

PD-AAJ-540

497-0267

**RURAL ELECTRIFICATION PROJECTS
INDONESIA**



**NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION
JAKARTA, INDONESIA**

NRECA TEAM REPORT

PDO

INDONESIA

(MARCH 1981)

MONTHLY REPORT

NRECA INDONESIAN TEAM REPORT

UNITED STATES AGENCY FOR
INTERNATIONAL DEVELOPMENT

Contract No. AID/ASIA CI347

Loan No. 497-T-052

IMPLEMENTING AGENCIES:

DIREKTORAT JENDERAL KOPERASI
Directorate General of Cooperatives

PERUSAHAAN UMUM LISTRIK NEGARA
National Electric Power Agency

CONSULTANTS:

National Rural Electric Cooperative Association
Management, Organization and Training

C.T. Main International, Inc.
Architect and Engineering

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DESCRIPTION AND OBJECTIVES OF PROJECT (DGC)

The Government of Indonesia (GOI) has initiated a demonstration rural electrification program which is planned to provide areawide electric power distribution in ten specified areas within the next four or five years. The objective of this program is to demonstrate conclusively that reliable electric service and the social and economic benefits that accrue therefrom can be made available to the very poor people at a price they are able to pay.

Three of the electrical distribution systems will be located on separate islands outside of Java and will be implemented through rural electric cooperatives organized by the Directorate General of Cooperatives (DGC). The National Electric Power Agency (PLN) operates an extensive electric system in Central Java, and is responsible for constructing, operating and maintaining the seven systems located on that island.

The U.S. Agency for International Development (USAID) is assisting the GOI in this demonstration by making available AID grant funds to provide organizational, management and technical advisory services. The National Rural Electric Cooperative Association (NRECA), through its International Programs Division, was contracted by AID to provide these services because of its demonstrated capability and experience in assisting rural electric cooperatives in developing nations throughout the world.

NRECA is working with the two separate agencies charged with implementing the project. Because of the different organization, management, training and experience of these two agencies, the services provided by NRECA differ in scope and location. The services for DGC include complete assistance in the organization of the individual cooperatives; including staffing patterns, job descriptions, cost accounting, O&M methods, training, planning, policies and procedures, housewiring and etc. The NRECA services and progress to date for the seven systems in Central Java are the subject of a separate report.

The three outer island projects are located on Central Lampung (South Sumatra), East Lombok, and Luwu (South Sulawesi) and are to be constructed and developed

by the member-consumers themselves through the organization of rural electric cooperatives. Each Cooperative will construct, own and operate a diesel generating plant to provide power for the distribution system. (The Canadian Government is assisting with the generating project.) A special agency known as the Project Development Office (PDO) under the Directorate General for Cooperatives (DGC) is the GOI implementing agency for the Cooperatives.

The key personnel which NRECA has agreed to furnish for the performance of this contract are as follows:

<u>NAME</u>	<u>TITLE</u>	<u>ADDRESS</u>
Peter McNeill	Team Leader	Pondok Indah Bukit Hijau VIII/31 PH: 761132
Lloyd Lake	Sr. RE Specialist	P.O. Box 88 Tanjungkarang Lampung PH: 0721-52058
Louie Sansing	Sr. RE Specialist	Jl. Dukuh Patra II/73 Jakarta Selatan PH: 824308 ext. 394
*Sam Adkins	Sr. RE Specialist	c/o C.T. Main Inc. Box 26 Semarang PH: 024-311832
Paul Swanson	Sr. RE Specialist	Kotak Pos 43 Ampenan Lombok PH: 0364-23517
John DeFoor	RE Specialist	c/o Bina Marga Office Jl. Imam Bonjol 8 Palopo, S. Sulawesi
Ray Shoff	Administrative/Finance Officer	Ratu Plaza Jl. Jenderal Sudirman PH: 712034

* PLII Advisor

NRECA Jakarta Team Activities

General --- Team Leader Peter McNeill continued team representation with various agencies, visited one of the RE cooperatives and contributed to the teams numerous assignments. Administrative-Finance Officer Ray Shoff concentrated on the accounting aspects, forms and procedures, both in the NRECA PDO-RE office and at Lombok and Lampung. NRECA Training Officer Louie Sansing returned from home leave March 1st and promptly resumed his duties, in the PDO-RE office and at two RE cooperative sites. Highlights of NRECA team activities follow:

Coordination with co-consultants --- NRECA team members reviewed the final draft of a housewiring-material IFB which was prepared by C.T. Main personnel. Meetings were held with the Project Development Office for Rural Electrification (PDO-RE) Chief, Ir. Sjoufjan Awal, in preparation for tendering this IFB. Qualification of local suppliers to bid under this procurement and material delivery schedule were major considerations during these meetings.

--- Revised drawings for headquarters facilities at the three RE projects were received and NRECA team members made their final review and submitted comments to C.T. Main's representative in charge of this activity. It is expected that bids for construction will be solicited within a few weeks.

--- At coordinating sessions held with C.T. Main personnel during this reporting period, NRECA team members were briefed on the status of all material/equipment contracts for the three RE projects. USAID-PTE, PDO-RE, C.T. Main and NRECA personnel met to explore all possibilities for expediting approvals of various contracts and opening letters of credit.

--- The NRECA training officer met with C.T. Main staff in an effort to finalize service line and kwh meter-entrance staking procedures. A procedure and sample staking sheet, prepared by NRECA, was reviewed and agreement reached as to use thereof.

--- Personnel from Sandwell and Company Limited, the Canadian Engineering firm responsible for design and construction of generation facilities at the three

RE sites, coordinated with the NRECA team. Information was provided to NRECA on revised construction schedules by particular calendar years. This information was needed for Rupiah-loan budget purposes, and scheduling of training courses for power plant personnel.

Assistance to DGC/PDO-RE and USAID --- NRECA team members participated in a Coordination meeting held at the DGC headquarters building. During this meeting, which was chaired by Mr. Muslimin Nasution, Secretary for the Junior Minister of Trade and Cooperatives, project status-reports were received from consulting firms. Major topics discussed were: project REIL (Demonstration Electrification Projects) at the Lampung and Luwu Cooperatives; communications, Jakarta to RE Cooperative sites; pole procurement; and annual meeting plans at RE sites.

--- The PDO-RE completed the printing of numerous forms which were designed by NRECA for use at RE sites for construction material and financial controls. The printed forms, which cost PDO-RE fifteen million rupiah (Rp 15,000,000) to produce, were reviewed by the NRECA staff and approved for shipment to the Cooperatives. Instructions for the use of these forms have been the subjects of previous training courses conducted by NRECA and PDO-RE staff members. On-the-job explanations by NRECA field personnel will follow.

--- Preparation of PDO-RE Guidelines was a continuing activity during this reporting period. Draft copies of four guidelines were prepared on the subjects: Banking and Cash Control; Reports and Reporting Procedures; Material/Equipment Control; and Service Line-meter Entrances. These guidelines, which basically document and require compliance with requests and instructions given previously, will be finalized and executed by the Chief of PDO-RE in April 1981.

--- NRECA team members assisted PDO-RE staff with the forward statement and final preparation of a "Rural Electrification Manual." This manual was drafted by Mr. David Devin, USAID-RE Project Manager and the NRECA team at the request of Mr. Muslimin Nasution. It will be a useful aid for disseminating RE-program information to representatives of Government and various agencies.

--- At the request of Mr. Sjoufjan Awal, NRECA team members met with Dr. Kramer and professor Stancesco of IBRD. These gentlemen were in-country for the purpose of investigating rural electrification programs for their employer, the World Bank. PDO-RE and NRECA staff provided information and assistance to these bank representatives for completion of their mission.

--- Budget analysis was another assignment for NRECA staff members during this reporting period. Anticipated expenditures from various loan funds, for calender year 1981, has been placed in budget form by RE Cooperative staff members and submitted to PDO-RE for review and approval. Propriety of various line-item totals was the major NRECA team determination.

Training --- The NRECA training officer maintained regular contact with PDO-RE Acting Training Department Head, Mr. Alfian Nurmaley. Training schedules were revised to correspond with present construction schedules for the Lampung and Luwu Cooperatives.

--- A linemens training course was completed at Lampung during this reporting period. Fourteen (14) of the nineteen (19) participants proved their capabilities in pole climbing and are now employed as apprentice linemen in the Cooperatives construction program. The remaining five (5) are being utilized as groundmen.

--- Training course outlines and training materials are being prepared for the next scheduled course, "Construction Cost Accounting," which will be conducted in Lampung during April 1981. Training course scheduling and material preparation is in progress for courses to be held at Luwu in May and June 1981.

Overseas training --- A proposal for training RE Cooperative and PDO-RE personnel at locations in the Philippines and in the USA was formulated by NRECA staff. During meetings held with USAID-PTE and PDO-RE staff members, original proposals were reviewed and revised. Overseas training for managers of the three Cooperatives will be given priority and RE Cooperatives in the Philippines will be selected as training sites.

OUTER ISLAND PROJECTS

Luwu-Samabotuna Rural Electric Cooperative

General --- The NRECA Advisor, John DeFoor was onsite and engaged in his assignment all of this reporting period. A house constructed at the Cooperative headquarters site at Mina, for assignment to the advisor, remains unusable due to inadequate water and electrical facilities. The advisor, his wife and daughter, continue to live in the Bina Marga compound near Bone Bone.

Organization/Management --- Two meetings of the Cooperative's Board of Directors were held in March. The major subject for discussion was project REIL, a demonstration electrification project to be constructed in Bone Bone during this year. Representatives of PDO-RE/Jakarta attended the meeting and briefed Board members and the NRECA advisor on REIL project planning. (Picture on page 15 of this report.)

--- The DGC Project Coordinator, Mr. Hassan, and the NRECA advisor worked closely on the Cooperative's daily functions. PDO-RE's Acting Manager, Mr. Bagio Soeyomo, arrived at the project area in the last half of this reporting period. Coordination was established between the NRECA advisor and acting manager, and will continue on a daily basis. The NRECA team has urged PDO-RE to assign an acting manager to the project and Mr. Soeyomo's presence is an indication that PDO-RE concurs that full-time management is "a must."

--- The membership campaign gained momentum and at the end of this reporting period, nearly 1,000 membership applications have been received. Collection of membership fees will begin when proof of electric line construction is visible, arrival of materials and/or setting of poles.

--- Headquarters facility improvement continued as a contractor began installing a fence on the headquarters compound perimeter. Cooperative personnel constructed fences around the homes located in the compound. Power supply facilities were upgraded by the addition of transfer switches and buss network

--- The NRECA advisor held meetings with employees of each department in the Cooperative. Job orientation was the primary purpose of the meetings with special emphasis given to the Member Services Department. Employees in this department, referred to as Rural Members Service Specialists (RMSS) are responsible for the membership signup now in progress and will implement the housewiring program.

Construction planning --- The NRECA advisor worked closely with Mr. Garcia, C.T. Main's field engineer for the Cooperative, on plans for project REIL. A low-voltage (220/380 volt) electrical distribution system will be installed in Bone Bone to serve approximately 2,000 consumers. The use of a low-voltage distribution network necessitates dispersment of USAID furnished generator sets in three locations in Bone Bone. Construction is scheduled to begin in May 1981 with initial energization scheduled for July 12, 1981 (which is probably too optimistic). Close coordination between all consultant, PDO-RE and Cooperative management is essential to meet these ambitious schedules.

Problems --- A major problem for the NRECA advisor is communications, especially as related to written materials. An English translation of important documents, such as minutes of Board of Directors meetings is difficult to obtain. Maximum effectiveness hinges on understanding on the part of all parties concerned, advisor-Cooperative management-Board and staff, a problem still to be overcome.

--- During this period of minimal activity, confusion exists within the ranks of the forty-three (43) employees of the Cooperative. Adoption of an organizational chart, with position descriptions, and placement of employees in well-defined positions are urgent requirements.

Lampung-Sinar Siwomego Rural Electric Cooperative

General --- Garuda airlines flights to Lampung were well booked this reporting period as Jakarta-based RE program representatives flocked to this Cooperative's several areas. In addition to an annual meeting of members of the Cooperative was construction - construction of a power plant building to house generating sets furnished by USAID, and construction of an electrical distribution system in which major material components were procured through the USAID dollar loan.

Fortunately, the Branti airport is mid-way between the home of the NRECA Project Advisor, Mr. Lloyd Lake, and the Cooperative's service area. Minimal time was required for visitor pick-up and drop-off and the NRECA advisor's daily work schedule retained continuity.

--- In addition to NRECA, PDO-RE, and C.T. Main Jakarta-based staff members, the Lampung project was visited this period by USAID-PTE Engineer, Robert Johnson and PTE staff engineer, Edi Setriano. These engineers viewed construction activities and provided valuable assistance through recommendations to C.T. Main's and NRECA's project advisors.

Organization/Management --- The annual meeting of the Cooperative members was held on March 16th with more than 300 members in attendance. Major agenda items included election of directors and approval of a 1981 administration, construction and operations budget. Speeches were delivered by Mr. Muslimin Nasution, Secretary to the Junior Minister of Trade and Cooperatives, and Mr. Awal, Chief of PDO-RE. Peter McNeill attended representing the NRECA team.

All members of the original Board of Directors of the Cooperative were retained in office. Budget approval became a controversial issue at the meeting and, as a result, a fifteen (15) person committee was formed and charged with the responsibility of budget evaluation and approval.

--- The NRECA advisor and Acting Manager of the Cooperative, Ir. Ibrahim Sanusi, spent considerable time on the preparation of an organization chart and determining personnel requirements for the cooperative for the initial construction period as well as after system energization. A new organization chart was developed, reviewed with other NRECA and PDO-RE staff members, and presented to the Cooperative's Board of Directors during their March meeting. The chart, which depicts fifty-seven (57) employment positions, was approved by the Board and is now the key guideline for the Cooperatives organizational development in 1981.

The NRECA advisor is preparing job-specifications and position-descriptions for each respective position. Dating back to 1979, NRECA team members have prepared organizational charts and position description based on estimates of future needs. The task of the NRECA advisor is to revise and update estimates to fit the actual requirements.

--- NRECA staff members and C.T. Main's Lampung Project Engineer Frank Cachin instructed Cooperative personnel on construction methods and procedures for service-entrance installations at the members' residences. Field demonstrations were performed as a part of on-the-job training for this important activity.

--- The NRECA project advisor and administrative officer reviewed accounting practices with the Cooperative's accounting staff. Recommendations were made for specific alterations and improvement of procedures. As a follow-up to verbal recommendations, a written report was prepared, translated and provided to the Cooperative's management and accounting department personnel.

Included in this activity was a workshop conducted for accounting personnel on the subject of Reports and Reporting. Specific general ledger balances for the month of February were transferred to printed forms to produce a monthly report for submission to Cooperative management and to PDO-RE. The reporting format to be followed will be in accordance with a PDO-Guideline on this subject.

Construction progress --- At the end of this reporting period, 401 wood poles have been set, consisting primarily of nine (9) and ten (10) meter poles. Hardware and insulators are being added to the poles to support the single phase primary and secondary line conductors to be installed. Approximately 45% of the total poles required for project REIL are now in-place and about 10% of the framing has been accomplished.

--- The building being constructed to house the USAID-furnished generating sets, consisting of a concrete slab, roof and roof supports, office and storage area, is now 95% complete. All five generating sets are in-place and only the connections of generation to the external sub-station transformer and installation of fuel supply facilities remains to be completed. This structure and its associated facilities, the cost of which is considered relatively low at Rp 7,500,000 (\$12,000), should be completed and ready for service by May 1981.

--- Housewiring progress continues to meet and actually exceed expectations. Five two-man crews completed four hundred and thirteen (413) installations in twenty-six (26) days during this reporting period. In total, eight hundred and forty-four (844) houses had been wired by the end of this reporting period, three hundred and six (306) on a cash basis and the balance with short-term loans.

--- Membership signup continues to be a major activity of the Cooperative. Fifteen hundred and sixty-nine (1569) membership applications have been received and membership fees paid (Rp 1,000 each). Of this total, only twenty-one (21) remain to be approved by the Board of Directors, a prerequisite to issuance of a membership certificate.

Problems --- NRECA and PDO-PC staff had proposed amendments to the Cooperative by-laws to be acted upon at the annual meeting of members. Unfortunately, these proposed amendments, which were intended for clarification of duties and responsibilities of Board members, were not included in the annual meeting agenda.

--- A problem in the construction program relates to pole procurement. Poles required for three-phase primary lines must be approximately thirty-five (35) feet in length. Although more than one-half of the total poles required for project REIL have been received, a severe shortage of eleven (11) and twelve (12) meter poles exists.

Lombok-Sinar Rinjani Electric Cooperative

General --- Annual meeting plans were formulated by the Cooperative management, with assistance from the NRECA Advisor, Mr. Paul Swanson, and an annual meeting of members held during this reporting period. Approximately six hundred (600) members and over forty (40) guests attended this meeting held in Aikmel, Lombok. USAID-PTE, PDO-RE, C.T. Main and NRECA Jakarta staff members were included in the guest list.

--- Aside from functions relating to the annual meeting, the NRECA advisor continued to provide assistance daily to the Cooperative's personnel at their headquarters in Aikmel. Although construction activities were minimal, business-related duties required considerable attention. The advisor, with the assistance of NRECA Jakarta-based team members, continued to provide on-the-job training.

Organization/Management --- NRECA staff members assisted the Bookkeeping department supervisor and accounting staff members on journal voucher preparation and general ledger entries. Accounting records were closed for the month of January and written guidelines presented for the step by step procedure to follow in future month-end accounting.

--- A workshop was conducted by NRECA staff on Reports and Reporting. An operating report and balance sheet were prepared for the month of January in the workshop and a written procedure presented for use in future monthly report preparation.

--- Another workshop was conducted for warehouse personnel. The proper use

of material bin-cards was demonstrated and procedures developed for maintaining a perpetual inventory.

--- The NRECA advisor continued on-the-job training on the subject of time-keeping. The various forms provided by PDO-RE for this purpose were explained and time-keeping examples given.

--- Assistance was provided to the billing department in updating housewiring ledger cards. This activity, which has been in progress for several months, is producing results and ledger cards for the sixteen hundred and eighty (1680) housewiring installations should be completed in the next reporting period.

Operations --- Fourteen hundred and twenty-four (1424) consumers were billed in the month of March for 27,711 kwhs, an average of nearly 20 kwh per month per consumer. Diesel fuel consumption rose to 14,625 in March as a result of 24 hours operation of the power plant.

--- The statistics included on page 14 of this report are comparisons of two periods with an equal number of days. It may be noted that fuel consumption increased more than 40% for the period when 24-hour service was provided. For reasons unknown, kwhs billed during the same period actually dropped. An investigation of billing records is in process.

--- The NRECA project advisor and the Cooperative's manager are optimistic that increased use of electric service during daytime hours is forthcoming. This reporting period was the first month that 24-hour service was made available. Several members have requested continuation and promised to procure appliances or equipment to utilize the daytime service.

Problems --- The major problem internally is the absence of qualified personnel in key staff positions in the Cooperative's organization. In previous NRECA reports, it was indicated that a qualified accountant had been hired. Unfortunately, the person in question reconsidered his proposed move from Jakarta to East Lombok and withdrew his application. The position remains vacant,

with no immediate prospects.

--- At the annual meeting, considerable discussion evolved on the subject of election of Board members. Evaluation of by-law contents and GOI-DGC Cooperative Laws was deemed advisable and as a result, the annual meeting was adjourned without completing the business agenda. A question remains as to the legal right of Board members to continue to serve on the Board of Directors without an election.

LOMBOK ELECTRIC COOPERATIVE
- comparison of 31 day months -

	<u>12 hour operation</u>	<u>24 hour operation</u>
	<u>January</u>	<u>March</u>
Kwh generated	32,250	35,675
Kw peak demand	173	180
Liters of diesel fuel	10,062	14,625
Kwh/liter generated	3.21	2.44

Members billed	1,301	1,424
Kwh billed	30,737	27,711
Kwh/member	23.6	19.5
Revenue	Rp 2,000,060	Rp 2,181,255
Average revenue/member	Rp 1,537	Rp 1,532
=====		
Membership application received	1,953	
Housewiring installations completed	1,680	
Service lines and kwh meters installed	1,505	

Luwu Cooperative



The President of the Board of Directors, Mr. Takdir Umpa, with two Cooperative employees (on the left) and Mr. Wahyudhi and Mr. Toto of PDO-RE during a meeting of the Board of Directors



Residences constructed by the DGC in the Cooperative's headquarters compound at Mina to be occupied by the IRECA and C.T. Main project advisors

Lampung Cooperative



Linemen in the pole-climbing practice area with NRECA Training Officer Louie Sansing (right-side) and C.T. Main's Project Advisor Frank Cachin (center)



The apprentice linemen setting "the first pole" for the demonstration electrification project, REIL

Lombok Cooperative



The Manager of the Cooperative, Mr. Ridwan, addressing the members during one of the district meetings held prior to the annual meeting



The President of the Board of Directors, Mr. Indra Ali, presenting opening remarks during the annual meeting of members held in Aikmel, Lombok

PERSON-MONTHS BY POSITION, NRECA CONSULTANT TEAM

POSITION	PRESENTLY FILLED BY	CONTRACT PERSON-MONTHS	EXPENDED THIS PERIOD	EXPENDED THROUGH MARCH	PERCENT OF CONTRACT
Team Leader	Peter McNeill	36	1	30	83
Training Officer	Louie Sansing	36	1	26	72
Administrative Officer	Ray Shoff	19	1	17	89
PLN Advisor	Sam Arkins	42	1	25	60
Lampung Advisor	Lloyd Lake	44	1	30	68
Lombok Advisor	Paul Swanson	44	1	26	59
Luwu Advisor	John DeFoor	44	1	25	57
Short-term Advisors		27	0	18	67
Consultants		31	0	0	0
		323	14	197	61

Summary of Expenditures

National Rural Electrification Cooperative Association
 1800 Massachusetts Ave., N.W.
 Washington, D.C. 20036

AID/ASIA - C 1347
 Date: February 1981
 Period of contract: 8/25/78 - 8/25/82

	Budget	Total Expense To Date	Prior Billings	Current Billings
Salaries - Field	\$ 874,520	\$ 554,283.88	\$ 532,274.02	\$ 22,009.86
Salaries - Home	140,050	95,689.18	92,814.47	2,874.71
Fringe Benefits	256,664	208,834.19	197,794.62	11,039.57
Consultant Fees	95,800	33,906.25	33,906.25	
Allowances	366,145	215,294.34	205,949.57	9,344.77
Travel and Transportation	310,000	196,736.19	185,817.03	10,919.16
Other Direct Costs	125,900	67,727.47	66,821.03	906.44
Overhead	225,960	148,682.85	142,959.40	5,723.45
Equipment and Materials	15,000	15,705.27	15,705.27	
TOTAL	\$ 2,410,000	\$ 1,536,859.62	\$ 1,474,041.66	\$ 62,817.96

PDO - RE OUTER ISLANDS

COOPERATIVE TRAINING COURSE SCHEDULE

NRECA NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

NO.	TITLE	TARGET DATE IMPLEMENTATION PLAN	COURSE DURATION	1979				1980				1981				1982				
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
200	COOPERATIVE MANAGEMENT	MAY 1979	30 hrs.	10	12	9	12	18	14	12	11									
205	RMS TRAINING	JUNE 1979	30 hrs.		19						9	10								
206	ACCOUNTING - REPORTING	JUNE 1979	40 hrs.				16				17	28								
210	STAFF ORIENTATION	AUGUST 1979	20 hrs.																	
220	TRAINERS TRAINING (CONSTRUCTION)	OCT/NOV 1979	200 hrs.																	
230	TRAINERS TRAINING (HOUSEWIRING)	NOV/DEC 1979	40 hrs.				12													
240	LINEMAN'S TRAINING	JAN/FEB 1980	200 hrs.							11										
250	ELECTRICIAN TRAINING	JAN/FEB 1980	40 hrs.				14				14									
260	PRODUCTIVE USE SPECIALIST	MARCH 1980	60 hrs.																	
300	MATERIAL LOGISTICS	JANUARY 1980	40 hrs.								9	7								
310	ACCOUNTING - REPORTING	FEBRUARY 1980	40 hrs.																	
320	ELECTRICAL APPARATUS	MARCH 1980	80 hrs.																	
330	ENGINEERING	MAR/APR 1980	40 hrs.																	
340	METER READING	JULY 1980	40 hrs.								10									
350	OPERATIONS MAINTENANCE	SEPTEMBER 1980	60 hrs.								14									
360	ACCOUNTING - REPORTING	NOVEMBER 1980	40 hrs.																	
370	WORK ORDER CONTROL	JANUARY 1981	40 hrs.																	
380	SUPPLY/SKILL	FEBRUARY 1981	15 hrs.																	
390	SAFETY TRAINING	MARCH 1981	15 hrs.								14	14								
400	INFORMATION SEMINAR	MARCH 1981	16 hrs.																	
410	LINE MAINTENANCE POWER PLANT OPERATORS**	APRIL 1981	16 hrs.				6													
320*	REPEAT COURSE																			
330*	REPEAT COURSE																			
340*	REPEAT COURSE																			
390*	REPEAT COURSE																			

*Repeat courses as needed

**Course added

Courses completed and number of people trained ○

RURAL ELECTRIFICATION COOPERATIVE PROJECT SITES

