AID 1020-25 (1-70)

497-00-000-200
REPORT
4970200(4)
PD-AAF-082-C1

PAGE 1

PROJECT APPRAISAL REPORT (PAR)

1. PROJECT NO.	2. PAR FOR PERIOD:	3. COUNTRY	4. PAR SERIAL NO.
497-H-019	May 1970 TO Nov. 1976	Indonesia	77-3

5. PROJECT TITLE

Capital Project Loan
Tuntang Electric Power Sub-system Rehabilitation

13p

6. PROJECT DURATION: Began FY 70 Ends FY 76	7. DATE LATEST PROP	8. DATE LATEST PIP	9. DATE PRIOR PAR
	N.A.	N.A.	N.A.

10. U.S. FUNDING	a. Cumulative Obligation Thru Prior FY: $27.7 million	b. Current FY Estimated Budget: $ -	c. Estimated Budget to completion After Current FY: $ -

11. KEY ACTION AGENTS (Contractor, Participating Agency or Voluntary Agency)

a. NAME	b. CONTRACT, PASA OR VOL. AG. NO.
Government of Indonesia (GOI) acting thru PLN (State Electric Power Agency)	Loan Agreement 497-H-019
PLN/Chas. T. Main (consulting engineer)	Contract Pdj.017/PST/71
Supply/install contracts for generation, distribution and communications equipment.	See Block II

I. NEW ACTIONS PROPOSED AND REQUESTED AS A RESULT OF THIS EVALUATION

A. ACTION (X) USAID	AID'W	HOST	B. LIST OF ACTIONS	C. PROPOSED ACTION COMPLETION DATE
			All necessary actions for project implementation have been completed, initiated or defined prior to making this evaluation. No new actions follow from this evaluation.	

D. REPLANNING REQUIRES REVISED OR NEW: ☐ PROP ☐ PIP ☐ PRO AG ☐ PIO/T ☐ PIO/C ☐ PIO/P

E. DATE OF MISSION REVIEW: 18 November 1976

PROJECT MANAGER: TYPED NAME, SIGNED INITIALS AND DATE	MISSION DIRECTOR: TYPED NAME, SIGNED INITIALS AND DATE
Walter D. Lawrence 22 Oct. 1976	Thomas C. Niblock 18 November 1976

Robert P. Wimmer Evaluation Officer Date: 18 November 1976

AID 1020-25 (10-70) PAGE 2 PAR	PROJECT NO. 497-H-019	PAR FOR PERIOD May 1970 TO Nov. 1976	COUNTRY Indonesia	PAR SERIAL NO. 77-3

II. PERFORMANCE OF KEY INPUTS AND ACTION AGENTS

A. INPUT OR ACTION AGENT — CONTRACTOR, PARTICIPATING AGENCY OR VOLUNTARY AGENCY	B. PERFORMANCE AGAINST PLAN — UNSATISFACTORY 1	2	SATISFACTORY 3	4	5	OUTSTANDING 6	7	C. IMPORTANCE FOR ACHIEVING PROJECT PURPOSE (X) — LOW 1	MEDIUM 2	3	4	HIGH 5
1. PLN - GOI electric power agency				X								X
2. Chas. T. Main - consultant					X							X
3. AMELCO - construction contractor			X									X
Comment on key factors determining rating												
4. General Electric gas turbine			X								X	
5. Vinnell - Yogyakarta Diesels			X							X		
6. MOTOROLA - communications equipt.					X			X				
7. Conversion - PLN		X										
See continuation sheet for comments.												

4. PARTICIPANT TRAINING	1	2	3	4	5	6	7	1	2	3	4	5

Comment on key factors determining rating

Training was done under the supply/installation contracts on the particular equipment furnished by General Electric, Vinnell (Enterprise-DeLaval diesel engines) and MOTOROLA radio communication system. AMELCO provided basic lineman training and C.T. Main engineering design, layout, drafting and specialized operation and maintenance and conversion training. Performance included in II above.

5. COMMODITIES	1	2	3	4	5	6	7	1	2	3	4	5

Comment on key factors determing rating

N.A. All equipment and material was furnished as part of supply/install contracts.

6. COOPERATING COUNTRY	1	2	3	4	5	6	7	1	2	3	4	5
a. PERSONNEL					X							
b. OTHER			X									

Comment on key factors determining rating

PLN, the State Power Agency, performed reasonably well and cooperated willingly. The PLN electric power development program taxes its technical and administrative capabilities severely. Bureaucratic processes in other government agencies, such as Customs, occasionally delayed the work and required undue amounts of administrative work to resolve.

7. OTHER DONORS West Germany	1	2	3	4	X	6	7	1	2	3	4	5

(See Next Page for Comments on Other Donors)

AID 1020-25(10-70) PAGE 3 PAR	PROJECT NO. 497-H-019	PAR FOR PERIOD: May 1970 to Nov. 76	COUNTRY Indonesia	PAR SERIAL NO. 73-3 77-3

II. 7. Continued: Comment on key factors determining rating of Other Donors

The 150 KV transmission and substation system is being built under West German credits and technical inputs. Parts of this system are in operation as of October 1976 and remaining transmission lines will be completed by mid 1977 and substations by end 1977. The design and execution of their 150 KV system are entirely satisfactory.

III. KEY OUTPUT INDICATORS AND TARGETS

A. QUANTITATIVE INDICATORS FOR MAJOR OUTPUTS		TARGETS (Percentage/Rate/Amount)					
		CUMULATIVE PRIOR FY	CURRENT FY TO DATE	CURRENT FY TO END	FY 78	FY 79	END OF PROJECT
Electric distribution system rehabilitation in four major cities and 15 villages in Central Java	PLANNED	100%	-	-	-	-	-
	ACTUAL PERFORMANCE	75%	100%				
	REPLANNED			-	-	-	-
Interim generation - Semarang gas turbine gen. Yogyakarta Diesel Plant Radio communication system	PLANNED	100%	-	-	-	-	-
	ACTUAL PERFORMANCE	90%	100%				
	REPLANNED			-	-	-	-
Customer conversion - to be done by PLN with local currency financing. (See continuation sheet III A).	PLANNED						
	ACTUAL PERFORMANCE						
	REPLANNED			2%	20%	30%	100%
Construction by other donors of 150 KV transmission and substation facilities	PLANNED	75%	100%			-	-
	ACTUAL PERFORMANCE	40%	50%				
	REPLANNED			75%	100%	-	-

B. QUALITATIVE INDICATORS FOR MAJOR OUTPUTS	COMMENT:
1. N.A.	
2.	COMMENT:
3.	COMMENT:

AID 1020-25 (10-70) PAGE 4 PAR	PROJECT NO. 497-H-019	PAR FOR PERIOD: May 1970 to Nov.'76	COUNTRY Indonesia	PAR SERIAL NO. 77-3

IV. PROJECT PURPOSE

A. 1. Statement of purpose as currently envisaged. 2. Same as in PROPS ☒ YES ☐ NO

1. To replace the existing obsolete and overloaded 6 KV primary and 127/220 volt secondary distribution systems in Central Java by designing, constructing and placing into operation new 20 KV primary distribution and 220/380 volt secondary distribution systems for the major cities of Semarang, Yogyakarta, Surakarta and Magelang plus a number of contiguous villages.

2. To establish those new distribution practices as the most effective and economical standards for general country-wide application.

B. 1. Conditions which will exist when above purpose is achieved.	2. Evidence to date of progress toward these conditions.
1. The rehabilitated distribution system will greatly reduce the voltage drops and power losses characteristic of the present system, thereby permitting increased service to existing customers. The new system will extend the service areas and will provide capacity and flexibility for a 20 year load growth.	1. The new primary and secondary distribution facilities were completed 15 Oct.'76 by the contractor and final acceptance documents are in process. The conversion process is only started with new areas and new customers are first to be connected.
2. Provide interim generation for the largest Central Java city of Semarang and for Yogyakarta, second largest, until the Semarang steam powerplant goes into operation about Oct.'77. These facilities will provide for limited load growth, reduce the burden on the 30 KV and 70 KV transmission lines and up-grade service during the interim time period.	2. These two generating plants are in operation. Evidence in these cities is proper distribution voltage - 100% of rated voltage instead of 70% as before. This is visible in terms of brighter lights.
3. A cadre of trained technicians and laborers.	3. Formal courses by supply and construction contractors have trained about 150 men on operation and maintenance and conversion work. Under consultant's supervision, an Indonesian design/drafting cadre of 25 men (and several women) have produced all the working drawings for the distribution system. They now are working on the Ketenger (AID) project designs. Some 300 temporary contractor laborers received training in many crafts on the job.

V. PROGRAMMING GOAL

A. Statement of Programming Goal

The electric power sector program goal is to provide electric service to every existing and potential customer who desires such service. This is a monumental task in Indonesia with one of the lowest per capita electric energy consumption rates in the world. A basic goal of this project is to demonstrate and prove the economy, efficiency and flexibility of the new system for general application in Indonesia.

B. Will the achievement of the project purpose make a significant contribution to the programming goal, given the magnitude of the national problem? Cite evidence.

In order for Indonesia to provide electric service to continually increasing numbers of its people, an immense investment is required and it is essential to employ the most economical electric distribution system for the electric plant expansion. In AID's opinion, the system used on this project combines the best of American and European practices and can substantially reduce the investment and maximize the performance of the future electric systems in Indonesia.

Continuation of II A - Performance of Key Inputs and Action Agents

2. Chas. T. Main - consultant: Provided well qualified and conscientious people, with very few exceptions well adapted to overseas work. The field staff is hard working-possibly overworked and an additional man in administrative support would have enabled them to produce better monthly and quarterly progress reports.

3. AMELCO - construction rehabilitation contractor: Performance rating on the low end of satisfactory reflects failures in meeting completion date commitments (there were some extenuating circumstances), initially poor work organization (which did improve with time) and placing of exaggerated cost overrun claims ($10 million-settled for $2 million) which required a lot of the consultant's time. On the plus side, AMELCO's Filipino foreman, while not as work organization conscious as Americans might have been, developed very good rapport with the Indonesian laborers and managed them effectively.

4. General Electric - Semarang Gas Turbine-generator: Initial operation of the unit was about six months behind schedule due in part to shipping and local transportation problems involving such a heavy piece of equipment. Reduction gear bearing and vibration problems appear to be caused by faulty design and/or manufacturing. Unit vibration in turn is suspected as contributing to the cracking off of turbine cross-fire tubes which went thru the turbine and damaged the rotor blading to such an extent that General Electric provided a new rotor under the warranty.

5. Vinnell - Yogyakarta Diesel Plant: This was basically a turn-key job by Vinnell who did detailed design, equipment procurement and installation. Major sub-suppliers include Enterprise-DeLaval engine-generators and General Electric controls and transformers. Installation work was well done altho completed about one year behind schedule. A major shut down of one of the engines was caused by an apparent combination of operating and equipment faults which required the replacement of the crankshaft. The replacement is scheduled for completion by mid-November 1976 under the manufacturer's warranty. Engine manufacturing defects were clearly the cause of other shut downs - cam lobes which failed after a few hundred hours of operation and cracked welds on valve push rods.

6. MOTOROLA - radio communications: This equipment has proven to be of good quality manufacture and performance. There have been no problems.

7. Conversion work to be done by PLN consists of checking the consumer's premises and indicating repairs if necessary for safe utilization of the new 220 volt service, replacing the consumer's service panel and connecting the new distribution lines to the panel. Necessary cable and hardware for the connections have been supplied by the construction contractor and the installation will be done by PLN forces. With some 120,000 consumers to convert and 60,000 new consumers to comment, that work will take three to four years. To prepare PLN personnel for the conversion work, AMELCO provided basic lineman training and C.T. Main has given additional training in safety, electric fundamentals and work planning to a nucleus of conversion work trainees. However, additional men need to be trained and AID is prepared to assist in financing additional consultant effort under AID loan 497-H-040 for consultant services in order that the ultimate sector objective of improved electric service may be provided to the consumers in the project area at the earliest possible date. Conversion work is not defined as a part of the project in the loan paper, but it is included in this report to complete the system rehabilitation picture. The rating of "unsatisfactory" in Section II and the conversion execution targets shown in Section III reflect PLN's slow pace of starting conversion work. These factors are due partly to reductions in rupiah funding following the financial problems encountered by the Indonesian oil corporation, PERTAMINA which have affected the entire Indonesian economy. However, PLN's budget proposal for GOI FY 1977/78 will include funds for 60,000 conversions.

attachment 4 ~~[illegible]~~

TO : SEE DISTRIBUTION

FROM : Walter G. Bollinger, PRO

SUBJECT : MISSION EVALUATION SCHEDULE

1. Attached is a schedule for evaluations of the USAID projects that will be undertaken between October 1976 and May 1977. The Mission Evaluation Officer, Robert Zimmerman, has already discussed these dates with all project officers. Mission Order Number 1370.5 dated October 7, 1976 outlines the conceptual and procedural framework we intend to apply in carrying out our project evaluations. The Evaluation Officer will meet with each project officer approximately three weeks ahead of the scheduled date to discuss further the required process and proper documentation for each evaluation. The dates on the schedule represent the date of the evaluation group review with some flexibility permitted should the evaluation process uncover a need therefor.

2. All project officers should read the Mission Order carefully and also the relevant documents mentioned therein as they, not the Evaluation Officer are primarily responsible for the evaluation of their project. The Evaluation Officer can effectively assist only if the project officers themselves understand the process involved and are prepared to cooperate fully.

Attachment

PRO:RFZimmerman:as

DISTR: DIR, DD, MGT, RLA, PRO-2, C&R-3, VHP
RD: Larson, Tappan, Roberts, Hinds, Walters, Devin, Argento, Trostle
PH: Terry, Vanderhoof, Johnson, Reese, Nelhamra
PTE: Woody, Tierney, Grayson, Lawrence, Koski
EHR: Green, Terrell, Littlewood

BEST AVAILABLE COPY

EVALUATI... SCHEDULE OCTOBER 1976 - MAY 19

Title	G-Grant L-Loan	Project #	Date
Tuntang Electric Power Rehabilitation	L	H-019	October 27, 1976
Area Development Project Planning	G	0238	November 2, 1976
Family Planning Assistance Services	G	188.0	November 4, 1976
Voluntary Agencies Co-Financing PL-480 Title II	G	0225	November 11, 1976
Agriculture Research	G	0198	November 15, 1976
Health Research and Development	G	0230	November 30, 1976
Population Research & Development	G	188.3	December 14, 1976
Non-Formal Education	G	0234	December 15, 1976
Assistance to Agriculture	G	0189	January 21, 1977
Education Finance	G	0229	January 28, 1977
Semarang Steam Power Plant	L	H-024	February 15, 1977
Jagorawi Highway Const.	L	H-031	February 22, 1977
Medan Electric Power Distribution & Rehabilitation	L	H-022	March 1, 1977
Agriculture Education for Development	L	T-041	March 8, 1977
West Java T&D I & II	L	(H-028 (H-032	March 15, 1977
Ketenger Transmission & Distribution Rehabilitation	L	H-0[illegible]	March 22, 1977
Aceh Road Betterment	L	T-036	April 7, 1977
Citanduy River Basin Development	L	[illegible]	April 14, 1977
Brackish Water Fisheries Production	G	0236	April 21, 1977
Malaria Control	L	[illegible]	May 26, 1977
Luwu Area & Transmigration Development	L	[illegible]	(Investment Plan to be developed and carried out by Hasanuddin University)
Sederhana Irrigation	L	T-0[illegible]	(USX Team to Prepare Evaluation Program during Oct-Nov 1976)

BEST AVAILABLE COPY

Attachment C5a

PA:1

AGENCY FOR INTERNATIONAL DEVELOPMENT
Jakarta, Indonesia

October 27, 1976

OFFICIAL FILE

TO : PROJECT OFFICERS

FROM : Walter G. Bollinger, PRO WGB

SUBJECT: Outline for Evaluation Review and Alteration in Current PAR Format

1. Attached is an outline that we intend to try to follow in preparation for the Evaluation Review. This outline should permit us to apply the definition of evaluation presented in our recent USAID ORDER No. 1370.5, and to provide more substance to our evaluations than is possible within the confines of the current PAR format. We will still use the PAR but we are, in effect, adding a page 5 which will be a logical continuation of the current page 4.

2. The Mission Evaluation Officer will assist you in responding to this outline. We welcome further suggestions that will help us develop an evaluation format and process that is more relevant to the requirements of this Mission.

Attachment: a/s

Drafted:PRO:RFZimmerman:as

BEST AVAILABLE COPY

DISTRIBUTION: DIR, DD, C&R-3, LA
PRO: Singleton/Withers/Zimmerman-3
MGT: Berrett/Hunt
PH : Terry/Reese/MacNamara/Johnson/Vanderhoof
EHR: Green/Terrell/Littlewood/Carbin
RD : Larson/Tappan/Argento/Mintz/Devin/Walters/Roberts/Baldwin
PTE: Woody/Grayson/Lawrence/Tierney/Kouki/McAlver
VHP: Salvo/Kuhn

AN OUTLINE FOR THE EVALUATION REVIEW

I. Review of the Logframe

A. Project Purpose

B. Project Outputs/Progress

II. Review of Previous Year's Inputs

A. Documentary US/GOI

B. Commodities US/GOI

C. Personnel US/GOI

D. Funds US/GOI

III. Review Draft PAR

A. Actions outlined Previous PAR

B. Review Current PAR

C. Review Continued Relevance of Current Project Purpose (An addition to annual PAR format)

1. Are there alternative approaches to achieving this Project's Purpose or the Sector Goal? Would any other approach be more effective or appropriate for USAID/

2. What is current priority of Project with the GOI? Evidence for or against?

3. How does GOI view USAID role? Do USAID and GOI share common perception of Project Purpose?

4. Are there Adverse Side Effects to this Project?

   a. Economic?
   b. Ecological?
   c. Social/Political?
   d. Health?

5. Do the Benefits justify the costs?

6. Are there any unexpected Benefits?

Attachment 6

USAID ORDER

UNITED STATES AID MISSION TO INDONESIA

DATE ISSUED	EFFECTIVE	OFFICE	CODE
October 7, 1976	October 7, 1976	PROGRAM Issuance No. 11	1370.5

SUBJECT: Program Evaluation Committee for Assistance & Guidance to Project Officers & for Review of Project Evaluation

CANCELLING: Issuance No. 11 Order No. 220, dated May 10, 1974

I. PURPOSE

This Mission Order is intended to serve as the basis for a consistent and effective evaluation process for all USAID/GOI projects. This order will define evaluation as we intend to apply it, outline the process to be followed and identify responsibilities.

II. EVALUATION DEFINED

It should be clear at the outset, that evaluation and implementation monitoring are two different processes with different purposes. Implementation monitoring is the means for assuring that resources for a given project are available and adequate, that implementation actions are occurring on schedule and that planned outputs are being achieved.

Evaluation, on the other hand, seeks to answer three basic questions relevant to all forms of economic assistance:

Effectiveness - Are the targets for outputs and purposes being achieved? What are the reasons for success or failure?

Significance - Will the achievement of the targets contribute to economic development or other higher goals beyond the project purpose? To what extent? What are the activity's advantages over possible alternatives? What about side effects?

Efficiency - Do the benefits justify the cost? Are there more efficient means of achieving the same targets?

Evaluation challenges all aspects of the project design including the feasibility of purpose and output targets, the viability of the causative linkages between outputs and project objectives, and the underlying implicit and explicit assumptions.

BEST AVAILABLE COPY

III. PROJECT EVALUATION REVIEW

The best evaluative conclusions and determinations for future actions arise out of a group review -- an interactive process among interested parties. These reviews should be carried out as collaborative efforts not judicial inquiries.

A Mission Evaluation Review Committee is hereby designated to review and examine completed program evaluation reports, PARs or equivalents, as they are submitted. The committee is composed of the following members:

1. Chairman: Director or Deputy Director
2. Program Officer
3. Evaluation Officer
4. Controller and
5. Project Manager

supplemented by other interested parties. Wherever possible appropriate GOI officials should be encouraged to participate. Project evaluation will be carried out annually for each ongoing project (Grants and Loans).

Several weeks prior to the scheduled group evaluation review, the Project Manager should meet with the Mission Evaluation Officer to discuss the format for the review as well as the methodology and substance of the evaluation itself. If a special evaluation team is conducting an in depth evaluation, the final report or a summary thereof will form the basis for the final group review. Where the evaluation is a simple annual review and involves only USAID personnel and, if possible, GOI counterparts, the Project Appraisal Report (PAR) format will be followed and will serve as the basic document for the group review.

The Project Manager will distribute the draft PAR or copies of an in depth evaluation to those officers participating in the group review one week prior to the review so that they may attend prepared to discuss any issues outlined therein. The Project Manager and the Evaluation Officer will prepare a final PAR after each review in order to provide a permanent record of the findings and decisions arrived at during the evaluation group review.

IV. RESPONSIBILITIES

A. The Mission Director is the final authority and primary mission evaluation officer. He makes the final decisions.

BEST AVAILABLE COPY

B. The Project Manager is the person primarily responsible for evaluating his project.

C. The Mission Evaluation Officer is the process manager. He sees that an evaluation schedule is set and met. He helps project personnel analyse progress in accordance with the logical framework and provides assistance as necessary regarding appropriate evaluation methodology and documentation. The Evaluation Officer, therefore, should have a chance to review projects when they are in the proposal design stage in order to help ensure that the project design sets the stage for later evaluation. Finally, the Evaluation Officer arranges for and follows up on group reviews.

REFERENCE

This order draws on the AID Evaluation Handbook (MC 1026.1 Supplement II) and AID/TO CIRCULAR A-603 "Improved Program Design and Evaluation" (dated 8/28/76).

Thomas C. Niblock
Director