.