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

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**RPPR QUARTERLY REPORT**

**1 April 2000 Through 30 June 2000**

**Prepared By**

**NRECA INTERNATIONAL, LTD.**

**For Trilateral Partners**

**RURAL ELECTRIFICATION BOARD OF BANGLADESH**

**and**

**USAID MISSION TO BANGLADESH**

***QUARTERLY REPORT FOR 4/00 TO 6/00***  
*Technical Assistance For Rural Power For  
Poverty Reduction Program*

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## **I. Executive Summary**

The following serves as a summary of the progress made on various activities under each of the four Intermediate Results, with additional details included under section III:

### ***IR #1: Member User Satisfaction Improved and Participation Enhanced***

- Developed the video script and submitted it to REB for approval. REB has established a formal committee comprised of Executive Committee members to review and approve the script. This new video on the RE Program to produced in English and Bangla for a wide audience that will include GOB officials, donors, as well member/consumers in the PBSs. Target date set for completion of the video is end of September.
- Submitted Member Services Department Refocus Plan to REB for review. Plan includes the following: Executive Summary; the Plan; revised Member Service policies, organizational charts, job descriptions; and the Member Services Policy translated into Bangla
- Conducted pilot test of the newly developed program on Key Accounts Management at Narsingdi PBS I. Objective of program is to improve services to the “key accounts” of the PBSs. Began development of 2<sup>nd</sup> module of the training program in preparation for pilot testing.
- Customer Awareness Training for PBS Directors, Lady Advisors, and management personnel continued with regional programs being conducted which covered seven PBSs (130 people trained for total of 1,170 training hours).
- Another 87 Billing Assistants participated in the “short-course” on Customer Awareness as part of two regional Billing Assistants’ programs conducted during the quarter. Total of 747 training hours.

### ***IR #2: REB and PBS Management Enhanced***

- Continued Business Process Analysis of each of the REB Directorates reporting to the Member Finance. Analysis is initial effort, which will lead to the development of software modules to enhance transfer of information and to provide for improved management information and workflow within the concerned Directorates.
- The Re-Evaluation Report of Nilphamari PBS prepared by NRECA was accepted by REB and forwarded to the concerned GOB agencies.
- Finalized the I-Beam Board/Management responsibilities training program and received approval from REB Curriculum Committee. The program includes the Trainer's Guide, the Trainee's Guide and translation into Bangla of the REB policy instructions relating to Board and General Manager responsibilities. Scheduling for pilot testing will be done in next quarter.
- Conducted a field test of the four questionnaires that were developed for obtaining socio-economic information for each of the four main categories of consumers of the PBSs, namely domestic, irrigation, commercial, and industrial. Revised questionnaires under development as per the results of the field test. A formal Field Testing Report was also prepared.

- Continued analysis for determining requirements for a computerized data base that will be developed for analyzing the socio-economic data using the SPSS software package.
- Tasks and work related to computerization of REB and PBSs included:
  - Initiated project to modify the REB Payroll Application for use in the PBSs.
  - Completed participation in the PBS Billing Software Evaluation Committee, which was comprised of NRECA and REB/PBS personnel. Attended demos by various vendors, conducted vendor site visits and made formal recommendations to REB.
  - Inspected the vendor installation of the PBS LANs at Dhaka and Comilla model PBSs and at Manikganj, which were purchased by REB under an independent procurement action.
  - Assisted REB with preparation of tender for securing PBS billing software, as previous vendor defaulted on contract.
  - Newly developed REB Form 550 Data Entry System and PTA Database Management module submitted to Rate Cell for review and approval. This system will automate collection, compilation, and calculation of PBS financial data for use in REB monthly MIS Reports and semi-annual PTA reviews.
  - Continued with "system study" of REB financial activities leading to development of computerized General Ledger system for REB.
- Conducted field visits on engineering and maintenance issues. Visited Kustia PBS to inspect the substations which were having serious operational problems and consulted with REB's System Operations Directorate regarding corrective actions. Visit to Narsingdi PBS 2 to assist with energization of a new substation.

### ***IR #3: Support Services Enhanced***

- REB formally established the Materials Management (MM) Team, which had been functioning informally to this point. Meetings with team members were held.
- Completed analysis of the entire REB MM process and prepared flow chart to provide pictorial description of all steps included in the process.
- NRECA's computer personnel completed initial programming module for use by the Procurement Directorate to track IFBs. Further analysis and development work continued as part of effort to develop additional modules needed for a computerized system to automate the MM process.
- Completed development of a consolidated OMRR (Operations, Maintenance, Repair & Replacement) inventory material list. Presented the list to MM Team at June 5<sup>th</sup> meeting. The list was well received and appreciated by the Directorate of MPSS. Input is pending from other concerned directorates.
- Conducted an initial investigation of the Materials Management problem related to "Materials Allocation" and issues regarding procurement of materials by different donor agencies.
- Further assistance provided to REB with regard to recommendations received from Ministry of Energy & Mineral Resources (MEMR) regarding development of TAPP for proposed Training Academy that is being processed for GOB approval. Revisions made and resubmitted to REB for their submission to MEMR.
- Received formal approval of the newly developed "Training of Trainers" curriculum from REB. Continued staff development sessions with REB Training Directorate personnel through use of these new training materials. Sessions are being conducted on biweekly schedule.

- Work in area of development of curriculum materials for REB/PBS training programs continued for the following:
  - REB approval received for new I-Beam training for PBS Directors and PBS Management. Plan for scheduling of initial pilot test at Model PBS next quarter.
  - Continued development work on curriculum materials for three new materials management training programs.
  - Continued with full-scale revision of existing REB curriculum materials for "Records Management" and "Office Management" training programs.
  - Completed development of Curriculum Style Book, which will serve as reference for development of curriculum materials following a uniform format that is user friendly for trainees and trainers.

#### ***IR #4: Small Power Generation Program Developed***

- Continued work with REB in support of first three SPG projects (Comilla PBS-1, Dhaka PBS-1, and Narsingdi PBS-1):
  - Assisted REB in progress monitoring of construction.
  - Assisted REB with negotiations with contractor on contractual requirements.
  - Completed study on Evaluation of Alternatives for Sizing and Operation of these three power plants.
  - Completed the Capacitor Placement Study for Narsingdi PBS-1.
- Continued support of REB regarding the second eight SPG Projects:
  - Completed the Bid Evaluation Report for the second eight SPG projects for submission to REB Management and MEMR.
  - Visited each site to assist REB in evaluating the site and the gas inter-connections to them.
- Completed a presentation to the Executive Committee of the "*REB Renewable Energy Program Policy and Implementation Strategy*", which was developed by participants of the strategy seminar.
- Continued to work with CARE, as the GIS project for building a database for Golpalgonj PBS was formally started. This work has involved close interaction with the consulting engineer for the PBS in order to secure the necessary system maps and other information required to complete the project. The final results of the GIS project will be an effect planning tool and will demonstrate how REB can analysis PBS territories and select appropriate areas for renewable energy projects.
- Completed procurement cycle for purchasing one high powered PC for using the GIS software at the NRECA office and finalized specifications with local vendor for purchasing the GIS software.

## **II. Quarterly Reporting and Overview of RPPR Program**

### **Background on Quarterly Reporting:**

Under the terms of NRECA International, Ltd's Cooperative Agreement with USAID, Quarterly Reports are to be submitted to provide information as to the status of the technical assistance provided under the Rural Power For Poverty Reduction (RPPR) Program. It should be noted that this technical assistance effort differs from previous NRECA Host Country Contracts (HCCs) with the Rural Electrification Board (REB) in that it is "result oriented" and is very specific in terms of what is to be accomplished during the 5-year program. Under these past HCCs, NRECA provided overall assistance to REB in all aspects of the RE Program. According to the RPPR Program Design that was jointly completed by REB, USAID, and NRECA, specific areas were identified from various assessments of the RE Program, and these selected areas are the specific focus of the RPPR technical assistance. For this reason, it should be understood that Quarterly Reports for the RPPR Program will present information as to the status of these activities and will not provide the same "broad-based" reporting on the entire RE Program as was done by NRECA under the previous HCCs with REB.

Comments on various other observations made by NRECA on the overall RE Program will be included, but for the most part will be primarily related to those areas that have direct and/or indirect impact on RPPR activities.

### **General Description of RPPR Program:**

The specific objectives of the technical assistance effort under the Rural Power For Poverty Reduction Program further supports enabling the Rural Electrification Board (REB) and the Palli Bidyut Samities (PBSs) to meet the management challenges of expanding the Rural Electrification Program of Bangladesh. Activities will focus on strengthening management and technical capability of REB to fulfill its mandate to provide direction and support to the rural electrification system through the establishment and development of the PBS system, thus increasing the numbers of rural people having access to reliable electric service.

### **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 Program Objectives:**

Specifically the RPPR Program involves the completion of various activities and tasks that support the following four main objectives or intermediate results:

- IR #1: *Improving Member-User Satisfaction and Increasing Their Participation*
- IR #2: *Enhancing REB and PBS Management*
- IR #3: *Enhancing PBS Support Services*
- IR #4: *Developing the Framework for A Small Power Generation Program*

There are twenty-one individual activities under these four major areas. The overall RPPR Program will promote the RE Program as a "means" for improving socio-economic conditions of the rural people rather than an end in itself.

### **III. Quarterly Status & Planning on Intermediate Results w/Activities**

#### ***IR #1: Member User Satisfaction Improved and Participation Enhanced***

**Activity 1.1: Develop and implement a plan for member-user education and awareness, productive use of electricity and outreach programs to benefit the poor.**

Status as of this Quarter:

- Developed the video script and submitted to REB for approval. REB has established a formal committee comprised of Executive Committee members to review and approve the script.
- At the request of the Chairman, developed story and advertisement for "The Guardian" magazine to tell about NRECA's work with REB over the past 22 years. An upcoming edition of the magazine will feature the RE Program.

Plans For Next Quarter:

- Upon receipt of approval from REB for video script, proceed with the steps leading to the completion of the film, including filming, editing, narration in English, translation into Bangla and narration in Bangla). Target date for completion is 30 September 2000.
- Pursue discussions with USAID's JOBS Program to investigate potential linkages that may be supportive of PBS members developing opportunities for increased "productive uses" of electricity.

**Activity 1.2: Expand PBS Member Services Department capabilities in member-user services.**

Status as of this Quarter:

- Submitted Member Services Department Refocus Plan to REB for review. Plan includes the following: Executive Summary; the Plan; revised Member Service policies, organizational charts, job descriptions; and the Member Services Policy translated into Bangla.
- Worked with socio-economist providing input regarding Member Services capabilities for their planned involvement related to being responsible for conducting socio-economic impact surveys and studies at the PBS level.

Plans For Next Quarter:

- Continue work with socio-economist as necessary.
- Make revisions to Member Services Department Refocus plan as necessary.
- Develop plan for implementing elements of the new Member Services Program as outlined in the newly developed Plan.

**Activity 1.3: Develop and conduct customer awareness training for all PBS employees.**

Status as of this Quarter:

- Conducted 3 CA training programs for Board Members, Lady Advisors and General Managers on a regional basis for 7 PBSs. 130 people were trained for a total of 1170 training hours. The PBSs included: Chittagang 2, Rangpur 1, Rangpur 2, Gaibandha, Dinajpur 1, Dinajpur 2 and Thakurgoan.
- Presented CA training in regional programs in Jessore, Rangpur and Habigonj. 83 Billing Assistants received the training for a total of 747 training hours.

Plans For Next Quarter:

- Continue conducting CA one-day training for other PBS Boards, managers and

- officers on a regional basis.
- Conduct CA training at regional training classes for Billing Assistants.
- Schedule a “training of trainers” session for staff from additional PBSs to begin a broader implementation of the CA training to PBS employees.

## **IR #2: REB and PBS Management Enhanced**

### **Activity 2.1: Management assessment and development system developed and functioning.**

#### Status as of this Quarter:

- Work in this area during this past Quarter was limited. Most tasks related to this activity are complete. Management Team has been empowered and a Management Assessment completed. Management Assessment Report has been prepared. Sections of this report are being reviewed and acted upon under Activity 2.2.

#### Plans for Next Quarter:

- Continue work on refining Management Assessment. Work with REB management to finalize and obtain approval.
- Continue to identify “priority” items in management assessment that will lead to development of action plans being addressed under Activity 2.2.
- Continue work on “Model PBS Concept”. From the Model PBSs identified, select PBSs to implement specific management plan items.
- Remaining activity to be carried out in Activity 2.2.

### **Activity 2.2: Develop and implement linked REB and PBS management plans.**

#### Status as of this Quarter:

- Proceeded with work with REB & PBSs related to identified key priority items in the Management Assessment for action, as explained below:
  - Continued work on the Business Process Analysis of the REB Financial Directorates, which began the previous quarter. Study has been directed toward the information interdependence of each Directorate.
  - Continued to advise the Revolving Fund Board on as needed basis with regard to implementing the Policies and Procedures for the Administration of the Revolving Fund, as previously submitted. To date not all have been fully implemented.
  - Obtained REB’s Rates and Contracts Cell acceptance of the PTA Database module, as designed by NRECA’s Computer Team. The module is being fine-tuned through the joint efforts of REB and NRECA. The process of populating the database with the historical Form 550 information has also begun. Formal comments from REB on the PBSs’ Form 550 Data Entry module are still pending.
  - Began work on the development of a PBS Automated Payroll Package based upon the design of the REB Automated Payroll Package. This package will serve as another automated function that will enhance the efficiency of the PBSs.
  - Obtained REB’s formal acceptance of the Nilphamari “re-assessment” report. REB has since forwarded it to the concerned GOB Ministry.
- Finalized the I-Beam Board/Management responsibilities training program and received approval from REB Curriculum Committee. The program includes the Trainer's Guide, the Trainee's Guide and translation into Bangla of the REB policy instructions relating to Board and General Manager responsibilities.
- Conducted Key Accounts (KAs) Management introduction program at Narsingdi PBS-1 as a pilot project. Program received positive rating on the response questionnaire. The initial program resulted in the identification of an additional

training component that would aid the PBS staff in applying the principles presented during this pilot testing.

- Continued to quantify data from PBSs for RPPR Key Performance Indicators.

Plans for Next Quarter:

- Continue design and implementation of priority management action plan items to incorporate the Assessment findings into linked recommendations. This will include but not be limited to:
  - Continue with the development of a viable REB Revolving Loan Fund, with the goal of allowing a smooth administration of the Fund. This effort will include advising the Revolving Fund Board as to potential sources of funding and the use of these loan funds by the PBSs. Assist with the implementation of the Policies and Procedures that were developed last quarter.
  - Initiate a review of Account 252 (Deferred Credits) with studies aimed at reducing the balance in the account, while also determining the proper ongoing procedures for this account.
  - Develop linked Material Management plans for REB/PBS Material Management procedures. Monitor developments to ensure plans are in support of tasks being completed under Activities 3.1 and 3.2.
  - Assist the REB Rate Cell in the population of the PTA Database module with all historical Form 550 information for all PBSs. Consult with REB in the preparation of an appropriate plan for the deployment of the PBS Form 550 Data Entry module to all PBSs.
  - Develop and implement other management plans in close cooperation with REB and the PBSs.
- In consultation with REB's Training Directorate, conduct pilot testing of "I-Beam" Board/Management responsibilities training program for one or two model PBSs.
- Continue with plans for the development of management training courses for PBS Boards and PBS officers. This may include revision of current curriculum as well as development of new curriculum (i.e., "Board/Management Responsibilities", "Understanding the Security Agreement", "How to Read and Understand PBS Financial Statements", and various Member Service training courses – See Activities 1.1 and 1.2). This effort will continue to be coordinated with Act. 3.5.
- Based on information obtained from the Key Accounts (KAs) pilot program at Narsingdi PBS I, develop an additional training component that would aid PBS staff in the application of the principles related to managing KAs. Work with Narsingdi PBS staff in the development of an initial list of KAs for evaluation and the initial implementation of a KAs program. Work will focus on establishing a KAs structure at the PBS, as well as selection of a KAs Coordinator and other KAs Representatives. Continue to monitor the new KA Program and begin the development of a plan for implementing the KAs Program in other Model PBSs.
- As a part of the RPPR Key Performance Indicators, gather additional data from PBSs and REB, revise data gathering procedures, and continue to refine the data to pinpoint performance indicators.

**Activity 2.3: Develop systems to monitor, evaluate, and report impact of the rural electrification program on RPPR customer:**

Status of this quarter:

- NRECA socioeconomic staff completed the field-test of the initial version of impact assessment questionnaires following the approved plan for surveying the PBS member customers of main four categories-domestic, industrial, commercial and irrigation. Prepared a field experience report which provides details related to the field testing.

- Completed major modifications of the impact assessment questionnaires based on the field-test experiences. Any further modification of the questionnaires will depend on the next field-test that will be conducted in coordination with REB.
- Consult with REB regarding the approval of the revised questionnaires and plans for conducting a second field-test to validate the new questionnaires.
- Initiated work to determine the sample size and sampling procedure for the Baseline data-flow system.
- Began recruitment of a suitable support staff person with a background and experience related to the use of computerized systems (i.e., base-line data bases, etc.) developed for socio-economic analysis. Experience related to translating and typing in Bengali will also be important capabilities.

Plans for the next quarter:

- Complete development of Baseline questionnaire (both Bengali & English version) and obtain REB's approval for Field-testing.
- Formulate the required system methodology and process for the socioeconomic baseline database in both English and Bangle versions.
- Begin the development process of the Baseline questionnaire manual guideline (both English and Bengali) for the data collectors as a part of the "system" that will be used for providing training to these individuals. Eventually these materials will be for training PBS personnel who will be involved with process of data collection.
- Complete the recruitment of the support staff for NRECA's socio-economic section.
- Proceed with the procurement actions required for securing the SPSS software package, which is the preferred package for socio-economic analysis.

**Activity 2.4: Develop a direct response system for member-user feedback to PBSs.**

Status as of this Quarter:

- There was no specific work on this activity during the quarter.

Plans for Next Quarter:

- Using Customer Awareness Survey Results Report in IR# 1.1, development of feedback system is planned for the 4<sup>th</sup> Quarter of this year.

**Activity 2.5: Computerize REB & PBSs**

Status as of this Quarter:

- Completed training of REB personnel on the new Payroll Application. Continued working with REB on minor modifications to the package.
- Initiated project to modify the REB Payroll Application for use in the PBSs. Made numerous site visits to the model PBSs to collect data and consult with PBS personnel on the requirements for the PBS Payroll Package.
- Inspected the vendor installation of the PBS LANs at Dhaka and Comilla model PBSs and at Manikganj, which were purchased by REB under an independent procurement action. Noted deficiencies and corrected configurations at Dhaka and Comilla. Made arrangements to return to these two sites for basic computer use and basic LAN administration training. Formal trips reports that outlined the findings were submitted to REB.
- Conducted site visits to Manikganj, Dhaka-1, Tangail-1, Sirajganj and Bogra PBS to follow up on their use of the Voter List Database Software. Arrangements were made to return for additional training for the PBSs that plan on using the software.
- Continued the Business Process Analysis of the REB Finance Division in preparation for the development of software packages for automating the various finance-related functions within REB.

- Performed site survey of REB Accounts Directorate's existing hardware configuration. Made recommendations for upgrading and required procurement for establishing a LAN for the Directorate's two floors of operations. Submitted same to Director of Accounts for his review and necessary action.
- Updated the REB Computer Hardware Inventory and Distribution Report, per the request of Member Finance and submitted the same to REB.
- Consulted with REB Rates and Contracts Cell on the PTA Database regarding the functionality and additional needs for the software package developed by the NRECA computer staff.
- Attended meetings of the Materials Management Team (MMT) and consulted with the concerned Directorates regarding software needs and requirements. Developed a sample module for tracking IFBs for the Procurement Directorate, for evaluation and modification. The requested feedback was pending at the time of this Report.
- Completed participation in the PBS Billing Software Evaluation Committee, which was comprised of NRECA and REB/PBS personnel. Attended demos by various vendors, conducted vendor site visits and made formal recommendations to Member PBS & Training. Attended Financial Bid Opening.
- Procured and installed workstation for use on GIS Mapping Project at the NRECA office.
- Established a in-house system at NRECA's Annex offices that provides for the interconnection of 10 workstations between the two side by side offices.
- Continued to work with REB Training Directorate in preparing and conducting computer training courses for REB and PBS staff.
- Continued to provide general support and trouble-shooting assistance to the REB/PBS Information Technology upgrade effort.
- Completed the appointment process with REB and USAID, which led to the official appointment of Nazrul Islam as an NRECA System Analyst.

Plans for Next Quarter:

- Make site visits to Narsinghdi-1, Moulavibazar-1, Mymensingh-1, Tangail-1 and Jamalpur PBSs to inspect and correct the LANs installed by the local vendor - CACTS.
- Conduct site visits to Comilla-1, Dhaka-1, Narsinghdi-1&2, Mymensingh-1&2, Hobiganj, Moulavibazar-1 and Manikganj PBS as part of the System Study of the PBS Payroll Application.
- Complete development of the PBS Payroll Package and submit to REB for acceptance. In conjunction with REB, develop a plan for the deployment of the Payroll Application to all PBSs.
- Continue development of Material Management Software modules for the Directorates of MPSS, CS&M, Procurement and Accounts. Leading to an integrated Material Management Application.
- Work with REB's Rate Cell in support of their populating the PTA Database with all historical information on all PBS Form 550s.
- Prepare plan, in conjunction with REB, for the deployment and training of the PTA Data Entry Module (DEM) at all PBSs.
- Assist REB, where requested, on the evaluation and final selection of a software development vendor for the PBS Billing Package.
- Assist REB, where requested, on the configuration and hardware procurement for a WAN/LAN at REB HQ.
- Continue to update the Business Processes and Workflows Analysis for the REB Finance Directorates.
- Assist and advise the REB Training Directorate to help intensify the training effort to respond to the expressed needs of the PBSs.

- Work with REB to provide continuous general support and trouble-shooting assistance to the REB/PBS Information Technology upgrade effort.

**Activity 2.6: Develop preventative maintenance program guidelines for PBSs.**

Status as of this Quarter

- Visited Kustia PBS and inspected the substations which were having serious operational problems. Consulted with REB's System Operations Directorate regarding recommendations related to corrective actions to be taken.
- At REB's request, reviewed inquiry regarding the specifications of Aerial Bundled Cable and made recommendations concerning the details of the technical specification. Obtained technical information and pricing guidelines from manufacturer to aid them for a tender offering.
- Conducted site visit to Narshingdi PBS-2 to provide advice to REB/PBS personnel on energizing a new 5Mva transformer in their Chowala substation.

Plans for Next Quarter

- Continue to work with REB's System Operations Directorate and Training Directorate to set up a model regional substation maintenance program. (Note: Previously delayed due to SPG activities)
- Establish a regular monitoring program to provide feed back to REB on the needs of the PBSs. (Note: Previously delayed due to SPG activities)
- Continue visits and inspections of substations identified by REB as having special operation and maintenance problems.
- Evaluate REB's training with regard to the use of new test instruments.

**IR #3: Support Services Enhanced**

**Activity 3.1: Develop and implement procurement system for equipment and materials for electric operations, maintenance, repair and replacement.**

Status as of this Quarter:

- Formal approval of the Materials Management Team (MMT) was received from REB in May. Although other informal MM Team had been held previously, the first formal MM Team was held on June 5<sup>th</sup>. The productive meeting included discussions on the following topics: Computerization of REB's MM process; potential use of a software developer, other than NRECA; Review of two guidelines for OMRR inventory material process with plans for consolidating guidelines for the next meeting; and Status of suggested changes of Central Warehouse.
- Completed development of a consolidated OMRR (Operations, Maintenance, Repair & Replacement) inventory material list. Presented the list to MM Team at June 5<sup>th</sup> meeting. The list was well received and appreciated by the Directorate of MPSS. Input is pending from other concerned directorates.
- Established schedule between NRECA IT team and the Deputy Director of MPSS to discuss needs and expectations of the software program being developed for them. Testing of the their module of the software still pending.
- Participated in meetings with REB's MPSS Directorate personnel, NRECA's Director of Software Development and NRECA's Materials Management Advisor to discuss MPSS processes relevant to software development.
- Conducted an initial investigation of the Materials Management problem related to "Materials Allocation" and issues regarding procurement of materials by different donor agencies.

Plans for Next Quarter:

- Participate in MMTeam meetings to expedite OMRR inventory development process.
- Provide a software module to the Directorate of Procurement for testing.
- Provide suggested solutions to the Materials Allocation issue.
- Continue to work with NRECA's IT team in obtaining needed information from concerned directorates to continue the development the MM software.
- Conduct field visits to PBSs with IT Team to determine possible linkages to REB MM software.

**Activity 3.2: Develop improved material delivery system to supply PBSs for efficiently.**

Status as of this Quarter:

- Provided advice to concerned directorate on proper warehouse outlay.
- Assisted NRECA's training group by editing curriculum materials, and providing technical advice as the subject matter expert for the three new Materials Management courses currently under development.

Plans for Next Quarter:

- Continue to offer advice on proper warehouse outlay, through the MM Team.
- Investigate potential for assisting with development of a properly functioning PBS warehouse which could serve as a model to other PBSs and that could be duplicated.
- Continue assisting NRECA's training group in the development of the curriculum materials for the three Materials Management training programs.

**Activity 3.3: Establish and initiate discussion between REB and PBSs on support services needs on regular schedule.**

Status as of this Quarter:

- Other than specific work on other RPPR Activities specifically related to support services (i.e. training, materials management, maintenance, etc.), there was no specific work on this activity during the quarter.

Plans for Next Quarter:

- Develop a discussion scheme to allow for the development of team goals and operating procedures, as well as performance evaluation. The underlying objective of this activity is to discuss ways of improving the support services provided by REB to the PBSs.

**Activity 3.4: Develop and implement method for evaluating and improving support services.**

Status as of this Quarter:

- Other than specific work on other RPPR Activities specifically related to support services (i.e. training, materials management, maintenance, etc.), there was no specific work on this activity during the quarter.

Plans for Next Quarter:

- Establish and empower a support services team (SSTeam) from REB and PBSs.
- This activity will include the development of a methodology to identify the PBS support services needs and the design of evaluation criteria and report formats.

**Activity 3.5: Increase effectiveness of training delivery system.**

Status as of this Quarter:

- Continued work in support of REB's decision to develop a Training Academy for the RE Program as a solution to an improved "training delivery system". Tasks this quarter included the following:

- Participated in follow-up meeting in mid-April to review the latest recommendations received from the MEMR regarding their review of the TAPP submitted to them in October 1999.
- Completed required revisions and resubmitted the TAPP to REB for their submission to the MEMR.
- Activities related to the implementation of Regional Consultation Tours continued.
  - Successfully organized and implemented a regional consultation tour related to renewable energy within India in late May. Two REB participants included the Chairman and the Chief Engineer (Planning & Operations). Coordinated this with the USAID Mission to incorporate the Chairman's participation in World Bank conference on "power sector restructuring" that also took place in India.
  - Attempted to reschedule the regional tour entitled "*Training Administration and Facilities to Support Rural Electrification*" to Malaysia and Pakistan is still pending. The tour is designed to investigate large-scale manpower development programs being conducted by utility training institutions/academies. Program is still pending.
- Continued to support the implementation of basic computer training for REB and PBS officers and staff in the Training Directorate's computer lab, as well as the field training at the PBSs with new LAN systems as referenced under Activity 2.5.
- Obtained formal approval of REB for Training of Trainers (TOT) curriculum material (Trainer and Trainee manuals) developed by NRECA.
- Using the approved TOT curriculum continued implementation of the "staff development sessions" for the REB Training Directorate staff. Target population includes AGMs assigned to REB Training Directorate. A formal schedule for bi-weekly sessions was issued by the REB Training Directorate.
- Continued with curriculum development activities including:
  - Received REB's approval of the curriculum materials for the "I-Beam" Board/Management responsibilities training. The materials for this new program should be completed next quarter and be ready for pilot testing.
  - Continued development of curriculum materials for three new training programs related to Materials Management for both REB and PBS personnel.
  - Per REB's request, initial process began for full scale revision of "Records Management" and "Office Management" – this was identified as a priority with both programs being offered to all officers of REB and the PBSs.
  - The "draft" of a formal REB curriculum development policy/procedure is still pending with REB.
  - Began securing reference materials (i.e., operating manuals, repair manuals, etc.) for use in development of materials needed for training REB/PBS engineers on the operation of substations taken over from PDB and DESA.
  - Prepared a "Curriculum Style Book" to be used as reference in the development of REB curriculum materials to help ensure manuals are effectively designed for use by both the trainers and trainees.
  - Developed suitable format for "curriculum outline" that will serve as a tool for organizing the ongoing development of additional curriculum materials for the REB/PBS courses.

Plans for Next Quarter:

- Provide ongoing monitoring of progress on review of the TAPP for the new proposed Training Academy and provide necessary assistance to REB during the GOB approval process.
- Assist REB in the development of the documents required for the solicitation of consulting services as outlined in the TAPP per ADB guidelines.
- Continue with curriculum development tasks including:

- Complete work with Member Services Specialist to finish the curriculum materials for the "I-Beam" Board/Management responsibilities training. (Activity 2.2) and submit for approval by REB.
- In consultation with REB's Training Directorate, support the pilot testing of "I-Beam" Board/Management responsibilities training for one or two model PBSs.
- Seek approval of the submitted curriculum development policy/procedure, which is still pending with REB Training.
- Continue to work with Training Directorate to refine Plan for curriculum development activities and continue implementation of the plan to include the following:
  - ⇒ New programs/courses (i.e., a management refresher program for PBS Boards and GIMs: "Board/Management Responsibilities", "Understanding the Security Agreement", "How to Read and Understand PBS Financial Statements", and various Member Service training courses – See Activities 1.1 and 1.2). This effort will continue to be coordinated with Activity 2.2)
  - ⇒ Revised programs/courses, including those needing translation; supplementary materials for existing curriculum on priority basis for management, finance and technical/engineering.
- Continue the "staff development program" for the REB/PBS trainers using the new "Train the Trainer" curriculum following the bi-weekly schedule in Training Director's memo dated June 14<sup>th</sup>.
- Continue with implementation of the US and Regional Consultations/Tours, including the following:
  - Reschedule the consultation/tour to investigate the utility training institutions/academies in Malaysia and Pakistan.
  - Review options for future programs within the Asian region.
- Continue to support training activities in the "model PBSs" through consultation with NRECA's STSs and others involved with other RPRR activities (i.e., customer awareness training, REB/PBS management assessments, computerization, and SPG planning) will continue. Both the LTAs and STSs will serve as "subject-matter experts" in support of the curriculum development effort.
- Develop and begin implementation of a "plan" for improving the delivery of computer training in the PBSs in support of the newly installed LANs at eight PBSs.
- Continue to support the computer training in REB's Computer Lab in the Training Directorate. NRECA's Computer Instructor/Trainer and System Analysts will assist.
- Expand the computer training being provided in the PBSs in support of the Voter Data Base program, which will support the development of the data base required for the Billing software package currently under development by local vendor.

**Activity 3.6: Develop and activate PBS disaster response system.**

- No activity in this quarter. Project activity will be delayed until the last quarter of Year #3 due to the accelerated pace and expanded scope of IR #4 (Small Power Generation Program Developed).

Plans for Next Quarter:

- Conduct preliminary review of REB's current disaster response system for the PBSs and provide comments and recommendations to REB.

**IR #4: *Small Power Generation Program Developed***

**Activity 4.1: Review and assess GOB policies on Small Power Generation (SPG) in view of sector reform.**

**Activity 4.2: Define REB Small Power Generation Policy.**

**Activity 4.3: Develop Small Power Business Plan.**

(Note: These three activities have been combined due to their inter-relationship in terms of the tasks being completed to support these activities.)

Status as of this Quarter:

- Continued work on updated information for required system improvements for each PBS
- Progress Report for first three SPG projects (Comilla PBS-1, Dhaka PBS-1, and Narsingdi PBS-1):
  - Assisted REB in progress monitoring of construction.
  - Assisted REB with negotiations with contractor on contractual requirements.
  - Completed study on Evaluation of Alternatives for Sizing and Operation of these three power Plants.
  - Completed the Capacitor Placement Study for Narsingdi PBS-1.
- Progress Report for the second eight SPG Projects:
  - Completed the Bid Evaluation Report for the second eight SPG projects.
  - Visited each site to assist REB in evaluating the site and the gas inter-connections to them.

Plans for Next Quarter:

- Continue to support REB in the development of the first three SPG projects.
  - Complete work out of the interconnection requirements with REB through the use of engineering software.
  - Update information on required system improvements as required.
  - Assist REB in negotiations for a Gas Supply Agreement between REB and Titus and Bachrebat gas companies.
  - Assist REB with supervision of any construction and engineering activities undertaken during this quarter related to the planning and preparation of the PBS substations and 33 kV lines that serve as the interconnections with the power stations. This work is totally the responsibility of REB and the PBSs, and penalty clauses exist in the Agreements if interconnections are not prepared to accept the delivery of power as per established date of SPG project completion.
  - Support REB's monitoring of Key Milestones:
    - (i) Selection and approval of a qualified Construction Contractor.
    - (ii) Completion of Site filling;
    - (iii) Selection and approval of qualified Operations and Maintenance Contractor;
  - Assist REB with oversight of construction phase.
  - Schedule the training required for REB/PBS personnel related to the IPP's commercial operation of the SPG plants.
- Continue to support REB in development of the second eight SPG Projects
  - Begin work on Evaluation of Alternatives for Sizing and Operation of the second eight SPG projects.
  - Issue Letters of Intent (LOI) to first ranked bidders following the approvals from MEMR and the participating GOB agencies.
  - Commence negotiations of Security Package Agreements with Bidders (after issuance of LOI).
  - Work with Titus and Bachrebat Gas to assure physical delivery of gas to each site.
  - Work out interconnection requirements with PDB.
- Support the commencement of requisite activities to initiate future generation projects under the auspices of the REB Office of Generation, including preparing draft policies and training materials.

(Note, as a result of the meeting with the Secretary of the Ministry of Energy on 5/26/98 and with concurrence of REB and USAID to pursue the new SPG schedule, resources will be utilized beyond what was originally planned for under IR #4.)

- Activity 4.4: Establish REB policy with respect to renewable energy rural electrification program.
- Activity 4.5: Develop features of REB Renewable Energy Power (REN), including tariffs, equipment, specifications & standards.
- Activity 4.6: Develop REB Renewable Energy Business Plan to be presented to donors and others potential sources of program financing.

(Note: These three activities have been combined due to their inter-relationship in terms of the tasks being completed to support these activities.)

Status as of this Quarter:

- Completed a presentation to the Executive Committee of the "REB Renewable Energy Program Policy and Implementation Strategy", which was developed by participants of the strategy seminar.
- Continued to work with CARE, as the GIS project for building a database for Golpalgonj PBS was formally started. This work has involved close interaction with the consulting engineer for the PBS in order to secure the necessary system maps and other information required to complete the project. The final results of the GIS project will be an effect planning tool and will demonstrate how REB can analysis PBS territories and select appropriate areas for renewable energy projects.
- Completed procurement cycle for purchasing one high powered PC for using the GIS software at the NRECA office.
- Completed specifications with local vendor for purchasing the GIS software.

Plans for the Next Quarter:

- Continue to work with REB in support of the develop of REB's renewable energy program as outlined in the "REB Renewable Energy Program Policy and Implementation Strategy"
- Complete the development of the GIS database for Golpalgonj PBS.
- Continue to develop REB management training manuals for renewable energy program. Consult with the REB Training Director for scheduling initial training program activities for REB management personnel.
- Continue development of training manuals for REB engineering and training staff, as well as training materials for PBS officers and contractors.
- Complete the installation of the GIS software package on the workstation at NRECA and complete software training for NRECA engineering staff. Explore other training opportunities through the GIS office at CARE.
- Complete the procurement of one additional GIS work station for the NRECA office.
- In consultation with REB, continue to monitor new developments regarding progress related to the proposed World Bank-funded renewables project scheduled as part of a larger loan to the RE Program. Progress on these development plans is expected in September 2000.

## **IV. Quarterly Status and Planning of RPPR's Project Management**

### ***Project Management/Administration For Program-Related Issues***

#### Status as of this Quarter:

- NRECA/Arlington completed arrangements for securing services of Small Power Generation Specialist required to support the SPG activities for the first three pilot stations and the next eight sites. Although a suitable candidate for the Computer Systems Specialist position was identified, but is still pending due to REB's indecision related to the installation of a LAN in the REB Headquarters.
- NRECA/Dhaka completed the recruitment formalities for several local professional positions who will be employed by NRECA for the RPPR Program. A fourth Computer Analyst formally joined NRECA during the quarter. This position will function against the time available in the Financial Systems Specialist position as it was not possible to locate a Financial Systems Specialist with the required experience in development of computerized financial packages). A replacement for NRECA's Director - Curriculum Development was successfully recruited and joined NRECA during the reporting period.

#### Plans for Next Quarter:

- NRECA/Arlington will begin the preliminary recruitment planning to identify personnel to fill the short-term positions of Organizational Development Specialist and Financial Systems Specialist. Recruitment of the Computer Specialist will be delayed until 1<sup>st</sup> quarter in 2001.
- NRECA/Dhaka will continue the recruitment effort for the following local professional positions still vacant: Curriculum Development Specialist (Finance), as replacement for staff member who left NRECA and the Management Specialist who will assist with basic management training, as well as Customer Awareness Programs for PBS Directors and management staff. The recruitment process will also be initiated for the support personnel for NRECA's Socio-Economic group.

## V. Brief Summary of Related Observations & Other RE Activities

### Key Operational Information

The following table reflects key operational information regarding the fifty five (55) commercially operational PBSs included in the RE Program for the months of February, March, April, and May, as contained in the selected REB Management Information System (MIS) Reports:

Description	Feb 2000	March 2000	April 2000	May 2000	Change - 3 Mos Per'd
System Loss ( 12 mo. Avg)	16.87%	16.80%	16.24%	16.26%	- 0.64%
System Loss ( this month's Avg.)	12.02%	16.26%	11.18%	18.23%	+ 6.21%
Percentage of Collection (12 mo. Avg.)	95.83%	96.54%	97.49%	96.99%	+ 1.16%
Percentage of Collection (this mo. Avg.)	94.69%	93.40%	95.50%	106.10%	-- 11.41%
Accounts Receivable (# mo. Outstanding)	2.74	2.78	2.76	2.63	-0.11
Total Villages Energized	27,868	27,993	28,078	28,084	+ 216
Number of New Meter Connections	27,861	29,615	20,048	25,356	+ 75,019
Total # of Meters Connections	2,676,064	2,705,679	2,725,727	2,723,588	+ 47,524
Total Km of Energized Line	108.004	108.899	109.625	109.376	+1.372
MWH Purchased YTD - % of chng last yr.	25%	22%	19%	19%	N/A

- Operational statistics for the 55 energized PBSs continue to reflect that the overall RE Program shows further expansion with 75,019 *new connections* made during this reporting period, averaging 25,006 per month. It is noted that the statistics provided in the MIS Reports for *Total # of Meter Connections* does not equal the 75,019 in the previous category. As part of this expansion, 461 *new villages* received electric service. Also, the total amount of *energized line* increased by 1,372 km during these three months.
- Overall *12-Month Average System Loss* for all 55 operating PBSs shows a positive reduction of 0.64% over the three-month reporting period, with the May average being 16.26%. Efforts by REB and the PBSs continue to show a progressive reduction in these losses as continued improvements are made to the large amounts of lines and consumers being taken over from PDB and DESA. Time has shown that losses can be brought under control. It should be noted that if the six PBSs with large areas recently taken over from BPDB and DESA were excluded, the 12 month average loss would be further reduced to 13.92%.
- The *Average Monthly System Loss* for the reporting period shows significant movement up and down. It was 12.02% in February, but up to 16.29% for March. There was a reduction to 11.18% for April, but then jumped again in May to 18.23. Over the three months there was a increase of 6.21%. As part of routine monitoring of PBS performance, both of the monthly averages for system loss will continue to be monitored closely in order to ensure that the required corrective actions continue to being taken to gain control of the losses in these takeover areas. As was noted in previous reports, REB and the PBSs have taken positive corrective actions to address the conditions which were hampering efforts to resolve various operational problems in these new take-over areas. As has been noted in previous reports, while the averages related to system losses

have shown improvements, several PBSs have losses that are well above the acceptable levels and proper attention must be given to assist these PBSs with corrective action.

- The overall *Percentage of Collection (12 mos average)* showed a positive improvements for some months during the period with movement from 95.83% at the start of the period to 96.99% - a positive increase of 1.16%. For this reporting period, the *Monthly Percentage of Collection* showed a significant positive change of 11.41% to 106.10. This no doubt reflects the year-ending efforts of the PBSs to achieve their collection percentage established for PTA. These figures continue to show that collections, as well as losses, can be controlled when the necessary efforts are being made, and the consumers are educated about their participation in the PBS system.
- The total *Accounts Receivable* showed a modest decrease from 2.74 months to 2.63 months for the reporting period. It should be noted that the year ending average in June 1999 was at 2.49.

Note: As has been noted in previous Quarterly Reports, there have always been some problems related to the amount of revenue outstanding caused by late payment or non-payment by selected gov't offices and other entities (mosques, etc.). It must be understood by all those involved with the RE Program that timely payment of bills must exist for all PBS consumers.

- Statistics related to MWH purchased further indicates the continued growth in demand with a 20% average monthly increase for the three months of the reporting period in terms of the percentage of change in the total number of MWH purchased for the year. While this monthly average is down from the 36.33% shown in for the last reporting period, this statistic continues to indicate the ongoing development of load within the PBSs, some of which is coming from large loads being taken over from PDB and DESA.

### ***Other Related Activities and Relevant Information***

- The NRECA Team made a formal presentation of RPPR activities to the REB Management and other officers serving as Directors and above on May 5<sup>th</sup>.
- As of the end of the reporting period, the finalizing of NRECA's article prepared for the edition of *The Guardian* which was still pending as the planned edition of the local magazine which was to feature the RE Program was not published in May as expected. *The Guardian* is a locally published monthly magazine that provides coverage on various issues impacting Bangladesh.
- At USAID's request, NRECA participated in meetings held with JBIC, a Japanese development agency which has expressed interest in participating in the RE Program.
- Repeated - RPPR Key Performance Indicators: Data gathering continues. As indicated in earlier Quarterly Reports, it should be noted that due to the focus of the RPPR activities starting with the "model PBSs", and not with all fifty-five PBSs, the RPPR Performance Indicators will be initially focused on measuring changes resulting from RPPR activities at these model PBSs.

As noted in earlier Qtrly. Reports, in some cases relevant data is frequently available at the PBSs or at REB, but accessing the data is not always easily done nor sometimes even possible. Most data is kept only by manual records thus further computerization of the data must be completed in order to compile the information in a form that can analyzed and used for reporting purposes.

- Repeated - Revised REB Power Supply Training and Technical Assistance Program: A Workplan Proposal under the RPPR Project Document - May 1999: While there have been various meetings held with REB officials to review the contents of the document in relation to REB's current and future needs in the areas of Power Supply; Engineering and Operations; and Renewable Energy, no specific action was taken during the reporting period. Based on the results

of the previously held meetings, there is general agreement with the contents of the report and the areas identified as requiring further technical assistance.

- Operational and Maintenance Problems at DESA Substations (Repeated From 3/99 to 5/99 Qtrly. Report): Based on input from NRECA's Engineering and Operations Advisor regarding the best solution to the operations and maintenance problem related to the existing electromechanical relays, a decision was taken by REB to replace the three-phase over-current relay on each feeder with a new microprocessor-based relay. These electronic relays cost about the same as one new electromechanical relay, but have greatly increased functionality. The best choice of relay for this particular application is the DPU2000R, made by ABB. This particular unit is manufactured in the standard relay size, so it should fit into the existing control cabinets with out having to make a new opening. This single relay unit would provide the following features, which can be used or disabled in any combination:
  - a) Phase time over-current protection for each of three phases.
  - b) Phase instantaneous over-current protection for each of three phases.
  - c) Ground time over-current protection.
  - d) Ground instantaneous over-current protection.
  - e) Negative sequence over-current protection.
  - f) Phase and ground directional over-current protection.
  - g) Selectable time-current characteristics: inverse, very inverse, extremely inverse, definite time, etc. for better coordination with downstream devices.
  - h) Tap settings from 1 to 10 in 0.1 increments available (vs. discrete taps found on electromechanical relays.)
  - i) Frequency based load shedding and restoring functions with under-voltage blocking.
  - j) Under-voltage and over-voltage alarms and controls.
  - k) Sensitive Earth Fault functions.
  - l) Programmable multi-shot reclosing.
  - m) Feeder metering that records kWh, kvarh, kW, kVar, kV, amps, and power factor in 15-minute increments with time and date stamps.
  - n) Fault location and event recording.
  - o) Self-testing circuits without need for calibration.
  - p) Computer accessible.

(Note: As of the end of this reporting period (12/31/99), no final decision with action had been taken with regard to these particular relays.)

- Summary Report on Engineering Issues at REB and the PBSs (Repeated From Previous Reports): While some points were addressed towards the very end of this reporting period when meetings were held on substation maintenance issues, other points from this Report (initially referenced in the May 1998 Quarterly Report) a number of points still remain valid. For this reason, a listing of the points presented in that Report is again repeated in this Quarterly Report. While the May Report provides details on each item, the following is only a list of the items that seem to command the most attention:
  - 1) Inadequate Construction Work Plan
  - 2) No Power Requirements Study:
  - 3) Power Factor Correction:
  - 4) Small Conductor Sizes on Backbone Feeders:
  - 5) Lost Neutrals:
  - 6) Need Better Power Transformers:
  - 7) Voltage Regulation:
  - 8) Quantum Meters:
  - 9) Substation Over-Current Devices:
  - 10) REB Workshop:
  - 11) Distribution Transformer Losses:
  - 12) Material Specifications:

## Quarterly Report Exhibits

### A. Implementation Schedule

The Implementation Schedule presented in this Quarterly Report reflects the Annual Work Plan for the RPPR Program prepared for Year #3, and represents activities and subtasks for the entire five years. The Workplan for Yr. #3 now matches the US Government fiscal year of 1 October thru 30<sup>th</sup> September, which is also in compliance with the Cooperative Agreement between USAID and NRECA..

The first section of the Implementation Schedule presents the activities and subtasks for Project Year #3 – Jan 2000 through 31 March 2000 by month. The next section presents these same activities and subtasks according to the remainder of the Program period on a quarter basis for each calendar year.

The Implementation Schedules have been developed using *Microsoft Project* in order to monitor progress and modify as necessary. Subsequent Quarterly Reports will reflect progress on each activity and the various subtasks

**EXHIBIT - A**

**IMPLEMENTATION SCHEDULE  
With Focus on Year #3**

## RPPR Annual Work Plan - Year #3 (Status As of 06/30/00)

ID	Task Name	2000											
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	General Project Administration & Implementation	[Gantt bars for 1-7]											
2	Project Management	[Gantt bars for 2]											
3	Advise REB/PBSs	[Gantt bars for 3]											
4	Meetings	[Gantt bars for 4]											
5	Reports	[Gantt bars for 5]											
6	Training Participation	[Gantt bars for 6]											
7	Donor Info	[Gantt bars for 7]											
8	<b>IR # 1.0 MEMBER-USER SATISFACTION IMPROVED &amp; PARTICIPATION ENHANCED</b>	[Summary bar for IR 1.0]											
9	1.1 Develop & implement plan for member education & awareness & productive use of electricity.	[Gantt bars for 9]											
10	1.1.1 Establish member services team with representatives from PBSs & REB - Established & Completed	[Gantt bars for 10]											
11	1.1.2 Develop PBS member services planning scheme - Drafted	[Gantt bars for 11]											
12	1.1.3 Pilot test MS plan in Model PBSs	[Gantt bars for 12]											
13	1.1.4 Develop/implement MS plans in "Model" PBSs on phased schedule and then to others	[Gantt bars for 13]											
14	1.1.5 Evaluate & revise all MS Plans yearly	[Gantt bars for 14]											
18	1.2 Expand PBS Member Services Department capabilities in member-user services.	[Gantt bars for 18]											
19	1.2.1 Design MS Dept. staff structure - Draft prepared awaiting REB approval	[Gantt bars for 19]											
20	1.2.2 Pilot test expanded MSD staff structure in "Model" PBSs - Delayed awaiting approvals	[Gantt bars for 20]											
21	1.2.3 Implement expanded MSD staffing with training on phased basis in "Model" PBSs and then others	[Gantt bars for 21]											
22	1.2.4 Perform MSD SOW, evaluate staffing & recommend revisions to PBSs not less than once per year	[Gantt bars for 22]											
26	1.2.5 Revise & implement MHG Plan (training for all MSD employees)	[Gantt bars for 26]											
30	1.3 Develop & conduct customer awareness training for all PBS employees.	[Gantt bars for 30]											
31	1.3.1 Develop Customer Awareness Training (CAT) with REB Training Directorate - Completed	[Gantt bars for 31]											
32	1.3.2 Train CA trainers for conducting programs w/REB Training Directorate - Completed	[Gantt bars for 32]											
33	1.3.3 Conduct CA Training in pilot PBSs w/REB Training Directorate - Completed	[Gantt bars for 33]											
34	1.3.4 Evaluate and revise CA Training - Completed	[Gantt bars for 34]											
35	1.3.5 Prepare Trainers and conduct ongoing CAT at "Model" PBSs and for other PBSs. Evaluate & revise training.	[Gantt bars for 35]											
36	<b>IR # 2.0 REB &amp; PBS MANAGEMENT ENHANCED</b>	[Summary bar for IR 2.0]											
37	2.1 Management Assessment (MA) & development system developed & functioning.	[Gantt bars for 37]											
38	2.1.1 Establish & empower Management Team and define PBS role - Established & Completed	[Gantt bars for 38]											
39	2.1.2 Develop process to evaluate REB & PBS management - Completed but reoccurring	[Gantt bars for 39]											
42	2.1.3 Perform MAs for PBSs & REB, including functional relationships between PBSs & REB - Drafted	[Gantt bars for 42]											
45	2.1.4 Use Management assessments to develop Management Plans (MP)	[Gantt bars for 45]											
46	2.1.4.1	[Gantt bars for 46]											

RPPR-WP #3  
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Task		Summary		Rolled Up Progress		Split	
Progress		Rolled Up Task		External Tasks		Rolled Up Split	
Milestone		Rolled Up Milestone		Project Summary			

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## RPPR Annual Work Plan - Year #3 (Status As of 06/30/00)

ID	Task Name	2000												
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
47	2.1.4.2													
48	2.1.5 Schedule follow-up assessments beyond PRRP program													
49	2.2 Develop & implement linked REB & PBS management plans													
50	2.2.1 Identify management improvement needs from review of PBS & REB MA - Drafted													
51	2.2.2 Establish objectives & goals for PBS & REB Management Plans (MPs).													
52	2.2.3 Design action components for REB & PBS MPS with inter-organization linkages													
53	2.2.4 Compile & implement management plans for REB/PBSs													
54	2.2.5 Evaluate overall functioning of planning & revise MPs in 3rd qtr. of each operating year.													
58	2.2.6 Complete MP evaluations at mid-term & at the end of the RPPR Program													
59	2.3 Develop sys to monitor, evaluate, report socioeconomic impact of RE program on RPPR customers - Delayed													
60	2.3.1 Establish basis for socioeconomic studies - Delayed due to Staffing - SocioEconomist in 9/99													
61	2.3.2 Design RE socioeconomic impact study process													
62	2.3.3 Implement PBS ongoing data collection													
63	2.3.4 Conduct study in ongoing manner with annual reporting.													
64	2.3.5 Establish schedule for more comprehensive studies every 5 years after the RPPR program													
65	2.4 Develop A Direct Response System for member-user feedback to PBSs - Yr. #3													
66	2.4.1 Empower MS Team to develop system - Scheduled for start of Yr. #4													
67	2.4.2 Develop Member-User Response System - Scheduled for start of Yr. #4													
68	2.4.3 Develop & implement MUR training in "Model" PBSs & other PBSs with Tmg. Dir. - Sheduled Yr. #3 & early Yr. #4													
69	2.4.4 Pilot Test MUR feedback system at "Model" PBSs - Scheduled for Yr. #4													
70	2.4.5 Revise system and implement in remaining "Model" PBSs and other PBSs in phases - Scheduled later Yr. #4													
71	2.4.6 Maintain ongoing implementation, monitoring and revision - link with Annual Management Plans													
74	2.5 Computerize REB & PBSs													
75	2.5.1 Develop computerization team - Established and functioning - Completed													
76	2.5.2 Design computerization scheme - Draft Hdqtrs Plan and PBS in process with local vendor													
77	2.5.3 Provide logistics													
78	2.5.4 Implement scheme in phases; monitor, evaluate, & revise throughout													
79	2.5.5 Review computerization scheme yearly when making MPAs													
84	2.6 Develop preventative maintenance (PM) program guidelines for PBSs													
85	2.6.1 Appoint & empower Operations & Maintenance team from REB & PBSs - Completed													
86	2.6.2 Develop preventative maintenance guidelines - Completed and approved existing REB Policy Guidelines													
87	2.6.3 Implement preventative maintenance guidelines - In process & assist as needed													
88	2.6.4 Provide ongoing monitoring, evaluation & revision of PM guidelines													

RPPR-WP #3  
Qtrly Rpt 06/00

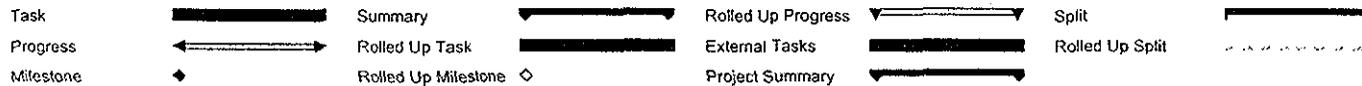
Task		Summary		Rolled Up Progress		Split	
Progress		Rolled Up Task		External Tasks		Rolled Up Split	
Milestone		Rolled Up Milestone		Project Summary			

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## RPPR Annual Work Plan - Year #3 (Status As of 06/30/00)

ID	Task Name	2000												
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
92	IR # 3.0 PBS SUPPORT SERVICES ENHANCED													
93	3.1 Develop/implement procurement system for equip & mat'ls for O&M, repair & replacement - Delayed													
94	3.1.1 Establish & empower materials management team to deal with procurement matters.													
95	3.1.2 Develop procurement system for OMRR materials.													
96	3.1.3 Obtain required actions & implement system													
97	3.1.4 Implement OMRR procurement system													
98	3.1.5 Monitor, evaluate & revise system on schedule													
101	3.2 Develop improved materials delivery system to supply PBSs more efficiently													
102	3.2.1 Perform complete materials flow & handling evaluation to determine needs													
103	3.2.2 Redesign delivery system to meet needs that are revealed													
104	3.2.3 Implement the redesigned system													
105	3.2.4 Monitor, revise & re-implement system													
108	3.3 Establish & initiate REB & PBS discussion on support services needs on regular schedule. - Delayed													
109	3.3.1 Establish Support Services Team with REB & PBS reps													
110	3.3.2 Develop discussion scheme													
111	3.3.3 Implement SS discussion scheme with a preplanned evaluation & revision scheme													
112	3.3.4 Evaluate & revise SS Team discussion scheme yearly													
115	3.4 Develop & implement method for evaluating & improving support services. - Delayed													
116	3.4.1 Empower SS team to develop methodology													
117	3.4.2 Develop methodology													
118	3.4.3. Implement the SS management scheme													
119	3.5 Increase effectiveness of the training delivery system (TDS)													
120	3.5.1 Establish Trng Team with REB/PBS reps & empower it to perform TDS development - Established													
121	3.5.2 Evaluate existing training delivery system - Drafted													
122	3.5.3 Redesign the training delivery system - Incorporate plan for potential RE Training Academy													
123	3.5.4 Obtain approvals, staff & activate TDS w/REB Trng Dir.													
124	3.5.5 Develop curricula													
125	3.5.6 Conduct training, evaluate results & replan													
126	3.5.7 Monitor TDS, revising & renewing with evolving needs & technical advances													
130	3.5.8 Conduct observation tours/consultations to achieve specific RPPR objectives.													
138	3.6 Develop & activate PBS disaster response system - Delayed until Yr. #3													
139	3.6.1 Empower the O&M team to design, activate & manage the Disaster Response System													
140	3.6.2 Design the DRS													

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### RPPR Annual Work Plan - Year #3 (Status As of 06/30/00)

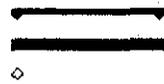
ID	Task Name	2000												
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
141	3.6.3 Implement the DRS													
142	<b>IR # 4.0 SMALL POWER GENERATION PROGRAM DEVELOPED</b>													
143	4.1 Review & assess GOB policies on SPG in view of sector reform.													
144	4.1.1 Communicate with WB & GOB Power Cell on SPG and REN issues - Completed & Ongoing													
145	4.1.2 Review current foreign exchange policies of GOB - Completed													
146	4.1.3 Review current GOB policies on fuel, duties, etc. - Completed but Ongoing due to Reform													
147	4.1.4 Identify & seek favorable action on other applicable issues - Completed but Ongoing due to Reform													
148	4.2 Define REB Small Power Generation policy													
149	4.2.1 Establish SPG team to represent REB & PBSs in SPG program dev. - Established													
150	4.2.2 Define REB's role in control of PBSs involvement in SPG investment - Completed													
151	4.2.3 Establish REB, PBS, vendor roles and relationships - Completed													
152	4.2.4 Develop environmental guidelines for each type of SPG project - Contained within RFP													
153	4.2.5 Codify rules, relationships & guidelines into SPG policy statement													
154	4.3 Develop Small Power Business Plan													
155	4.3.1 Develop SPG Business Plan - Completed RFP													
156	4.3.2 Present SPG Business Plan to Donors and Other Investors - Completed RFP													
157	4.3.3 Evaluate response of all potential financiers - Completed as part of Proposal Evaluations													
158	4.3.4 Assist REB and PBSs with implementation of SPG pilots resulting from BusinessPlan - Ongoing													
159	4.4 Establish REB policy with respect to REN													
160	4.4.1 Conduct REN Workshop for REB & PBS management - Completed													
161	4.4.2 Perform cost study of REN vs. grid extension - Prepared and submitted to REB													
162	4.4.3 Formulate REN policy and submit to REB & USAID - to Exec. Committee 6/00 - Completed													
163	4.5 Develop specific features of REN program													
164	4.5.1 Determine REN role in rural electrification													
165	4.5.2 Evaluate existing REB REN pilot program													
166	4.5.3 Design REN components													
167	4.5.4 Compile REN component of SPG program													
168	4.6 Develop REN Business Plan													
169	4.6.1 Identify geographic locations for REN use based on costs - In Progress - GIS with CARE													
170	4.6.2 Develop detailed estimates for REN inst, maint, collections, billing													
171	4.6.3 Prepare business plan & present to donors & potential investors - Focus on Framework for REN Program													
172	4.6.4 Evaluate responses of donors & investors													

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Task  
Progress  
Milestone



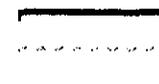
Summary  
Rolled Up Task  
Rolled Up Milestone



Rolled Up Progress  
External Tasks  
Project Summary



Split  
Rolled Up Split



## RPPR Annual Work Plan - Year #3 (Status As of 06/30/00)

ID	Task Name	97		1998				1999				2000				2001				2002			
		Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	
1	General Project Administration & Implementation	[Gantt bars for 1998-2002]																					
2	Project Management	[Gantt bars for 1998-2002]																					
3	Advise REB PBSS	[Gantt bars for 1998-2002]																					
4	Meetings	[Gantt bars for 1998-2002]																					
5	Reports	[Gantt bars for 1998-2002]																					
6	Training Participation	[Gantt bars for 1998-2002]																					
7	Donor Info	[Gantt bars for 1998-2002]																					
8	<b>IR # 1.0 MEMBER-USER SATISFACTION IMPROVED &amp; PARTICIPATION ENHANCED</b>	[Gantt bars for 1998-2002]																					
9	1.1 Develop & implement plan for member education & awareness & productive use of electricity.	[Gantt bars for 1998-2002]																					
10	1.1.1 Establish member services team with representatives from PBSs & REB - Established & Completed	[Gantt bars for 1998-2002]																					
11	1.1.2 Develop PBS member services planning scheme - Drafted	[Gantt bars for 1998-2002]																					
12	1.1.3 Pilot test MS plan in Model PBSS	[Gantt bars for 1998-2002]																					
13	1.1.4 Develop/implement MS plans in "Model" PBSS on phased schedule and then to others	[Gantt bars for 1998-2002]																					
14	1.1.5 Evaluate & revise all MS Plans yearly	[Gantt bars for 1998-2002]																					
18	1.2 Expand PBS Member Services Department capabilities in member-user services.	[Gantt bars for 1998-2002]																					
19	1.2.1 Design MS Dept. staff structure - Draft prepared awaiting REB approval	[Gantt bars for 1998-2002]																					
20	1.2.2 Pilot test expanded MSD staff structure in "Model" PBSS - Delayed awaiting approvals	[Gantt bars for 1998-2002]																					
21	1.2.3 Implement expanded MSD staffing with training on phased basis in "Model" PBSS and then others	[Gantt bars for 1998-2002]																					
22	1.2.4 Perform MSD SOW, evaluate staffing & recommend revisions to PBSs not less than once per year	[Gantt bars for 1998-2002]																					
26	1.2.5 Revise & implement MU Plan training for all MSD employees	[Gantt bars for 1998-2002]																					
30	1.3 Develop & conduct customer awareness training for all PBS employees.	[Gantt bars for 1998-2002]																					
31	1.3.1 Develop Customer Awareness Training (CAT) with REB Training Directorate - Completed	[Gantt bars for 1998-2002]																					
32	1.3.2 Train CA trainers for conducting programs w/REB Training Directorate - Completed	[Gantt bars for 1998-2002]																					
33	1.3.3 Conduct CA Training in pilot PBSS w/REB Training Directorate - Completed	[Gantt bars for 1998-2002]																					
34	1.3.4 Evaluate and revise CA Training - Completed	[Gantt bars for 1998-2002]																					
35	1.3.5 Prepare Trainers and conduct ongoing CAT at "Model" PBSS and for other PBSS. Evaluate & revise training.	[Gantt bars for 1998-2002]																					
36	<b>IR # 2.0 REB &amp; PBS MANAGEMENT ENHANCED</b>	[Gantt bars for 1998-2002]																					
37	2.1 Management Assessment (MA) & development system developed & functioning.	[Gantt bars for 1998-2002]																					
38	2.1.1 Establish & empower Management Team and define PBS role - Established & Completed	[Gantt bars for 1998-2002]																					
39	2.1.2 Develop process to evaluate REB & PBS management - Completed but reoccurring	[Gantt bars for 1998-2002]																					
42	2.1.3 Perform MAs for PBSS & REB, including functional relationships between PBSS & REB - Drafted	[Gantt bars for 1998-2002]																					
45	2.1.4 Use Management assessments to develop Management Plans (MP)	[Gantt bars for 1998-2002]																					
46	2.1.4.1	[Gantt bars for 1998-2002]																					

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Task	[Solid bar]	Summary	[Arrow bar]	Rolloled Up Progress	[Dashed bar]	Split	[Dotted bar]
Progress	[Double arrow bar]	Rolloled Up Task	[Thick bar]	External Tasks	[Thick dashed bar]	Rolloled Up Split	[Dotted bar]
Milestone	[Diamond]	Rolloled Up Milestone	[Diamond]	Project Summary	[Arrow bar]		

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

USAID Award No. 388-A-00-97-00040-00  
USAID Project No. 388-0093

**RPPR QUARTERLY REPORT**

**1 January 2000 Through 31 March 2000**

**Prepared By**

**NRECA INTERNATIONAL, LTD.**

**For Trilateral Partners**

**RURAL ELECTRIFICATION BOARD OF BANGLADESH**

**and**

**USAID MISSION TO BANGLADESH**

# ***QUARTERLY REPORT FOR 1/00 TO 3/00***

***Technical Assistance For Rural Power For  
Poverty Reduction Program***

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  - IR #2: *REB and PBS Management Enhanced***
  - IR #3: *Support Services Enhanced***
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  - A. Implementation Schedule**

## **I. Executive Summary**

The following serves as a summary of the progress made on various activities under each of the four Intermediate Results, with additional details included under section III:

### ***IR #1: Member User Satisfaction Improved and Participation Enhanced***

- Approval was received from USAID for the production of a new video on the RE Program to produced in English and Bangla for a wide audience that will include GOB officials, donors, as well member/consumers in the PBSs. Initial target date set for completion of the video is end of July
- Work began on the development of a new program on Key Accounts Management to be implemented under Member Services Departments of the PBSs to improve services to the "key accounts" of the PBSs. Pilot testing of new program expected next quarter.
- Customer Awareness Training for PBS Directors, Lady Advisors, and management personnel continued with regional programs being conducted which covered six PBSs (78 people trained for total of 702 training hours)
- Another 58 Billing Assistants participated in the "short-course" on Customer Awareness as part of two regional Billing Assistants' programs conducted during the quarter.

### ***IR #2: REB and PBS Management Enhanced***

- Advised REB on previously submitted Policies and Procedures for the REB Revolving Fund.
- Commenced Business Process Analysis of each of the REB Directorates reporting to the Member Finance, which will lead to the development of software modules to enhance transfer of information and to provide for improved management information and workflow within the concerned Directorates.
- Developed and completed the re-evaluation of Nilphamari feasibility and completed a Re-Evaluation Report for REB. This evaluation looked into the feasibility of Nilphamari PBS, using today's information. Report completed and submitted to REB March 13, 2000;
- Identified a need for "key accounts" training for PBS management. Began developing a training program to be used at selected model PBSs;
- An initial set of tools in the form of questionnaires have been developed for obtaining socio-economic information for each of the four main categories of consumers of the PBSs, namely domestic, irrigation, commercial, and industrial. Field testing of these questionnaires is scheduled for early next quarter.
- Preliminary planning initiated to determine requirements for development of computerized data base that will be developed for analyzing the socio-economic data.

- Tasks and work related to computerization of REB and PBSs included:
  - Assisted REB with preparation of tender for securing PBS billing software, as previous vendor defaulted on contract.
  - Completed minor modifications to REB Payroll software developed by NRECA and formally declared the package "complete" to REB current requirements.
  - Completed development of REB Form 550 Data Entry System and PTA Database Management module. This system will automate collection, compilation, and calculation of PBS financial data for use in REB monthly MIS Reports and semi-annual PTA reviews.
  - Commenced "system study" of REB financial activities leading to development of computerized General Ledger system for REB.
- Field visits were made to seven DESA and PDB substations recently taken over by the PBSs to assess problems related to maintenance and operation.
- In response to a high level meeting held between REB and the Tea Board, field visits were made to Moulvi Bazar and Hobagonj PBSs to seek solutions to low voltage problems and system reliability to the tea gardens.
- Advised REB on software selection for conducting engineering planning studies.

### ***IR #3: Support Services Enhanced***

- Preliminary meetings held with member of Materials Management (MM) Team to identify areas to be addressed by Team, including: computerization of MM process, material lists for Operations, Maintenance, Repair, and Replacement, and warehousing practices.
- Completed analysis of the entire REB MM process and prepared flow chart to provide pictorial description of all steps included in the process.
- Initial planning with NRECA's computer personnel to develop requirements for computerized system to automate the MM process.
- Assistance provided to REB with regard to recommendations received from Ministry of Energy & Mineral Resources (MEMR) regarding development of TAPP for proposed Training Academy that is being processed for GOB approval.
- Continued staff development sessions with REB Training Directorate personal through use of newly developed Training of Trainers curriculum developed by NRECA.
- Work in area of development of curriculum materials for REB/PBS training programs continued for the following:
  - Finalizing new I-Beam training for PBS Directors and PBS Management in preparation for submission to REB Curriculum Advisory Committee for approval and scheduling of pilot test.
  - Development work began on curriculum materials for three materials management programs.
  - Began full-scale revision of "Records Management" and "Office Management".

***IR #4: Small Power Generation Program Developed***

- Finalized all Agreements in Security Package for initial three SPG stations in anticipation of formal execution early next quarter.
- Prepared a full detailed Schedule of events for completion by REB and selected Power Company through date of Commercial Operation.
- For next eight proposed SPG sites: participated in Bid Opening, completed technical evaluations, and began review of Financial Packages from qualified bidders. Full Evaluation Report expected by end of April. Required site visits and preliminary load flow studies are also in process.
- The formal Terms of Reference (TOR) for completion of pilot GIS project for renewables was completed with CARE and work is to commence on the project activity in early next quarter. Expected completion is set for month of August if necessary drawings and information can be provided from the engineering consultants.
- Presentation prepared for use by REB official at ENEREGEX 2000 scheduled for Las Vegas in July.

## II. Quarterly Reporting and Overview of RPPR Program

### Background on Quarterly Reporting:

Under the terms of NRECA International, Ltd's Cooperative Agreement with USAID, Quarterly Reports are to be submitted to provide information as to the status of the technical assistance provided under the Rural Power For Poverty Reduction (RPPR) Program. It should be noted that this technical assistance effort differs from previous NRECA Host Country Contracts (HCCs) with the Rural Electrification Board (REB) in that it is "resulted oriented" and is very specific in terms of what is to be accomplished during the 5-year program. Under these past HCCs, NRECA provided overall assistance to REB in all aspects of the RE Program. According to the RPPR Program Design that was jointly completed by REB, USAID, and NRECA, specific areas were identified from various assessments of the RE Program, and these selected areas are the specific focus of the RPPR technical assistance. For this reason, it should be understood that Quarterly Reports for the RPPR Program will present information as to the status of these activities and will not provide the same "broad-based" reporting on the entire RE Program as was done by NRECA under the previous HCCs with REB.

Comments on various other observations made by NRECA on the overall RE Program will be included, but for the most part will be primarily related to those areas that have direct and/or indirect impact on RPPR activities.

### General Description of RPPR Program:

The specific objectives of the technical assistance effort under the Rural Power For Poverty Reduction Program further supports enabling the Rural Electrification Board (REB) and the Palli Bidyut Samities (PBSs) to meet the management challenges of expanding the Rural Electrification Program of Bangladesh. Activities will focus on strengthening management and technical capability of REB to fulfill its mandate to provide direction and support to the rural electrification system through the establishment and development of the PBS system, thus increasing the numbers of rural people having access to reliable electric service.

### 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 Program Objectives:

Specifically the RPPR Program involves the completion of various activities and tasks that support the following four main objectives or intermediate results:

- IR #1: *Improving Member-User Satisfaction and Increasing Their Participation*
- IR #2: *Enhancing REB and PBS Management*
- IR #3: *Enhancing PBS Support Services*
- IR #4: *Developing the Framework for A Small Power Generation Program*

There are twenty-one individual activities under these four major areas. The overall RPPR Program will promote the RE Program as a "means" for improving socio-economic conditions of the rural people rather than an end in itself.

### **III. Quarterly Status & Planning on Intermediate Results w/Activities**

#### ***IR #1: Member User Satisfaction Improved and Participation Enhanced***

**Activity 1.1: Develop and implement a plan for member-user education and awareness, productive use of electricity and outreach programs to benefit the poor.**

Status as of this Quarter:

- Continued work through the quarter to secure USAID approval for a new REB video to use for consumer-members and other audiences. The video will be produced in English and Bangla for a wide audience of viewers.
- Video approval by USAID and contracts executed on 22 March 2000.
- Met with REB Chairman for additional information about the video.
- Attended Annual General Meetings at Sirajgonj and Bhola PBS and made presentations about the RPPR program.

Plans For Next Quarter:

- Continue work with the video contractor identified for development of a new video on the RE Program for use as member education tool. Expect final product by end of July 2000.

**Activity 1.2: Expand PBS Member Services Department capabilities in member-user services.**

Status as of this Quarter:

- Revised Member Service policies, organizational charts. Member Services policy translated into Bangla.
- Worked with socio-economist providing input regarding Member Services capabilities for conducting socio-economic impact surveys and studies.
- Began development of a Key Accounts Management program for use by PBS Member Service Departments and other key PBS officers.

Plans For Next Quarter:

- Continue work with socio-economist as necessary.
- Continue work on Member Service reorganization and design of overall Member Service training curriculum.
- Continue Key Account Management as necessary.

**Activity 1.3: Develop and conduct customer awareness training for all PBS employees.**

Status as of this Quarter:

- Conducted 2 CA training programs for Board Members, Lady Advisors and General Managers on a regional basis for 6 PBSs. 78 people were trained for a total of 702 training hours. The PBSs included: Rajshahi, Naogoan, Nawabganj, Jhenaidah, Kustia and Meherpur.
- Presented CA "short course" in regional programs in Pirojpur and Comilla. 58 Billing Assistants received the training for a total of 522 training hours.

Plans For Next Quarter:

- Continue conducting CA one-day training for other PBS Boards, managers and officers on a regional basis.
- Conduct CA training at regional training classes for Billing Assistants.

## **IR #2: REB and PBS Management Enhanced**

### **Activity 2.1: Management assessment and development system developed and functioning.**

#### Status as of this Quarter:

- Limited work in this area during this past Quarter. Most tasks related to this activity are complete. Management Team has been empowered and a Management Assessment completed. Management Assessment Report has been prepared. Sections of this report are being reviewed and acted upon under Activity 2.2.

#### Plans for Next Quarter:

- Continue work on refining Management Assessment;
- Continue to identify "priority" items in management assessment that will lead to development of action plans being addressed under Activity 2.2;
- Continue work on "Model PBS Concept". From the Model PBSs identified, select PBSs to implement specific management plan items.
- Remaining activity to be carried out in Activity 2.2.

### **Activity 2.2: Develop and implement linked REB and PBS management plans.**

#### Status as of this Quarter:

- Identified key priority items in the Management Assessment for action, as explained below.
  - Continued to advise the Revolving Fund Board in implementing the Policies and Procedures for Administration of the Revolving Fund, as previously submitted;
  - NRECA's Computer Group has completed development of software for collection of financial data from the PBSs and compiling this data in an accessible database for use in the PTA process. With acceptance of REB, in April of this software, the PTA information gathering process can be fully automated from preparation of the Form 550, to publishing of the monthly MIS Report and semi-annual progress reviews of the PTA's. Allowance has also been made for the calculation and publication of the Key Financial Ratios for each PBS;
  - Commenced Business Process Analysis of each of the REB Directorates reporting to the Member Finance, and development of software modules to enhance transfer of information and to provide for improved management information and workflow within the concerned Directorates.
- Developed and completed the re-evaluation of Nilphamari feasibility and completed a Re-Evaluation Report for REB. This evaluation looked into the feasibility of Nilphamari PBS, using today's information. Report completed and submitted to REB March 13, 2000;
- Submitted the I-Beam Board/Management responsibilities training program to REB curriculum committee for approval. The training includes a Trainer's Guide, the Trainee's Guide and translation into Bangla of the REB policy instructions relating to Board and General Manager responsibilities;
- Identified a need for "key accounts" training for PBS management. Began developing a training program to be used at selected model PBSs;
- Continued to quantify data from PBSs for RPPR Key Performance Indicators.

#### Plans for Next Quarter:

- Continue design and implementation of priority management action plan items to incorporate the Assessment findings into linked recommendations. This will include but not be limited to:

- Continue development of a viable REB Revolving Loan Fund, with the goal of allowing a smooth administration of the Fund. Continue to advise the Revolving Fund Board as to potential sources of funding and the use, by PBSs, of these loan funds. Implement Policies and Procedures developed last quarter;
  - Initiate review of Account 252 (Deferred Credits) with studies aimed at reducing the balance in the account and to determine proper ongoing account procedures.
  - Develop linked Material Management plans for REB/PBS Material Management procedures;
  - Submit PTA Statistical Compilation and Calculation module to REB for acceptance and begin deployment of the Form 550 Data Entry module to all PBSs;
  - Continue review of financial systems within REB. Goal is to improve automation, increase availability of meaningful management information, and improve accuracy of output;
  - Continue with plans for development of management training courses for PBS Boards and PBS officers (example – “Board/Management Responsibilities”, “Understanding the Security Agreement”, “How to Read and Understand PBS Financial Statements”, and various Member Service training courses – See Activities 1.1 and 1.2). This effort will continue to be coordinated with Act. 3.5;
  - Develop and implement other management plans in close cooperation with REB and the PBSs.
- In consultation with REB’s Training Directorate, develop a plan to conduct pilot training of “I-Beam” Board/Management responsibilities training for 3 pilot PBSs;
  - Provide follow-up assistance to REB on the re-assessment of Nilphamari PBS as explained above;
  - Implement on-the-job training at selected PBSs for handling of “key accounts”. This will include a semi-formal training program, and hands on meetings between PBS management personnel and key accounts;
  - As a part of the RPPR Key Performance Indicators, gather additional data from PBSs and REB, revise data gathering procedures, and continue to refine the data to pinpoint performance indicators.

**Activity 2.3: Develop system to monitor, evaluate, and report the socio-economic impact of the rural electrification program on RPPR customers.**

Status as of this Quarter:

- NRECA’s socio-economic staff developed a series of approaches (i.e, selection of PBSs, size of samples, implementation cycles, ect.) that could be utilized for developing the “system”. Approaches gave consideration to ensuring reliable results could be obtained when information is extracted from the system. REB was consulted during this development for determining realistic expectations of PBS capabilities and for selecting a suitable approach.
- Completed the development of the initial version of the tools (questionnaires) for surveying PBS member consumers in the four main categories – domestic, industrial, commercial, and irrigation. These “draft” questionnaires were submitted to REB for concurrence and for the development of an initial plan for field testing the approved tools.
- Completed the analysis of various models to determine appropriate sample sizes for obtaining valid data.
- Began initial investigations of requirements for data base development and computerizing the socio-economic “system”. Currently the plan is to utilize MS Access for creating the data-base and using SPSS for the analysis of the data. The SPSS software is a popular software package used for most socio-economic analysis.

#### Plans for Next Quarter:

- Following REB's approval of the tools (questionnaires) for surveying PBS member consumers in the four main categories – domestic, industrial, commercial, and irrigation, conduct a field test of the tools according to the approved plan.
- Complete an analysis of the results of the field test and revise the tools as required for the four consumer categories. Based on the degree of changes required, determine if future field testing is required.
- Consult with REB in the development of a strategy regarding overall plan as to whether the initial emphasis will be on developing the base-line or conducting the "impact" assessment study. Planning process will examine special requirements for conducting "impact" assessment study and potential use of outside enumerators who would be used to conduct the surveys.
- Continue work on development of computerized system for creating the data-base (i.e., creation of "screens" for data entry using MS Access; procure SPSS software package, etc.)
- Begin recruitment of support staff to be used for creating the data-base.

#### **Activity 2.4: Develop a direct response system for member-user feedback to PBSs.**

- Using Customer Awareness Survey Results Report in IR# 1.1, development of feedback system is planned for Year 3, 4<sup>th</sup> Quarter of the project.

#### **Activity 2.5: Computerize REB & PBSs**

##### Status as of this Quarter:

- Assisted REB in the development of a tender to secure PBS Billing software, as necessitated due to the failure of the previous vendor to deliver a final product. Eleven (11) vendors responded to the tender. REB has formed an Evaluation Committee, including PBS and NRECA representatives to review demonstrations of Billing Packages and select the most appropriate for the PBSs.
- REB purchased seven (7) LAN systems for installation at selected PBSs. Vendor is to install, operate and train the PBS employees on the use of the system.
- In coordination with REB Payroll personnel, made minor modifications to the Payroll Package, as implemented last quarter. The package has now been declared "complete" to REB's specifications.
- Completed the development of an REB Form 550 Data Entry System (DES), and a PTA Database Management module. Implementation of these modules will automate the collection, compilation and calculation of PBS financial data for use in the REB monthly MIS reports and the semi-annual PTA reviews.
- Assisted in the formation of the RPPR Program's Materials Management Team (MMT) and joined as members. Advised the MMT on the potential for development of software for inventory control, material pricing and information transfer among the concerned Directorates.
- Made site visits to Khulna, Savar and Sylhet to observe inventory practices and existing IT applications, in preparation of developing a comprehensive Materials Management Application.
- Made site visits to Comilla-1, Manikganj and Dhaka-1 Model PBSs to support the ongoing implementation of the Voter Database Application and/or IT operations in general, and to perform follow-up training and system modifications, as needed.
- Visited the offices of Star Trek, a software developer, to review the progress of its contract to provide billing services for Munshiganj PBS, a PDB take-over project.
- Commenced a System Study of REB financial activities, leading toward the development of a computerized General Ledger System for REB.
- Solicited quotes for a workstation to be used in the GIS Mapping Program, evaluated quotes and submitted procurement recommendation to Chief of Party.

- Solicited quotes for four (4) desktop workstations and two (2) laser printers. Evaluated bids, recommended and procured four (4) Gateway Pentium III workstations and two (2) Hewlett-Packard Laser printers.
- Recommended and procured PC components to upgrade existing NRECA machines for better performance.
- Continue to work with REB Training Directorate in preparing and conducting computer training courses for all levels of REB employees.
- Continue to provide general support and trouble-shooting assistance to the REB/PBS Information Technology upgrade effort.

Plans for Next Quarter:

- Conduct a day-long training seminar for all REB payroll personnel on the REB Payroll Package.
- Conduct follow up visits to Model PBSs on operation of the Voter Database Package. Provide additional training, on the package, and assistance in planning for data conversion to PBSs that have yet to complete this process.
- Join the REB Evaluation Committee in reviewing demonstrations of PBS Billing Packages. Assist in the evaluation of the tender offers and selection of the best vendor.
- Submit the PTA Database Management application to REB for acceptance and prepare a plan for deployment of the DES to each PBS.
- Continue to update the Business Processes and Workflows Analysis for the REB Finance Directorates.
- Assist the RPPR Materials Management Team (MMT) to develop and implement an Information System to enhance the procurement and material handling processes. The MMT shall provide direction and oversight of these efforts, in coordination with the CompTeam.
- Provide whatever assistance is needed toward the development of a phased implementation plan for the REB HQ LAN/WAN. Recommend the staffing of the REB Computer Cell prior to beginning this project.
- Provided continuous general support and trouble-shooting assistance to the REB/PBS Information Technology upgrade effort.

**Activity 2.6: Develop preventative maintenance program guidelines for PBSs.**

Status as of this Quarter:

- Visited the following PBS substation and made inspections addressing problems relating to maintenance: Madahdi-1, Madahdi-2, Arihazar, Adhuria, Mahmudpur, Hasnabad and Keranigonj.
- Visited Hobagonj PBS to discuss the problems that the Tea Gardens were experiencing. The Tea Garden manager stated that he has three major problems 1) Load shedding 2) Low voltage and 3) one phase of a three phase line off. Had general discussions on the problems and possible procedure to alleviate the problems. Visited Shaiataganj and Madhabpur substations to observe the results of maintenance performed on them.
- Visited Moulovibazar to discuss low voltage problems. Made suggestions to alleviate the problems.
- Visited Sylhet to discuss the rebuilding of old PDP take over substation. Along with a committee from REB possible solutions were discussed and a plan was made for rebuilding the station and energize it for the PBS's future needs.
- Advised REB on the purchase of engineering software for engineering planning studies.

Plans for next quarter:

- Work with REB's System Operations Directorate and Training Directorate to set up a regional model substation maintenance program.
- Work with REB's System Operations Directorate and Training Directorate to set up a seminar on maintenance of take over substations.
- Establish a regular monitoring program to provide feed back to REB on the needs of the PBSs.
- Visit and inspect substations identified by REB as having special operation and maintenance problems.

**IR #3: *Support Services Enhanced***

**Activity 3.1: Develop and implement procurement system for equipment and materials for electric operations, maintenance, repair and replacement.**

Status as of this Quarter:

- Preliminary meetings held with REB and members of Materials Management Team identified.
- Completed initial review three material lists being used for Operations, Maintenance, Repair, and Replacement (OMRR) materials needs of the PBSs with objective to consolidate into a single listing. Three lists of potential OMRR materials will be submitted: 1) From REB System Operations, 2) from Deputy Director Kuhlina Warehouse, and 3) from Kuhlina Warehouse Materials List. The three lists will be compared and subsequently consolidated to provide viable list of OMRR material. Obtained relevant input resulting from activities under 2.6.
- Completed analysis of the entire REB MM process and prepared initial draft of flow chart to provide pictorial description of all steps included in the process.
- Participated in planning sessions and meetings with REB and NRECA Computer staff in development of plans for MM automation.

Plans for Next Quarter:

- Obtain formal REB appointment of Materials Management team (MMTeam) from REB and PBSs.
- Begin development of plan for system to This activity will include identifying the Operations, Maintenance, Repair, and Replacement (OMRR) materials needs of the PBSs, based on the output of IR 2.6.
- Follow up and finalize the consolidated listing that identifies the Operations, Maintenance, Repair, and Replacement (OMRR) materials needs of the PBSs, based on the output of IR 2.6.
- Begin identification of potential procurement options for OMMR.

**Activity 3.2: Develop improved material delivery system to supply PBSs for efficiently.**

Status as of this Quarter:

- Participated in various meetings related to MM automation as noted in Activity 3.1.
- Began work on development training materials required for three new material management programs for REB and PBS personnel. Work is in conjunction with NRECA's Training group.
- Participated in a visit for REB/PBS and NRECA personnel to the UNOCAL warehouse in Sylhet in order to observe the setup and operation of a warehouse facilities under the direction of an American firm. UNOCAL is an American firm in Bangladesh involved with exploration and production of natural gas.

Plans for Next Quarter:

- Formal appointment of Materials Management Team (MMTeam) from REB and PBSs – refer to Activity 3.1.
- Participate in development of plan for improved material handling through the evaluation of material flow and handling system as part of system automation study that will involve coordination of the participating REB Directorates (i.e., CS&M, System Operations, and REB Projects).
- Continue development effort for preparation of training materials required for material management programs for REB and PBS personnel. Work will continue in conjunction with NRECA's Training group.

**Activity 3.3: Establish and initiate discussion between REB and PBSs on support services needs on regular schedule.**

Status as of this Quarter:

- No activity in this quarter.

Plans for Next Quarter:

- Establish and empower a support services team (SSTeam) from REB and PBSs. Note: This activity will include the development of a discussion scheme to allow for the development of team goals and operating procedures, as well as performance evaluation. The underlying objective of this Activity is to discuss ways of improving the support services provided by REB to the PBSs.
- Begin development of overall framework for SS Team functioning, including: its goals, operating procedures, and performance evaluation.
- Identify various support services provided by REB to the PBSs and prioritize based on importance and relevance.

**Activity 3.4: Develop and implement method for evaluating and improving support services.**

Status as of this Quarter:

- No specific work on this Activity during the quarter – planned initial work for 3<sup>rd</sup> quarter.  
Note: This activity has been designed to coordinate with IR 3.3

Plans for Next Quarter:

- Refer to Activity 3.3 regarding establishment of Support Services team (SSTeam) from REB and PBSs..
- This activity will include the development of a methodology of Team to do the following
  - Identify the PBS support services needs
  - Design of evaluation criteria and report formats.
  - Examine potential means of corrective action.

**Activity 3.5: Increase effectiveness of training delivery system.**

Status as of this Quarter:

- Continued work in support of REB's decision to develop a Training Academy for the RE Program as a solution to an improved "training delivery system". Tasks this quarter included the following:
  - Follow-up meetings were held to review recommendations received from the MEMR regarding their review of the TAPP submitted to them in October 1999.
- Activities related to the implementation of Regional Consultation Tours continued.
  - Regional tour entitled "*Training Administration and Facilities to Support Rural Electrification*" to Malaysia and Pakistan is still pending. The tour is designed to

investigate large-scale manpower development programs being conducted by utility training institutions/academies.

- Initial development was completed on a regional consultation tour related to renewable energy and scheduled for India during next quarter.
- Worked with NRECA engineering staff and REB's Training Directorate in planning and implementation of a seminar on "Substation Inspection and Maintenance" with PBS personnel including AGM COM and AGM ENG.
- NRECA continued to support the implementation of basic computer training for REB and PBS officers and staff in the Training Directorate's computer lab
- Continued the "staff development sessions" for the REB Training Directorate staff continued using the new "Training of Trainers" curriculum that has been developed by the NRECA Training staff. Target population includes AGMs assigned to REB Training Directorate.
- Continued with curriculum development activities including:
  - Proceed with obtaining REB's approval of the curriculum materials for the "I-Beam" Board/Management responsibilities training. The materials for this new program should be completed next quarter and be ready for pilot testing.
  - Began development of curriculum for three new training programs related to Materials Management for both REB and PBS personnel.
  - Per REB's request, initial process began for full scale revision of "Records Management" and "Office Management" – this was identified as a priority with both programs being offered to all officers of REB and the PBSs.
  - The "draft" of a formal REB curriculum development policy/procedure is still pending with REB.

#### Plans for Next Quarter:

- Continue to monitor progress on review of the TAPP for the new proposed Training Academy and provide necessary assistance to REB during the GOB approval process.
- Continue with curriculum development tasks including:
  - Complete work with Member Services Specialist to finish the curriculum materials for the "I-Beam" Board/Management responsibilities training. (Activity 2.2) and submit for approval by REB.
  - In consultation with REB's Training Directorate, schedule pilot testing of "I-Beam" Board/Management responsibilities training for 3 pilot PBSs.
  - Seek approval of the submitted curriculum development policy/procedure, which is still pending with REB Training.
  - Continue to work with Training Directorate to refine Plan for curriculum development activities and continue implementation of the plan to include the following:
    - New programs/courses including "I-Beam", a management refresher program for PBS Boards and GMs and others (example – "Board/Management Responsibilities", "Understanding the Security Agreement", "How to Read and Understand PBS Financial Statements", and various Member Service training courses – See Activities 1.1 and 1.2). This effort will continue to be coordinated with Activity 2.2)
    - Revised programs/courses, including those needing translation; supplementary materials for existing curriculum on priority basis for management, finance and technical/engineering.
- Continue the "staff development program" for the REB/PBS trainers using the new "Train the Trainer" curriculum with attempts to deliver at least one session per month.
- Continue with implementation of the US and Regional Consultations/Tours, including the following:

- Assisted REB in progress monitoring of construction.
- Progress Report for the second eight SPG projects:
  - Participated with REB in Bid Opening – January 19;
  - Participated with REB in evaluation of technical, commercial and financial portion of Bids (Envelope I). Completed – February 29;
  - Participated with REB in evaluation of Tariffs (Envelope II). This process is nearing completion with expectation of completion in late April. A Bid Evaluation Report is being completed;
  - Participated with REB in visitation of most of the sites, primarily for evaluation of gas availability;
  - Continued with load flow studies to determine system improvements required to allow absorption of 10MW at each of the new sites. This will be an ongoing process.

Plans for Next Quarter:

- Plans for the first three SPG Projects:
  - Update information on required system improvements for each PBS, as required;
  - Complete capacitor placement study for Narsingdi PBS-1 as described above;
  - Assist REB in negotiations for a Gas Supply Agreement between REB and Titus and Bachrabat gas companies;
  - Work out interconnection requirements with PDB;
  - Assist REB with supervision of any construction and engineering activities undertaken during this quarter related to the planning and preparation of the PBS substations and 33 kV lines that serve as the interconnections with the power stations. This work is totally the responsibility of REB and the PBSs, and penalty clauses exist in the Agreements if interconnections are not prepared to accept the delivery of power as per established date of SPG project completion;
  - Key Milestones to be monitored:
    - (i) Selection and approval of a qualified Construction Contractor;
    - (ii) Completion of Site filling;
    - (iii) Selection and approval of qualified Operations and Maintenance Contractor;
  - Assist REB with oversight of construction phase;
- Plans for the second eight SPG Projects:
  - Complete the Bid Evaluation Report and present it to REB Board for approval - expected completion in late April;
  - Continue with load flow studies to determine system improvements required to allow absorption of 10MW at each of the new 8 Sites. This will be an ongoing process.
  - Issue Letters of Intent (LOI) during May to first ranked Bidders;
  - Commence negotiations of Security Package Agreements with Bidders (after issuance of LOI);
  - Work with Titus and Bachrabat Gas to assure physical delivery of gas to each site;
- Support the commencement of requisite activities to initiate future generation projects under the auspices of the new REB Office of Generation, including preparing draft policies and training materials.

(Note, as a result of the meeting with the Secretary of the Ministry of Energy on 5/26/98 and with concurrence of REB and USAID to pursue the new SPG schedule, resources will be utilized beyond what was originally planned for under IR #4.)

**Activity 4.4: Establish REB policy with respect to renewable energy rural electrification program.**

**Activity 4.5: Develop features of REB Renewable Energy Power (REN), including tariffs, equipment, specifications & standards.**

**Activity 4.6: Develop REB Renewable Energy Business Plan to be presented to donors and others potential sources of program financing.**

(Note: These three activities have been combined due to their inter-relationship in terms of the tasks being completed to support these activities.)

Status as of this Quarter:

- The "*REB Renewable Energy Program Policy and Implementation Strategy*" developed by participants of the strategy seminar still remains with REB for approval.
- Continued coordination with CARE regarding development of GIS and final development of Terms of Reference, with actual work to begin in early April.
- Worked with REB in development of paper for presentation by REB official at ENREGEX Conference in Las Vegas July. Presentation entitled "*Renewable Energy Electrification in Bangladesh: Integration of Solar Off-Grid Projects into a Highly Conventional Electrification Program*".
- Communicated with local software vendor regarding final specifications for GIS software
- Procured one work station for NRECA Dhaka office with specifications adequate to handle doing GIS work.
- Continued development of training manuals for REB renewable energy electrification program.

Plans for Next Quarter:

- Finalize REB program plan and strategy guidelines for renewable energy electrification program and submit the "*REB Renewable Energy Program Policy and Implementation Strategy*" to REB for formal approval.
- Review World Bank report on rural energy schemes including renewables prepared by local consultant and continue coordination with World Bank to define possible future renewable energy program funding.
- Finalize REB management training manuals for renewable energy program. Coordinate with REB for scheduling initial training program activities for REB management personnel.
- Continue development of training manuals for REB engineering and training staff as well as training materials for PBS officers and contractors.
- Install GIS work station and complete software training for NRECA engineering coordinator.
- In consultation with REB, continue to monitor new developments regarding progress related to the proposed World Bank-funded renewables project scheduled as part of a larger loan to the RE Program.

## **IV. Quarterly Status and Planning of RPPR's Project Management**

### ***Project Management/Administration For Program-Related Issues***

#### Status as of this Quarter:

- NRECA/Arlington recruitment efforts related to continuing to identify a Computer Systems Specialist who is anticipated for use in assisting with development of systems requirements for installation of LAN in REB Headquarters. REB's confirmation of their firm plans on this effort is still pending.
- NRECA/Dhaka completed the recruitment formalities for several local professional positions who will be employed by NRECA for the RPPR Program. A forth Computer Analyst will recruited against the time available in the Financial Systems Specialist position as it was not possible to locate a Financial Systems Specialist with the required experience in development of computerized financial packages). Both the Curriculum Development Specialist (Technical/Engineering) and the Demographics Specialist joined during the reporting period.

#### Plans for Next Quarter:

- NRECA/Arlington will continue the recruitment process for personnel to fill the short-term Computer Specialist position as determined by REB's planning for the LAN system for the Headquarters building.
- NRECA/Dhaka will continue the recruitment effort for the following local professional positions still vacant: Curriculum Development Specialist (Finance), as replacement for staff member who left NRECA and the Management Specialist who will assist with basic management training, as well as Customer Awareness Programs for PBS Directors and management staff. The recruitment process will be initiated for the Demographics Specialist and other support personnel for the Socio-Economic Group.

## V. Brief Summary of Related Observations & Other RE Activities

### Key Operational Information

The following table reflects key operational information regarding the RE Program for the months of November, December, January, and February, as contained in the selected REB Management Information System (MIS) Reports:

Description	Nov. 1999	Dec. 1999	Jan 2000	Feb 2000	Change - 3 Mos Per'd
System Loss ( 12 mo. Avg)	17.72%	17.56%	16.97%	16.87%	- 0.85%
System Loss ( this month's Avg.)	13.63	19.96%	14.88%	12.02%	- 1.61%
Percentage of Collection (12 mo. Avg.)	93.39%	93.66%	94.88%	95.83%	+ 2.44%
Percentage of Collection (this mo. Avg.)	89.92%	102.43%	99.48%	94.69%	+ 4.77%
Accounts Receivable (# mo. Outstanding)	2.82	2.68	2.69	2.74	+0.08
Total Villages Energized	27,407	27,579	27,737	27,868	+ 461
Number of New Meter Connections	38,712	31,183	30,015	27,861	+ 89,059
Total # of Meters Connections	2,588,378	2,619,561	2,648,203	2,676,064	+ 87,686
Total Km of Energized Line	106,075	106,639	107,297	108,004	+1,929
MWH Purchased YTD - % of chng last yr.	33%	31%	28 %	25%	N/A

- Operational statistics for the 55 energized PBSs continue to reflect that the overall RE Program shows further expansion with 89,059 *new connections* made during this reporting period, averaging 29,686 per month. As part of this expansion, 461 *new villages* received electric service. Also, the total amount of *energized line* increased by 1,929 km during these three months.
- Overall *12-Month Average System Loss* for all 55 operating PBSs shows a noteworthy reduction of 0.85% over the three-month reporting period, with the February average being 16.87%. Effort by REB and the PBSs continue to show a progressive reduction in these losses as continued improvements are made to the large amounts of lines and consumers being taken over from PDB and DESA. Time has shown that losses can be brought under control. It should be noted that if the six PBSs with large areas recently taken over from BPDB and DESA were excluded, the 12 month average loss would be reduced to 14.68%.
- In addition to the reduction in the 12-month average, the *Average Monthly System Loss* for the reporting period also showed an improvement from 13.63% in November to 12.02% for February, or a decrease of 1.61%. As part of routine monitoring of PBS performance, both of the monthly averages for system loss will continue to be monitored closely in order to ensure that the required corrective actions continue to being taken to gain control of the losses in these takeover areas. As was noted in previous reports, REB and the PBSs have taken positive corrective actions to address the conditions which were hampering efforts to resolve various operational problems in these new take-over areas. It should be noted, however, that while the averages related to system losses have dropped, several PBSs have losses that are well above the acceptable levels and proper attention must be given to assist these PBSs with corrective action.

- The overall *Percentage of Collection (12 mos average)* showed a positive improvements for some months during the period with movement from 93.39% at the start of the period to 95.83% - a noteworthy increase of 2.44%. For this reporting period the *Monthly Percentage of Collection* showed a positive change of 4.77%. It is positive to see the collection rate returning to above 95%, which is a percentage that has been attained for most of the time the RE Program has been in existence. It shows that collections, as well as losses, can be controlled when the necessary efforts are being made and consumers are educated about their participation in the PBS system.
- The total *Accounts Receivable* showed a very modest decrease from 2.82 months to 2.74 months during the reporting period. It should be noted that the year ending average for June was at 2.49.

Note: As has been noted in previous Quarterly Reports, there have always been some problems related to the amount of revenue outstanding caused by late payment or non-payment by selected gov't offices and other entities (mosques, etc.). It must be understood by all those involved with the RE Program that timely payment of bills must exist for all PBS consumers.

- Statistics related to MWH purchased further indicates the continued growth in demand with a 36.33% average monthly increase for the three months of the reporting period in terms of the percentage of change in the total number of MWH purchased for the year. This statistic continues to indicate the ongoing development of load within the PBSs, some of which is coming from large loads being taken over from PDB and DESA.

### ***Other Related Activities and Relevant Information***

- At REB's request, NRECA prepared an article for inclusion in an upcoming edition of *The Guardian*, which will feature the RE Program. *The Guardian* is a locally published monthly magazine that provides coverage on various issues impacting Bangladesh. The edition for the RE Program was expected to be May 2000.
- NRECA continued to work with REB to secure the requested information on the kms for energized line by Thana that was requested as part of the new GIS program being developed for the USAID Mission by the CARE GIS Department. The final project will provide the Mission with detailed information with regard to the locations of their various projects within the country.
- RPPR Key Performance Indicators: The effort of continuing to gather data regarding RPPR activities in an attempt to measure the impact of these activities as outlined in the RPPR Framework. As indicated in earlier Quarterly Reports, it should be noted that due to the focus of the RPPR activities starting with the "model PBSs", and not with all fifty-five PBSs, the RPPR Performance Indicators will be initially focused on measuring changes resulting from RPPR activities at these model PBSs.

As noted in earlier Quarterly Reports, in some cases relevant data is frequently available at the PBSs or at REB, but accessing the data is not always easily done nor sometimes even possible. Most data is kept only by manual records thus further computerization of the data must be completed in order to compile the information in a form that can analyzed and used for reporting purposes.

- Revised REB Power Supply Training and Technical Assistance Program: A Workplan Proposal under the RPPR Project Document – May 1999: While there have been various meetings held with REB officials to review the contents of the document in relation to REB's current and future needs in the areas of Power Supply; Engineering and Operations; and Renewable Energy, no specific action was taken during the reporting period. Based on the results of the previously held meetings, there is general agreement with the contents of the report and the areas identified as requiring further technical assistance.

- Operational and Maintenance Problems at DESA Substations (Repeated From 3/99 to 5/99 Qtrly. Report): Based on input from NRECA's Engineering and Operations Advisor regarding the best solution to the operations and maintenance problem related to the existing electromechanical relays, a decision was taken by REB to replace the three-phase over-current relay on each feeder with a new microprocessor-based relay. These electronic relays cost about the same as one new electromechanical relay, but have greatly increased functionality. The best choice of relay for this particular application is the DPU2000R, made by ABB. This particular unit is manufactured in the standard relay size, so it should fit into the existing control cabinets with out having to make a new opening. This single relay unit would provide the following features, which can be used or disabled in any combination:
  - a) Phase time over-current protection for each of three phases.
  - b) Phase instantaneous over-current protection for each of three phases.
  - c) Ground time over-current protection.
  - d) Ground instantaneous over-current protection.
  - e) Negative sequence over-current protection.
  - f) Phase and ground directional over-current protection.
  - g) Selectable time-current characteristics: inverse, very inverse, extremely inverse, definite time, etc. for better coordination with downstream devices.
  - h) Tap settings from 1 to 10 in 0.1 increments available (vs. discrete taps found on electromechanical relays.)
  - i) Frequency based load shedding and restoring functions with under-voltage blocking.
  - j) Under-voltage and over-voltage alarms and controls.
  - k) Sensitive Earth Fault functions.
  - l) Programmable multi-shot reclosing.
  - m) Feeder metering that records kWh, kvarh, kW, kvar, kV, amps, and power factor in 15-minute increments with time and date stamps.
  - n) Fault location and event recording.
  - o) Self-testing circuits without need for calibration.
  - p) Computer accessible.

(Note: As of the end of this reporting period (12/31/99), no final decision with action had been taken with regard to these particular relays.)

- Summary Report on Engineering Issues at REB and the PBSs (Repeated From Previous Reports): While some points were addressed towards the very end of this reporting period when meetings were held on substation maintenance issues, other points from this Report (initially referenced in the May 1998 Quarterly Report) a number of points still remain valid. For this reason, a listing of the points presented in that Report is again repeated in this Quarterly Report. While the May Report provides details on each item, the following is only a list of the items that seem to command the most attention:
  - 1) Inadequate Construction Work Plan
  - 2) No Power Requirements Study:
  - 3) Power Factor Correction:
  - 4) Small Conductor Sizes on Backbone Feeders:
  - 5) Lost Neutrals:
  - 6) Need Better Power Transformers:
  - 7) Voltage Regulation:
  - 8) Quantum Meters:
  - 9) Substation Over-Current Devices:
  - 10) REB Workshop:
  - 11) Distribution Transformer Losses:
  - 12) Material Specifications:

# Quarterly Report Exhibits

## A. Implementation Schedule

The *Implementation Schedule* presented in this Quarterly Report reflects the Annual Work Plan for the RPPR Program prepared for Year #3, and represents activities and subtasks for the entire five years. The Workplan for Yr. #3 now matches the US Government fiscal year of 1 October thru 30<sup>th</sup> September, which is also in compliance with the Cooperative Agreement between USAID and NRECA..

The first section of the Implementation Schedule presents the activities and subtasks for Project Year #3 – Jan 2000 through 31 March 2000 by month. The next section presents these same activities and subtasks according to the remainder of the Program period on a quarter basis for each calendar year.

The Implementation Schedules have been developed using *Microsoft Project* in order to monitor progress and modify as necessary. Subsequent Quarterly Reports will reflect progress on each activity and the various subtasks

**EXHIBIT - A**

**IMPLEMENTATION SCHEDULE  
With Focus on Year #3**







## RPPR Annual Work Plan - Year #3 (Status As of 03/31/00)

ID	Task Name	2000											
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	<i>General Project Administration &amp; Implementation</i>												
2	Project Management												
3	Advise REB/PBSs												
4	Meetings												
5	Rports												
6	Training Participation												
7	Donor Info												
8	<b>IR # 1.0 MEMBER-USER SATISFACTION IMPROVED &amp; PARTICIPATION ENHANCED</b>												
9	1.1 Develop & implement plan for member education & awareness & productive use of electricity.												
10	1.1.1 Establish member services team with representatives from PBSs & REB - Established & Completed												
11	1.1.2 Develop PBS member services planning scheme - Drafted												
12	1.1.3 Pilot test MS plan in Model PBSs												
13	1.1.4 Develop/implement MS plans in "Model" PBSs on phased schedule and then to others												
14	1.1.5 Evaluate & revise all MS Plans yearly												
18	1.2 Expand PBS Member Services Department capabilities in member-user services.												
19	1.2.1 Design MS Dept. staff structure - Draft prepared awaiting REB approval												
20	1.2.2 Pilot test expanded MSD staff structure in "Model" PBSs - Delayed awaiting approvals												
21	1.2.3 Implement expanded MSD staffing with training on phased basis in "Model" PBSs and then others												
22	1.2.4 Perform MSD SOW, evaluate staffing & recommend revisions to PBSs not less than once per year												
26	1.2.5 Revise & implement MU Plan training for all MSD employees												
30	1.3 Develop & conduct customer awareness training for all PBS employees.												
31	1.3.1 Develop Customer Awareness Training (CAT) with REB Training Directorate - Completed												
32	1.3.2 Train CA trainers for conducting programs w/REB Training Directorate - Completed												
33	1.3.3 Conduct CA Training in pilot PBSs w/REB Training Directorate - Completed												
34	1.3.4 Evaluate and revise CA Training - Completed												
35	1.3.5 Prepare Trainers and conduct ongoing CAT at "Model" PBSs and for other PBSs. Evaluate & revise training.												
36	<b>IR # 2.0 REB &amp; PBS MANAGEMENT ENHANCED</b>												
37	2.1 Management Assessment (MA) & development system developed & functioning.												
38	2.1.1 Establish & empower Management Team and define PBS role - Established & Completed												
39	2.1.2 Develop process to evaluate REB & PBS management - Completed but reoccurring												
42	2.1.3 Perform MAs for PBSs & REB, including functional relationships between PBSs & REB - Drafted												
45	2.1.4 Use Management assessments to develop Management Plans (MP)												
48	2.1.5 Schedule follow-up assessments beyond PRRP program												

RPPR-WP #3  
Qtrly Rpt 03/00

Task		Summary		Rolloled Up Progress		Split	
Progress		Rolloled Up Task		External Tasks		Rolloled Up Split	
Milestone		Rolloled Up Milestone		Project Summary			

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## RPPR Annual Work Plan - Year #3 (Status As of 03/31/00)

ID	Task Name	2000											
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
49	2.2 Develop & implement linked REB & PBS management plans												
50	2.2.1 Identify management improvement needs from review of PBS & REB MA - Drafted												
51	2.2.2 Establish objectives & goals for PBS & REB Management Plans (MPs)												
52	2.2.3 Design action components for REB & PBS MPS with iner-organization linkages												
53	2.2.4 Compile & implement management plans for REB/PBSs												
54	2.2.5 Evaluate overall functioning of planning & revise MPs in 3rd qtr. of each operating year.												
58	2.2.6 Complete MP evaluations at mid-term & at the end of the RPPR Program												
59	2.3 Develop sys to monitor, evaluate, report socioeconomic impact of RE program on RPPR customers - Delayed												
60	2.3.1 Establish basis for socioeconomic studies - Delayed due to Staffing - SocioEconomist in 9 99												
61	2.3.2 Design RE socioeconomic impact study, process												
62	2.3.3 Implement PBS ongoing data collection												
63	2.3.4 Conduct study in ongoing manner with annual reporting												
64	2.3.5 Establish schedule for more comprehensive studies every 5 years after the RPPR program												
65	2.4 Develop A Direct Response System for member-user feedback to PBSs - Yr. #3												
66	2.4.1 Empower MS Team to develop system - Scheduled for Yr. #3												
67	2.4.2 Develop Member-User Response System - Scheduled for Yr. #3												
68	2.4.3 Develop & implement MUR training in "Model" PBSs & other PBSs with Trng. Dir. - Sheduled Yr. #3 & early Yr. #4												
69	2.4.4 Pilot Test MUR feedback system at "Model" PBSs - Scheduled for Yr. #3 or early Yr. #4												
70	2.4.5 Revise system and implement in remaining "Model" PBSs and other PBSs in phases - Scheduled Yr. #3												
71	2.4.6 Maintain ongoing implementation, monitoring and revision - link with Annual Management Plans												
75	2.5 Computerize REB & PBSs												
76	2.5.1 Develop computerization team - Established and functioning - Completed												
77	2.5.2 Design computerization scheme - Draft Hdqtrs.Plan and PBS in process with local vendor												
78	2.5.3 Provide logistics												
79	2.5.4 Implement scheme in phases; monitor, evaluate, & revise throughout												
80	2.5.5 Review computerization scheme yearly when making MPAs												
85	2.6 Develop preventative maintenance (PM) program guidelines for PBSs												
86	2.6.1 Appoint & empower Operations & Maintenance team from REB & PBSs - Completed												
87	2.6.2 Develop preventative maintenance guidelines - Completed and approved existing REB Policy Guidelines												
88	2.6.3 Implement preventative maintenance guidelines - In process												
89	2.6.4 Provide ongoing monitoring, evaluation & revision of PM guidelines												

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Task		Summary		Rolled Up Progress		Split	
Progress		Rolled Up Task		External Tasks		Rolled Up Split	
Milestone		Rolled Up Milestone		Project Summary			

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## RPPR Annual Work Plan - Year #3 (Status As of 03/31/00)

ID	Task Name	2000											
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
93	IR # 3.0 PBS SUPPORT SERVICES ENHANCED												
94	3.1 Develop/implement procurement system for equip & mat'ls for O&M, repair & replacement - Delayed												
95	3.1.1 Establish & empower materials management team to deal with procurement matters.												
96	3.1.2 Develop procurement system for OMRR materials.												
97	3.1.3 Obtain required actions & implement system												
98	3.1.4 Implement OMRR procurement system												
99	3.1.5 Monitor, evaluate & revise system on schedule												
103	3.2 Develop improved materials delivery system to supply PBSs more efficiently												
104	3.2.1 Perform complete materials flow & handling evaluation to determine needs												
105	3.2.2 Redesign delivery system to meet needs that are revealed												
106	3.2.3 Implement the redesigned system												
107	3.2.4 Monitor, revise & re-implement system												
111	3.3 Establish & initiate REB & PBS discussion on support services needs on regular schedule. - Delayed												
112	3.3.1 Establish Support Services Team with REB & PBS reps												
113	3.3.2 Develop discussion scheme												
114	3.3.3 Implement SS discussion scheme with a preplanned evaluation & revision scheme												
115	3.3.4 Evaluate & revise SS Team discussion scheme yearly												
119	3.4 Develop & implement method for evaluating & improving support services. - Delayed												
120	3.4.1 Empower SS team to develop methodology												
121	3.4.2 Develop methodology												
122	3.4.3. Implement the SS management scheme												
123	3.5 Increase effectiveness of the training delivery system (TDS)												
124	3.5.1 Establish Tmg Team with REB/PBS reps & empower it to perform TDS development - Established												
125	3.5.2 Evaluate existing training delivery system - Drafted												
126	3.5.3 Redesign the training delivery system - Incorporate plan for potential RE Training Academy												
127	3.5.4 Obtain approvals, staff & activate TDS w/REB Tmg Dir.												
128	3.5.5 Develop curricula												
129	3.5.6 Conduct training, evaluate results & replan												
130	3.5.7 Monitor TDS, revising & renewing with evolving needs & technical advances												
134	3.5.8 Conduct observation tours/consultations to achieve specific RPPR objectives.												
141	3.6 Develop & activate PBS disaster response system - Delayed until Yr. #3												
142	3.6.1 Empower the O&M team to design, activate & manage the Disaster Response System												
143	3.6.2 Design the DRS												

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Task		Summary		Rolled Up Progress		Split	
Progress		Rolled Up Task		External Tasks		Rolled Up Split	
Milestone		Rolled Up Milestone		Project Summary			

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## RPPR Annual Work Plan - Year #3 (Status As of 03/31/00)

ID	Task Name	2000											
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
144	3.6.3 Implement the DRS												
145	<b>IR # 4.0 SMALL POWER GENERATION PROGRAM DEVELOPED</b>												
146	4.1 Review & assess GOB policies on SPG in view of sector reform.												
147	4.1.1 Communicate with WB & GOB Power Cell on SPG and REN issues - Completed & Ongoing												
148	4.1.2 Review current foreign exchange policies of GOB - Completed												
149	4.1.3 Review current GOB policies on fuel, duties, etc. - Completed but Ongoing due to Reform												
150	4.1.4 Identify & seek favorable action on other applicable issues - Completed but Ongoing due to Reform												
151	4.2 Define REB Small Power Generation policy												
152	4.2.1 Establish SPG team to represent REB & PBSs in SPG program dev. - Established												
153	4.2.2 Define REB's role in control of PBSs involvement in SPG investment - Completed												
154	4.2.3 Establish REB, PBS, vendor roles and relationships - Completed												
155	4.2.4 Develop environmental guidelines for each type of SPG project - Contained within RFP												
156	4.2.5 Codify rules, relationships & guidelines into SPG policy statement												
157	4.3 Develop Small Power Business Plan												
158	4.3.1 Develop SPG Business Plan - Completed RFP												
159	4.3.2 Present SPG Business Plan to Donors and Other Investors - Completed RFP												
160	4.3.4 Evaluate response of all potential financiers - Completed as part of Proposal Evaluations												
161	4.3.4 Assist REB and PBSs with implementation of SPG pilots resulting from BusinessPlan - Ongoing												
162	4.4 Establish REB policy with respect to REN												
163	4.4.1 Conduct REN Workshop for REB & PBS management												
164	4.4.2 Perform cost study of REN vs. grid extension - Prepared and submitted to REB												
165	4.4.3 Formulate REN policy and submit to REB & USAID												
166	4.5 Develop specific features of REN program												
167	4.5.1 Determine REN role in rural electrification												
168	4.5.2 Evaluate existing REB REN pilot program												
169	4.5.3 Design REN components												
170	4.5.4 Compile REN component of SPG program												
171	4.6 Develop REN Business Plan												
172	4.6.1 Identify geographic locations for REN use based on costs - In Progress - GIS with CARE												
173	4.6.2 Develop detailed estimates for REN inst. maint. collections, billing												
174	4.6.3 Prepare business plan & present to donors & potential investors - Focus on Framework for REN Program												
175	4.6.4 Evaluate responses of donors & investors												

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Task		Summary		Rolled Up Progress		Split	
Progress		Rolled Up Task		External Tasks		Rolled Up Split	
Milestone		Rolled Up Milestone		Project Summary			

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## RPPR Annual Work Plan - Year #3 (Status As of 03/31/00)

ID	Task Name	97		1998				1999				2000				2001				2002			
		Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	
1	<b>General Project Administration &amp; Implementation</b>	▶																					
2	Project Management	▶																					
3	Advise REB/PBSs	▶																					
4	Meetings	▶																					
5	Reports	▶																					
6	Training Participation	▶																					
7	Donor Info	▶																					
8	<b>IR # 1.0 MEMBER-USER SATISFACTION IMPROVED &amp; PARTICIPATION ENHANCED</b>	▶																					
9	1.1 Develop & implement plan for member education & awareness & productive use of electricity.	▶																					
10	1.1.1 Establish member services team with representatives from PBSs & REB - Established & Completed	▶																					
11	1.1.2 Develop PBS member services planning scheme - Drafted	▶																					
12	1.1.3 Pilot test MS plan in Model PBSs	▶																					
13	1.1.4 Develop/implement MS plans in "Model" PBSs on phased schedule and then to others	▶																					
14	1.1.5 Evaluate & revise all MS Plans yearly	▶																					
18	1.2 Expand PBS Member Services Department capabilities in member-user services.	▶																					
19	1.2.1 Design MS Dept. staff structure - Draft prepared awaiting REB approval	▶																					
20	1.2.2 Pilot test expanded MSD staff structure in "Model" PBSs - Delayed awaiting approvals	▶																					
21	1.2.3 Implement expanded MSD staffing with training on phased basis in "Model" PBSs and then others	▶																					
22	1.2.4 Perform MSD SOW, evaluate staffing & recommend revisions to PBSs not less than once per year	▶																					
26	1.2.5 Revise & implement MU Plan training for all MSD employees	▶																					
30	1.3 Develop & conduct customer awareness training for all PBS employees.	▶																					
31	1.3.1 Develop Customer Awareness Training (CAT) with REB Training Directorate - Completed	▶																					
32	1.3.2 Train CA trainers for conducting programs w/REB Training Directorate - Completed	▶																					
33	1.3.3 Conduct CA Training in pilot PBSs w/REB Training Directorate - Completed	▶																					
34	1.3.4 Evaluate and revise CA Training - Completed	▶																					
35	1.3.5 Prepare Trainers and conduct ongoing CAT at "Model" PBSs and for other PBSs. Evaluate & revise training.	▶																					
36	<b>IR # 2.0 REB &amp; PBS MANAGEMENT ENHANCED</b>	▶																					
37	2.1 Management Assessment (MA) & development system developed & functioning.	▶																					
38	2.1.1 Establish & empower Management Team and define PBS role - Established & Completed	▶																					
39	2.1.2 Develop process to evaluate REB & PBS management - Completed but reoccurring	▶																					
42	2.1.3 Perform MAs for PBSs & REB, including functional relationships between PBSs & REB - Drafted	▶																					
45	2.1.4 Use Management assessments to develop Management Plans (MP)	▶																					
48	2.1.5 Schedule follow-up assessments beyond PRRP program	▶																					

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<b>Task</b>		Summary		Rolled Up Progress		Split	
<b>Progress</b>		Rolled Up Task		External Tasks		Rolled Up Split	
<b>Milestone</b>	◆	Rolled Up Milestone	◇	Project Summary			

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