PD-AAA-626

CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) – PART I

Report Symbol U-447

1. PROJECT TITLE	2. PROJECT NUMBER	3. MISSION/AID/W OFFICE
RURAL ELECTRIFICATION Phases I and II	511-LT-046 and 511-T-046	USAID/Bolivia

4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 78-11

☒ REGULAR EVALUATION ☐ SPECIAL EVALUATION

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING		7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent	B. Final Obligation Expected	C. Final Input Delivery	A. Total	$ 32,300.00	From (month/yr.) 9/74
FY ___	FY 1980	FY 1980	B. U.S.	$ 21,300.00	To (month/yr.) 3/79
					Date of Evaluation Review

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
a) Finalize amendment to Technical Services Contract	C. Moseley	5/31/79
b) Improve ENDE-AID coordination and supervision of implementation	C. Moseley	Continuous
c) Contract socio-economic impact studies as required	P. Bittner	6/30/79
d) Clarify alleged deficiencies in work performed to date by A/E Consultant for La Paz Sub-Projects	C. Moseley	5/31/79
e) Expedite construction of La Paz Sub-Projects	C. Moseley	6/30/79

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9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- ☐ Project Paper
- ☐ Financial Plan
- ☐ Logical Framework
- ☐ Project Agreement
- ☒ Implementation Plan e.g., CPI Network
- ☐ PIO/T
- ☒ PIO/C
- ☐ PIO/P
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

- A. ☐ Continue Project Without Change
- B. ☐ Change Project Design and/or
- ☒ Change Implementation Plan
- C. ☐ Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

M. Charles Moseley

M. Charles Moseley
Electrical Engineering Advisor

12. Mission/AID/W Office Director Approval

Signature

Typed Name Daniel A. Chaij
Acting Director

Date

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Rural Electrification
Phases I and II

Project Evaluation Summary (PES)

13. Summary

Both projects are considerably behind schedule but all major problems have been overcome and satisfactory completions are in sight. Original projects objectives will be met without serious cost overruns. The overrun will amount to about 10.1% for Phase I and 8.8% for Phase II. Local contributions will cover both amounts.

Most seriously delayed are the two La Paz sub-projects where line construction was not started until March 1979. The delay is attributable to the bankruptcy of a major supplier and to ineffectiveness of the original sub-borrower who has been replaced by two recently formed cooperatives.

Other Major Problems encountered include:

- Poor performance of A/E Consultants, especially in determining the availability of certain types of poles, in recommending a combined materials and labor bid package for line construction, in estimating quantities of line construction materials required, in the processing of supplier invoices and in staffing his offices. All these problems have been overcome.

- Inadequate scope of work and definition and understanding of respective responsibilities and functions of A/E Consultants/Project Managers and GOB Administrator and sub-borrowers. These problems have been overcome.

- The need to separate and re-bid the supply of materials and construction because of exorbitantly high offers received under the first combined IFB. This problem has been overcome.

- Need to renegotiate the line construction for the principal sub-project as a result of a change from wood to concrete poles. This problem was resolved in December of 1977.

- Bankruptcy of two important suppliers. New suppliers have been contracted.

- Delayes and losses of materials in Peruvian and Chilean ports and en-route to the various sub-project sites. The problems have been overcome.

- Late placement of orders for vehicles, radios and tools needed during construction. Vehicles, tools, etc. have been rented using local contributions.

- Delays in staffing the position of project advisor in A.I.D. Mission and consequent difficulties of USAID in the detection and opportune solution

of various problems such as those caused by difference between consultants and the GCB administrator and sub-borrowers. The project advisor position was vacant approximately 12 months from June 1977 until May, 1978.

14. on Methodology

ic purpose of this evaluation, the first for the project was to gain an understanding of the nature, magnitude and causes of problems and the consequent delays in implementation and lessons learned. Two analysts (an electrical engineer and an economist/ management expert) were contracted to make independent evaluations of the two projects.

After becoming familiar with loan agreements and implementation documents and correspondence, these two analysts made numerous field trips to administrator and sub-borrower's offices and to construction sites and interviewed and glanced information from all principal participants in implementation.

Their reports together with insights and observations of the Mission's project advisor and those of numerous administrator and sub-borrowers officials provide input for this report.

15. External Factors

None

16. Inputs

AID contributions to the two projects total $21,300,000 of which 83% is allocated to cover foreign exchange costs of materials, equipment, technical assistance and engineering services. As of 3/31/79, $17,150,306 or 80.5% of the total AID contribution had been disbursed. The majority of disbursements pending are to cover the final 10% of invoices of suppliers and the cost of construction.

Local

Local constributions are supplied by the GCB, the Administrator (ENDE) the sub-borrowers and in some cases, by Departmental Development Corporations. A total of $8,184,000 was originally budgeted ($4,819,000 for Phase I and $3,365,000 for Phase II) and as of 2/28/79, the last date for which information is complete, disbursements totalled $7,368,000 (90% of the originally budgeted amount). It is expected that projects completion will require a 34.4% increase in local contributions to a new total of $11,000,000.

17. Outputs

Although the projects are behind original implementation schedules, there are firm indications that all significant outputs will be achieved. The total number of new customers connections made during the formal construction period will be within 10% of the 53,000 originally planned.

18. Purpose

As noted in the Capital Assistance Papers, the basic purpose of both projects is to improve the economic and social conditions of the rural population in the areas to be served by providing them with electrical transmission, distribution and connection services on a self-supporting basis.

All important loan conditions such as uniform electric service rates for rural and urban customers, and GOB provision of required generating and non-project infrastructure have already been achieved in completed portions of the 046 project and will be achieved as required for the still to be completed portions of both projects. It is reasonable to expect that the basic purpose of both projects will be satisfied.

19. Goal/Subgoal

The goals of these projects coincide with GOB and USAID goals to improve the general welfare and standard of living of the rural poor through the provision of basic infrastructure, increased food production and increased job and educational opportunities. While there are ample reasons, as stated in the Capital Assistance Papers, to believe that these projects will contribute significantly to the achievement of those goals, quantitative information and indicators are not yet available.

20. Beneficiaries

Approximately 265,000 of the poor in Bolivia are expected to be receiving direct benefits from these projects by the time of their conclusion. Ten years later, it is expected that the number of direct beneficiaries will grwo to at least 500,000 as new customers are connected to electric lines of the projects and to new lines extended from them. Other direct beneficiaries are hundreds of persons who are or have been participating in the planning, design, and construction of the projects and those who will hold the new administrative, operating and maintenance job created by the projects.

Indirect beneficiaries are even more numerous and in a sense can be considered to include the entire Bolivian population, as well as the community of project suppliers in other countries. In Bolivia the indirect benefits will be in terms of greater social tranquility, more abundant and greater economic stimulation during and following construction, higher levels of education, etc. Outside of Bolivia, indirect beneficiaries include all those involved directly or indirectly with

manufacture and shipment of millions of dollars worth of foreign materials and equipment required to build, operate and maintain the project facilities.

21. Unplanned Effects

None known at this time.

22. Lessons Learned

The following should be taken into account in the design of a new project:

a. Greater emphasis should be placed on institutional development and transfer of technology by the use of specialists to advise and assist the host country entities with the planning, design, purchase, and construction supervision rather than the contracting of an A/E consultant's staff to actually do all of the work.

b. Implementation plans should take into account the continuous nature of electric utility growth and provide for fragmented or piecemeal design and construction of each project within the framework of an overall project plan and budget. Such an approach will allow each of the major implementation activities (detailed planning, design, staking, construction, connections and energization) to be spread out over most of the implementation period. Consequently the size of the staffs required to perform the various activities will be reduced and participating electric companies and cooperatives will be able to grow and absorb with minimum strain the administrative and operational responsibilities added by the project.

c. Emphasis must be placed on early estimating and ordering of all long delivery time materials and equipment including vehicles, radios and tools needed during construction.

d. All meterials and equipment IFB's and contracts should specify well known and easily accessible delivery points at which the buyers will assume control and responsibility.

e. Care should be exercised that all contracts with consortiums specify that only one spokesman will be recognized for the consortium.

f. A detailed written agreement acceptable to AID regarding the authority, responsibilities and general relationships of the various host country entities participating in project implementation should be included as a Condition Precedent in the Project Paper and Loan Agreement.

g. Very early during implementation, AID should require and participate in the development of detailed and efficient procedures, and paperflow diagrams for handling all routine administrative matters.

h. USAID should plan to assume a greater share of the responsibility for the implenentation of project and should be very active in the anticipation and solution of problems, recognizing that some host country

counterparts are lacking in experience and/or motivation and may not understand or share approved project goals and objectives.

i. The new project should be oriented toward institution building and the transfer of technology and provide for the installation of small hydroelectric generating units to serve remote areas not accessible to line extension from existing electric systems.

j. The next project involving rural electrification should be scheduled to dovetail with the conclusion of the current projects and thus avoid the dismantling of the already experienced implementation units of the GOB administrator and the sub-borrowers and should be of such size to insure economic survival of new cooperatives, consolidation of existing service areas, and expansion to new service zones.

23. Special Comments or Remarks

Attached are copies of reports of two contracted Evaluators.