

CLASSIFICATION
PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-147

PROJECT TITLE Rural Electrification - I	2. PROJECT NUMBER 497-0267 Loan 497-T-052	3. MISSION/AID/W OFFICE Indonesia
	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) <u>FY 82-2.</u>	
<input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION		

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING A. Total \$ <u>96.8 MIL</u> B. U.S. \$ <u>41.0 mil.</u>	7. PERIOD COVERED BY EVALUATION	
A. First PRO-AG or Equivalent FY <u>78</u>	B. Final Obligation Expected FY <u>82</u>	C. Final Input Delivery FY <u>84</u>		From (month/yr.) <u>6/1980</u>	To (month/yr.) <u>7/1981</u>

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., airmail, SPAR, PIO, which will present detailed request.)	E. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
C.T. Main to present detailed projects schedules for both PLN and DGC portions of the project.	D. Dowling of C.T. Main	August 14, 1981

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

A. <input type="checkbox"/>	Continue Project Without Change
B. <input type="checkbox"/>	Change Project Design and/or
<input type="checkbox"/>	Change implementation Plan
C. <input type="checkbox"/>	Discontinue Project

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

Robert C. Johnson, Project Officer *R.C. Johnson*
 Robert E. Davis, PTE *RD*
 Raymond Cohen, PRO *RC*
 Patrick A. Gage, Evaluation Officer *P. Gage*

12. Mission/AID/W Office Director Approval

Signature: *Robert C. Simpson*
 Typed Name: Robert C. Simpson
 Deputy Acting Director
 Date: 3/31/81

RURAL ELECTRIFICATION PROJECT - PES

13. SUMMARY - The present project status, considering the amount of time and money expended, is very disappointing. The visible results in physical installation and receipt of project materials after expending much money and many man months is minimal. However, it is expected that the project will move faster in the future than in the past as changes have been made which should enhance progress. Cooperatives have been formed, land purchased for ten headquarters sites, fourteen IFB's issued of twenty one to be issued and six IFB's evaluated, fifty four contracts were recommended of which thirty one have been signed and fifteen L/Comms or DRAs have been requested of which thirteen have been issued, all as of July 15, 1981.

IFBs were on verge of being sent in May 1980 when I was here - this after long delays.

It is extremely difficult to determine progress as originally scheduled. One Condition Precedent of the Loan Agreement was that both PLN and DGC furnish to AID "(b) an implementation plan approved by AID which will include: (1) a time phased schedule of proposed Project actions". PLN and DGC submitted such plans, which were approved by USAID, but the PLN did not contain schedules. The earliest PLN schedule appears in the C.T. Main October 1979 PLN report which showed major system construction being completed by the end of October 1982. The latest schedule for PLN in the C.T. Main May 1981 PLN monthly report shows construction being completed at the end of May 1984. From these two schedules, it can be seen that the PLN part of the project is nineteen months behind schedule. The DGC Implementation Plan Schedule shows system construction to be completed in early May 1982. The latest C.T. Main schedule shows the completion to be August 31, 1984. Again, it can be seen that DGC portion of the project is approximately 27 months behind schedule.

The great problem appears to be the amount of time taken for various parties to complete action required of them. Evidently, some parties such as BAPPENAS, SEKNEG, and Bank of Indonesia, had no input to the schedules and have made no commitment to honor such. The schedules are therefore, in a practical sense, meaningless. The complex approval process involving PLN, PDO, BAPPENAS, SEKNEG, USAID and C.T. Main must be closely monitored and each party take action in an expeditious manner if schedules are to be met.

14. EVALUATION METHODOLOGY - This evaluation is the regular annual project evaluation and is based on field trips, project meetings, reports, discussions with GOI and Consultant Project people and personal knowledge of events of the past twenty months.

15. EXTERNAL FACTORS - Influential external factors are listed below:

(a) On November 15, 1978, the GOI instituted a 50% devaluation of the rupiah against the dollar. This could not have been foreseen in the feasibility studies.

(b) During the fiscal year of 1979, inflation in Indonesia was approximately 25% and in the U.S. over 12%. Both rates are higher than projected in the feasibility studies.

(c) On May 1, 1980 the GOI raised the prices of kerosene and fuel oil by 50%. At the same time PLN also raised its electric rates by the same amount.

(d) The new approval body of SEKNEG was created by the GOI during 1980. SEKNEG is charged with a approving tender evaluations and contract award recommendations. It must approve all awards made by DGC/PDO since PDO is submitting all evaluations to it and all awards with a minimum value of \$800,000 for PLN. As with all newly created organizations, there appears to be confusion and lack of knowledge regarding the terms of government to government loans. This has created difficulties, especially for DGC/PDO in that SEKNEG has, in one case, attempted to ignore the recommended award by DGC/PDO/C.T. MAIN/USAID and proceeded to negotiate with the second low responsive bidder and then stated that the award must go to bidder with which they negotiated. (PDO states that they do not have the power to resolve the problem with SEKNEG). The inclusion of SEKNEG in the approval process is cited by DGC/PDO as one of the reasons for such slow progress in awarding and signing contracts.

These external factors will no doubt have a negative impact on the success of the project. Just how severe this negative impact will be remains to be seen. The devaluation and increased costs have necessitated rate increases which will undoubtedly reduce both the percentage of people who will connect up and the consumption of those that do.

16. INPUTS - The inputs of the project consist of funding from the GOI, AID, the Canadian and Dutch Governments, technical assistance, and training.

(a) Funding Expanded (Date of Information)

- (1) \$2,665,443.27 of the AID Grant for A&E consulting services (May 31, 1981).
- (2) \$1,539,859.62 of the AID Grant for OMT consulting services (May 31, 1981).
- (3) \$51,248.45 of the AID Loan for Prod. Uses Consultant. (May 31, 1981).
- (4) \$895,388.04 of the AID Loan for PLN. (May 31, 1981).

- (5) \$267,425.00 of the AID Loan for DGC. (May 31, 1981)
- (6) \$201,000 USA interagency transfer of funds for BUCEN services (July 31, 1981).
- (7) \$14,400 of the AID Grant for DGC/PDO baseline data.
- (8) \$52,791.95 of the AID Grant for orientation tour (May 31, 1981).
- (9) \$71,094.41 of the AID Grant for excess property generator sets (May 31, 1981).
- (10) \$57,850.57 of the AID Grant for vehicles for consultant (May 31, 1981).
- (11) \$24,522.52 of the AID Grant for R.E. Administrative Assistant. (May 31, 1981).
- (12) \$18,903.22 of the AID Grant for Training (May 31, 1981)
- (13) Rp385,518,805.50 of the GOI/PLN fund for A&E consulting services (June 30, 1981).
- (14) Rp NA of the GOI/PLN fund for OMT consulting services (June 30, 1981).
- (15) Rp NA of the GOI/PLN fund for Productive Uses supports (June 30, 1981).
- (16) Rp1,592,008,838.13 of the GOI/PLN for project material and operation (June 30, 1981).
- (17) Rp279,450,000 of the DGC/DIP for A&E consulting services (June 30, 1981).
- (18) Rp111,000 of the DGC/DIP for OMT consulting services (June 30, 1981).
- (19) Rp1,200,000 of the DGC/DIP FOR PDO & Coop support (June 30, 1981).
- (20) Rp614,220,565 of the GOI Loan for coops. project material and operation (June 30, 1981).

Total US\$ Expended - \$5,859,927.05

Total Rp Expended - Rp 4,196,648,208.50 (Equiv. to \$6,714,637.13)

Grant Total US\$ Expended - \$12,574,564.18.

(b). Initial Project Funding

The project is a multidonor effort with the Canadian Government (CIDA) financing the generation plants for the three outer island projects and the Royal Netherlands Government (Dutch) financing the conductor for the seven Central Java Systems. The project financing is as follows:

<u>Country</u>	<u>Amount</u>	<u>Date Signed</u>
USAID Grant	US\$ 9 million	March 30, 1978
USAID Loan	US\$30 million	May 6, 1978
CIDA Grant	US\$ 4.95 million	November 16, 1978
CIDA Loan	US\$17.2 million	October 13, 1978
Dutch Loan	US\$ 5 million	March 21, 1979
GOI	US\$30 million	Same as above
Total	US\$96.15 million	

(c) Technical Assistance

- (1) 423 man months of A&E consulting services - AID financed. (May 31, 1981)
- (2) 211 man months of OMT consulting services - AID financed. (May 31, 1981)
- (3) ~~9 man months of productive uses consulting services - AID financed. (May 31, 1981)~~
- (4) 32,6 man months by BUCEN. (July 31, 1981)
- (5) 3 man months by Dr. Okada.

(d) Training

- (1) 143 employees of PLN have received 607 days of formal training.
- (2) 216 employees of DGC/PDO/Coop. have received 224 days of formal training.

See Appendices A, A1 and A2 for detailed analysis and breakdown.

(e) Problems

The major problems associated with the inputs have been:

1. Lack of timeliness of filling staff positions. Positions vacant for long periods.
2. Lack of timeliness of providing support for the Consultants by the DGC/PDO.
3. Turnover of staff of both GOI, Consultants and USAID.
4. Quality of staff assigned. (All parties involved).
5. Assumptions that qualified staff were available and would be assigned. (All parties involved).
6. Lack of coordination among and between all parties concerned.

Actions have and are being taken to alleviate Items 1, 2, 4 and 6. The problem of unfilled staff positions still exists as PDO has not supplied all of the required distribution engineers and draftsmen to the A&E consultant, and USAID is subsidizing the GOI support for Consultants by supplementing the salaries of a secretary and drivers furnished by PDO.

Turnover and shifting of staff is a recurring problem on most projects. It is very uneconomical to train individuals for a position and for them to be shifted to other positions or leave the project. It is hoped that such cases will occur less frequently in the future.

17. OUTPUTS - The following outputs were accomplished.
(Date of information).

- a. The formation of the PDO and three RE Cooperatives. (June 30, 1981).
- b. Completion of demonstration projects at Klaten in May 1979, Lombok and Lampung with each serving between 1200 to 2000 customers. (June 30, 1981).
- c. Purchase of land for the headquarters complexes for each of the ten sites.
- d. Site development work completed at the five PLN sites (May 31, 1981).
- e. Signing of contracts for 16,000 wood poles and 20,000 steel poles by PLN (May 31, 1981).
- f. Preliminary staking of 3318,4 KM of distribution line by PLN (June 30, 1981).
- g. Preliminary staking of 1622 KM of distribution line by DGC/ PDO (July 3, 1981).
- h. Final staking of 169 KM of distribution line by DGC/PDO (July 3, 1981).
- i. Final staking of 933 KM of distribution line by PLN (June 30, 1981).
- j. Production of final drawings and staking sheets for 169 KM of lines by C.T. Main for coops. (July 10, 1981)
- k. The issuance of IFB's for line materials; tools and equipment; conductor and housewiring and metering materials; and for the seven headquarter sites for PLN. (June 30, 1981).
- l. The evaluation of line materials, tools and equipment, conductor and housewiring and metering IFB's for PLN. (June 30, 1981).
- m. The signing of 18 of 28 recommended contracts by PLN. (June 30, 1981).
- n. The issuance of twelve IFB's for distribution materials, tools and equipment, housewiring and meters, and poles for DGC/PDO/Coops. Separate IFB's were issued for each coop. (June 30, 1981).
- o. The evaluation of six IFB's for DGC/PDO/Coops. (June 30, 1981).
- p. The signing of 13 of 26 recommended contracts by PDO. (June 30, 1981).
- q. The completion of 3646 participant days of formal training for PLN. (June 30, 1981).
- r. The completion of 2643.5 participant days of formal training for DGC/PDO/Coops. (June 30, 1981).
- s. The setting of 972 wood poles. (June 30, 1981) PLN.
- t. The setting of 5196 steel. (June 30, 1981) PLN.

For complete analysis and details of training, see Attachment A.

There are several significant problems relating to the level of outputs but practically all can be traced to the lack of use of the management tools of planning, scheduling and control by, essentially, all parties involved. This has led to a "management

by crisis" style of operation wherein the crisis of the moment gets attention and other important problems are not recognized or attended to until they become the crisis of the moment and, in some cases, are not recognized until it is too late to take responsible actions which then lead to much greater problems than the original problem. Such is the case where bid evaluations, contract signings, issuance of L/Comm's and L/C's are not handled expeditiously in order to meet the IFB time requirements. There have been several cases where bids and bid bonds have been allowed to elapse without making an effort to extend them. An excessive amount of time was taken by USAID in the issuance of the first group of L/Comm's.

Construction has been and is taking place without the approval of construction drawings. USAID has been asked to approve drawings after the construction was underway or completed. It was found that construction did not match the proposal and additional work was done resulting in considerable inefficiency. The reason or excuse given for such actions is "to keep from delaying the project". This may appear to be valid but, in many cases, where construction has to be reworked, the project is delayed rather than expedited. More than 6100 poles have been set in Central Java without completed and approved final drawings. It is hoped that such procedures will stop in order to preclude the possibility of considerable reworking. The poles cannot be utilized until the hardware arrives (some of which is not on order) so there is no great urgency for setting poles before drawings are finalized and approved.

18. PURPOSE - The major purposes of this project are:

To demonstrate that reliable electric power can be provided to the rural areas of Indonesia at a price which the majority of the people can afford through systems that are technically sound and financially viable and that the introduction of electricity to selected areas will bring about a significant increase in production and employment and improve the quality of life of the poor. A subsidiary purpose is to train a sufficient cadre of Indonesian experts in all phases of rural electrification to manage and expand their rural electric systems.

19. PROGRAM OR SECTOR GOAL - The goal of this project is to improve the standard of living and increase employment and productivity of the rural population in ten selected areas of Indonesia.

Again, while it is too early to evaluate this goal, USAID is optimistic that the provision of electric power to these areas should bring a new dimension to the package of

existing rural development programs that together will improve productivity and employment opportunities as well as raise the quality of life for the people who live in the target areas.

There are a very large number and variety of potential productivity uses of electricity in these ten rural areas, most of which could benefit the poor and the very poor. A partial list would include rice and other grain mills, irrigation, poultry farms, sugar processing, copra, tobacco and other food processing, refrigeration in shops and restaurants, sawmills and box factories, rattan furniture and other woodworking shops, hollow blocks, floor and roof tiles and pottery factories blacksmith, machinery and repair shops, food, pharmacy and general merchandise stores. Many of these activities already exist in the target areas using substitute forms of power. However, in other countries, the extension of electricity to the rural areas caused significant increases in the number of new activities. There is reason to believe that this will also occur in Indonesia.

20. BENEFICIARIES */ - The number of target villages and households at the proposed project sites are given below:

Site	No. of Target Villages	Pop. of Target Villages	No. of Target Households**	Est. Target Pop.	Village Pop. Density***
A. Central Java					
Pek-Pem.	102	242,120	20,000	102,000	1141
Klaten	98	245,105	25,000	120,000	2003
Bant.-Sleman	21	169,964	20,000	84,000	1403
Sragen	47	139,278	15,000	70,000	1132
Magelang	83	175,630	20,000	100,000	1002
Wonogiri	54	167,081	15,000	81,000	872
Banyumas	35	145,301	15,000	75,000	791
B. Outer Islands					
Luwu	65	132,263	15,000	85,000	34
Lampung	108	272,505	25,000	150,000	590
Lombok	34	262,312	25,000	115,000	828
T O T A L S	647	1,952,559	195,000	983,000	-

* Based upon assumption that 50% of households would connect to the system, an assumption which was made for planning and feasibility study work.

** Based on average household size at each site.

*** No. of persons per sq. km of village land.

Thus a total of 195,000 households (composed of, as shown above, an estimated 983,000 people) in 647 initial target villages should immediately and directly benefit from the project.

21. UNPLANNED EFFECTS - The unplanned effect to date is, that due to the very slow implementation of the Project and the built-up expectations of the people in the ten project areas, there is a great deal of political pressure to show progress.

22. LESSONS LEARNED - The following lessons should be learned from the R.E. Project by the AID organization:

1. Implementation schedules are not based on a realistic appraisal of the times required for project activities and the inherent delays built into two bureaucracies.

2. Planning, on a realistic basis, is sadly lacking. Grantee or donee support is assumed and agreements are signed but adequate support may be delayed. An example of such was the lack of PDO to provide transport and housing for the consultants during the early portion of the project.

3. Legal documents such as loans, grants and contracts are written in such a manner that there may be a great latitude or difference in interpretation by the parties involved. Much more detail and many more specifics such as detailed implementation plans and schedules, details and required schedules of conditions precedents, detailed scopes of work and support and detailed position descriptions for all staffing must be included to have a project that can be coordinated and administered.

4. A fragmented project is extremely difficult, if not impossible, to effectively implement, coordinate and administer. Fragmentation in one aspect creates difficulties but this project is fragmented in several manners. There are four governments involved - the GOI, USA, Canada and Netherlands; two GOI implementing agencies - the PLN and DGC/PDO/Cooperatives; ten project sites; two administrative project locations - Jakarta and Semarang; and three consulting groups consisting of five elements - A&E for PLN, A&E for DGC, OMT for PLN, OMT for DGC and Productive Uses for PLN.

5. Contracting for consultant services are difficult when long lead times for materials are necessary. Consultant services must be phased in carefully in the early stages of a project to avoid wasted person months. Expeditious staffing of positions which cannot be utilized but may present a facade of project progress must be avoided.

Extreme care must be taken to ensure that the positions are staffed with individuals who are qualified to do the work required by the position. For example: C.T. Main proposed and both USAID and PLN approved three construction type men to fill three Field Distribution Engineer positions. Many man months have been consumed with no productive distribution engineering resulting from the expenditures. In fact, the project has had construction supervisory personnel for two years or more before construction started.

6. Provision should be made for a personal interview with consultants being proposed for each key project position. The interview could be made by AID Officer in AID/W or in the Mission as practical, having specific knowledge of the project and of the qualifications required. Valuable person-months can be lost by having poorly qualified consultants occupying key project positions. The project did experience turnover in certain key positions which might have been avoided if interviews by a knowledgeable AID Officer had been arranged prior to acceptance of key consultant staff. The initial effort by the A&E consultant was electrical engineering and design yet the Project Director proposed and approved was a Civil Engineer with construction and civil engineering experience.

7. Scheduling and planning by all concerned parties should take place early in the project and agreement reached as to the amount of time required for each act by each party so that realistic plans and schedules for meeting the PACD will ensue.

8. Adequate control must be exercised to ensure that target and schedule are met and that an economical and efficient organization and operation ensues.

9. A greater understanding of purposes, scopes, limitations, responsibilities, cooperation needed and inter-relationships among and within all concerned parties, agencies, governments and offices which are involved in any manner with implementation of the Project must be promoted from initiation of the Project to eliminate confusion and the delays resulting therefrom.

10. Customs and procedures of the recipient country must receive adequate consideration to improve and ensure project success.

23. APPENDICES

1. Appendix A - Training
2. Appendix A1 - Completed Training Courses, NRECA Jakarta (PDO/Cooperatives).
3. PLN schedule of October, 1979.
4. PLN schedule of May, 1981.

Appendix A

TRAINING

During the first year of the project, Training Plans were prepared by both PLN and PDO with the assistance of the NRECA Training Consultant as part of the overall Implementation Plan. In this Training Implementation Plan it was stated that over the first 4 years of the project, PLN plans to train 758 people in 22 in-country training courses and 71 people in the U.S. and in the Philippines. Likewise, in the same time period the DGC/PDO plans to train 350 people through 30 in-country training courses, and 32 people in the U.S. and in the Philippines.

I. PLN

Following the Training Implementation Plan therefore, to date PLN/NRECA has conducted 10 in-country training courses and trained 225 participants, three (3) overseas training, with 25 participants to the U.S. and the Philippines, and one (1) other overseas training (loan) to the U.S. Bureau of Census with 2 participants.

All of the 225 PLN in-country trainees are still employed in some capacity or other. Some are waiting for the program to develop enough for them to have the job for which they have been trained for.

All of the 27 overseas trainees are still active within the RE project.

II. PDO/DGC

Also in accordance with the Training Implementation Plan, to date PDO/NRECA has conducted 38 in-country training courses and trained 487 participants (215 individuals), and one (1) overseas training in the U.S. with one participant.

Most of the 215 individuals (487 participants trainees) are still employed by PDO/Coops in some capacity or other. However, 11 employees have left the PDO/Coops. The one overseas trainee to the U.S. (Ima Suwandi) is no longer in direct involvement with the R.E.

III. Orientation Visits to the Philippines and the United States

To date the total of estimated 113 Indonesians have been sent for orientation visit to the Philippines Rural Electrification Program, and 8 Indonesian officials to the U.S. This includes

31 PLN officials, 21 DGC/PDO staff and 61 from the Central and Local Government, i.e.: Dept. of Trade and Coops, Directorate General of Power, Dept. of Interior, Dept. of Finance, BAPPENAS, President and Vice President's Office, Bank Indonesia, DPR, and Indonesian Cooperative Council.

a. Of the estimated 31 PLN officials visited the Philippines, 12 people are with the R.E. Project, they are:

PLN Pusat: R.E.

1. Ir. J.J. Rumondor
2. Ir. Soemarto
3. Ir. S. Tambunan
4. Ir. Moh. Basoeki
5. Ir. Moh. Singgih
6. Ir. Andoyo

PIRING

1. Ir. Yuzwar Luthan
2. Ir. Doddy
3. Ir. Masyur

WILAYAH

1. Ir. Suhardjo
2. Ir. Adi Wardoyo
3. Ir. Soewarno

The other 19 people sent are still with PLN organization although they are not in direct involvement with R.E.

b. Of the estimated 21 DGC/PDO staff visited the Philippines, 11 people are with the RE project, they are:

PDO

1. Ir. Sjoufjan Awal
2. Mr. Djapar P.
3. Mr. Bagio Sutomo
4. Ir. Soedarto
5. Ir. Budhiman
6. Ir. Ibrahim
7. Mr. Toto
8. Col. Sugiyartono

DGC

1. Prof. Ir. Sudjanadi
2. Ir. Muslimin Nasution
3. Ir. Ibnoe Soedjono

The other 10 people sent, although they are not with the RE project, they are still with the DGC organization. Only one quit from DGC.

c. The orientation visit to the U.S. are:

3 officials from DGC/PDO, 3 from PLN, and 2 from Dept. of Finance.

1. Of the three (3) DGC/PDO officials sent to the U.S., one person is still with the PDO (S. Awal), one person with no direct involvement with R.E. (Soejoedi, DGC), one person is no longer with the DGC or PDO (Gafar) organization.

2. Of the three PLN officials sent to the U.S.; one person is still with PLN/RE (Rumondor) two other persons have no involvement with the R.E. (Satria & Muin).

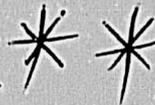
3. The two other officials sent to the U.S. from the Ministry of Finance has no direct involvement with the R.E. project. However, in the implementation of the Rupiah loan funds their office has been in support of the R.E.

d. Evaluation of the A&E Contract

In 1978 two(2) PLN Pusat officials (Rumondor & Satria) were sent to the U.S. and Canada to evaluate proposals for the RE Architect and Engineering contract and to hold consultations with the Canadian CIDA staff in Ottawa. Of the two PLN officials sent, only one person is still in direct involvement with the R.E.

e. Recently (June 1981), one PLN/LMK and one DGC officials were sent to Bangkok for the Mini-hydro power conference. Both officials has no direct involvement with R.E.

Note: During the early stage of the RE (1977-1978) three groups (PLN/DGC) were sent abroad (to Philippines). Numbers and who, were unknown, records were unavailable.



Others:

Evaluation Training by Bureau of Census

a. Six PLN officials were trained by the Bureau of Census for Evaluation Program in different sessions, and all of these people are still within the RE Project.

b. Six officials of DGC/PDO were trained for the above same training. From the six, one employees has been transferred to Dept. of Trade and Coops (Inspectorate General) and another two were transferred from PDO to DGC. The remainder three are still with PDO Rural Electrification.

Appendix A1

COMPLETED TRAINING COURSES, NRECA JAKARTA (PDO/COOPERATIVES)

1. Course Title: The Project Development Office and Rural Electrification Program
Date : April 5-7, 1979
Location : Jakarta
Participants: Eighteen persons including the coordinators from each of the cooperatives, PDO/RE department heads, sub department heads and other key PDO RE employees. Total: 18
2. Course Title: Management Seminar I
Date : May 2-5, 1979
Location : Tanjung Karang, Lampung
Participants: Twelve persons including project coordinator, newly elected; members of the Board of Directors, audit committee, members and RMSS employees. Total: 12.
3. Course Title: Management Seminar I
Date : May 9-12, 1979
Location : Palopo, Luwu
Participants: Nine persons including project coordinator, newly elected; members of the Board of Directors, audit committee, members and RSMM employees. Total: 9.
4. Course Title: Management Seminar I
Date : May 21-24, 1979
Location : Mataram, Lombok
Participants: Twelve persons including project coordinator, newly elected; members of the Board of Directors, audit committee, members and RMSS employees. Total: 12.
5. Course Title: Rural Member Service Specialists (RMSS) Training Course
Date : June 18-21, 1979
Location : Jakarta
Participants: Fifteen people including RMSS's from each of the three cooperatives plus PDO RE cooperative development and technical dept. employees. Total: 15.
6. Course Title: Management Training Course II
Date : September 14-16, 1979
Location : Jakarta
Participants: Eighteen employees from PDO RE who are employed as department or sub-department plus other key PDO RE employees. Total: 18.

7. Course Title: Management Training Course II
Date : September 24-26, 1979
Location : Aikmel, Lombok
Participants: Fourteen persons including members of the coop Board of Directors, audit committee members and key cooperative employees. Total: 14.
8. Course Title: Management Training Course II
Date : October 4-6, 1979
Location : Kotagaja, Lampung
Participants: Twelve persons including members of the cooperative Board of Directors, audit committee members and key cooperative employees. Total: 12.
9. Course Title: Management Training Course II
Date : October 11-13, 1979
Location : Bone-Bone, Luwu
Participants: Eleven persons including members of the cooperative Board of Directors, audit committee members and key cooperative employees. Total: 11.
10. Course Title: Electricians Trainers Training Course
Date : November 5-10, 1979
Location : Aikmel, Lombok
Participants: Twelve participants including three RMSS from Lombok, two from Lampung and two from Luwu cooperative plus five PDO RE engineering department employees. Total: 12.
11. Course Title: Electricians Training Course
Date : November 12-17, 1979
Location : Aikmel, Lombok
Participants: Fourteen local men who will make housewiring installations as contractors for the Lombok cooperative. Total: 14.
12. Course Title: Bookkeepers Training Course
Date : November 5-13, 1979
Location : Jakarta
Participants: Sixteen participants including bookkeepers or future bookkeepers and clerks from the three cooperatives, the treasurer of each cooperatives Board of Directors and PDO RE employees. Total: 16.

13. Course Title: Electric Gen-Set Operation and Maintenance
Date : November 1979
Location : Trakindo Company facilities, Jakarta
Participants: Potential power-plant employees from the Lombok cooperative and PDO RE employees 4 coop., 2 PDO. Total: 6.
14. Course Title: Construction Materials Management and Construction Cost Accounting
Date : March 10-15, 1980
Location : Aikmel, Lombok
Participants: Nine employees of the Lombok cooperative (including four RMSS) who may be assigned the duties of warehousemen, stock clerks and work order clerk. Total: 9.
15. Course Title: Apprentice Linemen Training Course
Date : April 7-9, 1980
April 28-30, 1980
May 1-10, 1980
Location : Aikmel, Lombok
Participants: Eleven linemen trainees, nine from the Lombok area and two from the Lampung cooperative. Total: 11.
16. Course Title: Staff Orientation
Date : June 23, 1980
Location : Aikmel, Lombok
Participants: Seventeen employees of the Lombok cooperative. Total: 17.
17. Course Title: Meter Reading, Billing and Collecting
Date : June 24-25, 1980
Locatin : Aikmel, Lombok
Participants: Ten employees of the Lombok cooperative including four RMSS and six employees in accounting and administrative departments. Total: 10.
18. Course Title: Distribution System Operation and Maintenance
Date : June 26-28, 1980
August 4-5, 1980
Location : Aikmel, Lombok
Participants: Fourteen cooperative employees including apprantice linemen power-plant operators and RMSS employees from Lombok (including 2 linemen from Lampung) and PDO representatives. Total: 14.

19. Course Title: Safety, Safety Procedures and First Aid Training
Date : June 28, 1980
July 30-31, 1980
Location : Aikmel, Lombok
Participants: Fourteen personnel; five linemen, four operators, three RMSS from Lombok cooperative, and two linemen from Lampung cooperative. Total: 14.
20. Course Title: Power Plant Operation and Maintenance
Date : July 21-26, 1980
Location : Aikmel, Lombok
Participants: 8 persons including 6 power plant employees from the Lombok cooperative and 2 employees of PDO RE. Total: 8.
21. Course Title: Electricians Training Course
Date : September 18-24, 1980 (except Sunday 21st)
Location : Lampung Cooperative Headquarters
Participants: Seven RMSS and seven contract electricians. Total: 14.
22. Course Title: Staff Orientation Seminar
Date : September 29 - October 4, 1980
Location : Sinar Rinjani Electric Cooperatives, Aikmel, Lombok
Participants: 10 directors, 3 supervisory/audit, 3 coordinator/manager, 12 key staff from each cooperative project. Total: 28.
23. Course Title: Power Plant Recording
Date : October 1-2, 1980
Location : Sinar Rinjani Electric Cooperative, Aikmel, Lombok
Participants: 5 operators, 3 mechanics. Total: 8.
24. Course Title: Mini - Workshop on Material Handling - PDO
Date : November 13, 1980
Location : PDO conference Room
Participants: Seven (7) PDO employees. Total: 7.
25. Course Title: Accounting Workshop (Refresher)
Date : November 24-29, 1980
Location : KLP "Sinar Rinjani"
Aikmel, Lombok
Participants: Accounting personnel; 3 PDO, 2 Lampung, 2 Luwu and 3 Lombok. Total: 10.

26. Course Title: **Materials Management and Warehousing, Course I.**
Date : **January 28 and 29, 1981**
Location : **Metro (Lampung)**
Participants: **Nine (9) employees of the Cooperative and One (1) PDO staff. Total: 10.**
27. Course Title: **Electricians Training Course (repeat)**
Date : **February 12-19, 1981**
Location : **Metro (Lampung)**
Participants: **Nine (9) local men who will become contract electrician. Total: 9.**
28. Course Title: **Apprentice Linemen Training Course**
Date : **February 9 to March 18, 1981**
Location : **Metro (Lampung)**
Participants: **Nine (9) employees from C.T. Main and twelve (12) employees from the Cooperative staff. Total: 21.**
29. Course Title: **KWH Meter Entrance, Service Drops and Meter Installation Workshop**
Date : **April 22-23, 1981**
Location : **Metro (Lampung)**
Participants: **Eleven (11) cooperative employees. Total: 11.**
30. Course Title: **Construction Cost Accounting Course II**
Date : **April 27 thru May 1, 1981**
Location : **Metro (Lampung)**
Participants: **Twelve (12) cooperative employees Total: 12.**
31. Course Title: **Electricians Training Course**
Date : **May 4-9, 1981**
Location : **Minna, Bone Bone, Luwu**
Participants: **Six (6) cooperative employees and eight (8) contract electricians (8 certified as contract electricians). Total: 14.**
32. Course Title: **Linemen Training Course**
Date : **May 4-25, 1981**
Location : **Minna, Bone Bone, Luwu**
Participants: **Twelve (12) cooperative employees. Total: 12.**
33. Course Title: **Material Management and Warehousing**
Date : **May 18 and 19, 1981**
Location : **Minna, Bone Bone, Luwu**
Participants: **Twelve (12) cooperative employees. Total: 12.**

34. Course Title: Construction Cost Accounting
Date : May 19-23, 1981
Location : Minna, Bone Bone, Luwu
Participants: Twelve (12) cooperative employees.
Total: 12.
35. Course Title: Operation and Maintenance; Safety
Date : May 29-30, 1981
Location : Metro, Lampung
Participants: Thirty (30) cooperative employees;
twenty (20) from line department,
six (6) operators, 4 RMSS.
Total: 30.
36. Course Title: Meter Reading, Billing & Collecting
Date : June 17, 1981
Location : Sinar Siwo Mego, Metro, Lampung
Participants: Eleven (11) cooperative employees
who will perform meter reading,
billing & collecting tasks.
(8 RMSS & 3 Accounting personnel)
Total: 11.
37. Course Title: Power Plant recording & reports workshop
Date : June 18, 1981
Location : Sinar Siwo Mego, Metro, Lampung
Participants: Six (6) operators. Total: 6.
38. Course Title: Accounting/Reporting, Operating Period
(Mini-workshop; operating period
accounts review)
Date : June 19, 1981
Location : Sinar Siwo Mego, Metro, Lampung
Participants: Eight (8) cooperative employees
(5 accounting & 3 Sekretariat).
Total: 8.

Summary:

38 total courses; 487 participants (215 individuals); 195 days
of formal training.

Appendix A1

Completed Overseas Training Course DGC/PDO

Course Title: R.E. Management Course
Date : May 13 - June 22, 1979
Total days: 41
Location : U.S.A.
Number of Participant: One.

Name of Participant:

1. Ima Suwandi.

Appendix A2

COMPLETED TRAINING COURSES, NRECA/PLN

A. Incountry Training

1. RE Systems Management
Date : July 3-12, 1979
Location: Semarang
Number of Participants: 25
2. English Language Training
Date : Sept. 3 - Nov. 10, 1979
Location: Jakarta (LIA)
Number of Participants: 10
3. English Language Training
Date : Jan. 7 - March 29, 1980
Location: Jakarta (LIA)
Number of Participants: 11
4. English Language Training
Date : April 8 - April 25, 1980
Location: Jakarta (LIA)
Number of Participants: 11
5. Intensive English Class
Date : July 28 - Oct. 24, 1980
(Sept. 15-26 break)
Location: Jakarta (PLN Pusat)
Number of Participants: 9
6. Intensive English Class
Date : July 28 - Oct. 24, 1980
(Sept. 15-26 break)
Location: Jakarta (LIA)
Number of Participants: 2
7. Intensive English Class
Date : Sept. 29 - Dec. 20, 1980
Location: Jakarta (PLN Pusat)
Number of Participants: 11
8. Construction Supervision and Training Skills
Date : Nov. 3 - Nov. 13, 1980
Location: Semarang
Number of Participants: 36
9. Construction Materials and Equipment Logistics
Date : Jan. 26-30, 1980
Location: Semarang
Number of Participants: 31