

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

CAPITAL ASSISTANCE PAPER

Proposal and Recommendations
For the Review of the
Development Loan Committee

PHILIPPINES: VICTORIAS RURAL ELECTRIC SERVICE COOPERATIVE

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

UNCLASSIFIED

AID-DLC/P-731
June 14, 1968

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: Philippines: Victorias Rural Electric Service Cooperative

Attached for your review are the recommendations for authorization of a loan in an amount not to exceed \$2,000,000 to the Development Bank of the Philippines, a development bank wholly owned by the Government of the Republic of the Philippines to be relent to the Victorias Rural Electric Service Cooperative to finance the foreign exchange costs of machinery, equipment and related services for the purpose of operation, transmission and distribution of electric power in the project area, Negros Occidental, Philippines.

Please advise us as early as possible but in no event later than close of business on Friday, June 21, 1968, if you have a basic policy issue arising out of this proposal.

Rachel C. Rogers
Assistant Secretary
Development Loan Committee

Attachments:

Summary and Recommendations
Project Analysis
ANNEXES 1-17

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PHILIPPINES RURAL ELECTRIFICATION PROJECT

VRESCO

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PHILIPPINES
RURAL ELECTRIFICATION PROJECT
VRESCO

SUMMARY SHEET

1. BORROWER AND SUB-BORROWER: Borrower is the Development Bank of the Philippines; guaranty from the Government of the Philippines. The funds will be reloaned to the Victorias Rural Electric Service Cooperative (VRESCO).

2. ADMINISTRATION OF THE PROJECT: Local currency funds will be provided to the cooperative by the Electrification Administration but the funds will be deposited in an account with DBP who will handle all disbursements. The Development Bank of the Philippines will borrow the foreign currency required for the project and will relend both the dollars and pesos to the cooperative. The National Power Corporation will provide technical supervision for the design, construction, and initial operating phases of the project under a written agreement with DBP.

3. AMOUNT OF LOAN: \$2,000,000

4. TOTAL COST OF PROJECT: The total cost of the project is \$2,475,000 broken down between dollar and peso costs as follows:

Dollar amount of the loan	\$2,000,000
Estimated peso amount of the loan* (to be advanced by the Electrification Administration)	475,000
TOTAL	<u>\$2,475,000</u>

5. PURPOSE OF THE LOAN: This is a pilot demonstration project to initiate a program of rural electrification in the Philippines with the following objectives:

- (a) to demonstrate the economic feasibility of rural electrification.
- (b) to demonstrate the benefits to the regional economy from the introduction of electrification to rural areas of substantial population.
- (c) to develop public sector support for a nationwide program, including sale of power, technical assistance and financing.

6. DESCRIPTION OF PROJECT: The project will provide for installation of generating equipment and for substantial expansion of the distribution system of an existing electric cooperative in Victorias, Negros Occidental. Electric power will be provided to an estimated 7,000 consumer families (approximately 40,000 persons) and to franchiseholders in two poblacions (towns). The cooperative will provide reasonable cost non-interruptible power service to all persons within the service area desiring to interconnect. This is the first of two projects for which USAID Manila has recommended A.I.D. financial assistance.

* 3.92 pesos to one dollar

7. BACKGROUND: In 1965, USAID financed the costs of a power survey of the Philippines. The survey strongly emphasized the need for a rural electrification program in the Philippines, and severely criticized the operation of small existing franchiseholders. When President Marcos met with President Johnson in 1966, it was agreed that the U.S. would assist in planning for rural electrification. In March, 1967, a team of consultants from the National Rural Electric Cooperative Association (NRECA) was sent to the Philippines under a two-year contract with A.I.D. They have worked closely with the national government, local governments and private groups. They selected the Victorias service area for a detailed feasibility study, which forms the basis for submission of the project.

The Electrification Administration will provide local currency funds for the project and the funds will be deposited with the DBP. The DBP will borrow the dollars for the project from A.I.D. and will provide both the dollars and the pesos to the cooperative on the terms made available by EA and A.I.D., plus a fee of 1 1/2 percent on the dollar loan. The fee will cover the cost of administration and also compensate for the risk of loss in the event of default by the cooperative. The National Power Corporation will undertake technical supervision of the project under an agreement with DBP.

8. OTHER SOURCES OF FINANCING: Ex-Im Bank clearance was received on April 1, 1968. Financing from other lending institutions is not available.

9. MISSION VIEWS: USAID recommends approval of this project.

10. STATUTORY CRITERIA: All statutory criteria have been satisfied. (Annex 13)

11. ISSUES: None

12. IMPACT ON U.S. ECONOMY: All equipment purchased under the A.I.D. loan will be of U.S. source and origin. Since the loan is the only foreign exchange financing available for this project, the procurement will be additional to normal U.S. commercial exports to the Philippines.

13. RECOMMENDATIONS: Authorization of a loan in the amount of \$2,000,000 to the Development Bank of the Philippines, guaranteed by the Republic of the Philippines, for the purpose of relending to an electric cooperative to finance the installation of generating equipment and the extensive expansion of the distribution system. The loan will be subject to the following terms and conditions:

- (a) The loan to be repaid in 25 years including a five year grace period on repayment of principal.
- (b) Interest on outstanding principal to be charged at the rate of 3 1/2% per annum.
- (c) Repayment of principal and interest in United States dollars.
- (d) The loan is to the Development Bank of the Philippines, guaranteed by the Government of the Philippines, but the proceeds will be re-loaned to the Victorias Rural Electric Service Cooperative (VRESKO). The Cooperative will bear the risk of maintenance of value. The terms of repayment by the cooperative are the same as in the A.I.D. loan to DBP plus a fee of 1 1/2% to DBP.

- (e) The DBP, GOP and VRESKO will all be parties to the loan agreement with A.I.D.
- (f) Equipment, materials, and services financed under the loan shall have their source and origin in the United States
- (g) The GOP will covenant to provide the local currency requirements for completion of the project on time and in the manner here described
- (h) The loan will be subject to other terms and conditions as set forth in the attached loan paper. (See Section VII).

Loan Officer: HBHelman, EA/SWP
Phil. Desk: ARLove, EA/SWP
Counsel: JKessler, EA/GC
Engineer: JGlaws, EA/ENGR
Financial Adv: LObolensky, EA/CDF

I. Place of the Project in the Development Program

The project is related to the A.I.D. objective for the Philippines of encouraging a process of political and economic growth in which an increasing number of Filipinos participate and benefit. The project is intended to accelerate economic development, improve the standard of living in rural areas of the Philippines and develop democratic institutions. Using the mechanism of a cooperative, the project will help the rural populace to help themselves and thereby provide an opportunity to experience a sense of ownership and participation in democratic processes, in accordance with Title IX of the FAA.

Of the total population, 70% live in rural areas and are largely deprived of the benefits of economic development. Only 5% of the rural population receive electric service, compared to over 90% of the population in Manila. Except for the largest cities, electric power systems are generally small and ill maintained, offering service part time, at high rates, to a small segment of potential consumers.

This is one of two demonstration projects directed at long-range modification of the nationwide practice in electrification. The projects are based on typical available conditions in the Philippines. The projects will demonstrate the benefit to the area of large-scale area coverage electrification at reasonable rates to all desiring service. In addition to financing the two demonstration projects, A.I.D. will provide technical assistance through a two-man team from the National Rural Electrification Cooperative Association (NRECA). The success of the program will be determined by the extent to which these pilot projects are emulated by existing and newly established systems.

II. Project Description

With the assistance of an A.I.D. loan of \$2,000,000 and a local currency loan of 475,000 dollar equivalent from the Philippine Electrification Administration (EA), electric power service is proposed to be provided to the municipalities of Victorias, Manapla and Cadiz in Negros Occidental Province (See Annex 2). An existing electric power cooperative (VRESCO), which is strongly supported within the community and ably managed, will undertake a sizeable expansion in area and extent of service. Initially two 2,000 kw generators will be installed, making the cooperative self-sufficient in generation, and a distribution system will be erected serving customers throughout the three municipalities except for two poblacions (towns) where the cooperative will wholesale power to existing franchise-holders. The third poblacion (Manapla) is served directly by the cooperative with individual connections to consumers therein. The cooperative has the advantages of (1) demonstrated capable leadership, (2) strong financial backing within the community from Victorias Milling Company (the sugar central of the region) and from the landowner-planters, and (3) relatively high population density. The cooperative faces the difficulties of having to support relatively small and costly generating facilities and of not serving directly customers in two of the three poblacions.

The objectives of the project are:

1. to demonstrate the success of large scale-area coverage electrification for the Philippines, through an electric power cooperative;
2. to demonstrate the financial viability of large scale-area coverage electrification where investment in generating capacity must be made to provide a source of power; and
3. to stimulate the formation and activities of public and private sector institutions which would advance rural electrification in the Philippines through technical, managerial, organizational and financial assistance to rural systems.

A. Historical Background

In 1965, A.I.D. financed, at GOP request, a power survey of the Philippines. The study was conducted by a team which included representatives of private utilities, public power systems and rural electric cooperatives. A principal recommendation of that study was the initiation of a substantial national program for rural electrification. President Marcos requested assistance from A.I.D. in support of rural electrification when he met with President Johnson in 1966. In response to this request, two consultants from NRECA went to the Philippines in 1967 under a two-year contract with A.I.D. The team conducted feasibility studies of the two projects recommended for A.I.D. financing.

The Power Survey selected 5 sites for which it recommended that feasibility studies be made for rural electrification projects. The service area of this project was one of the selections. The second project proposed for A.I.D. financial assistance (MOBESCO) was selected by the NRECA team, because there was a large reasonable cost source of power, contiguity of several communities, and no obstacle of franchiseholders.

The site incorporates 8 municipalities along the coastal road between Iligan and Cagayan de Oro, which are cities in Misamis Oriental Province, Mindanao.

The two projects would provide rural electrification under different sets of circumstances. VRESCO has an existing facility with strong community support; franchiseholders provide service to communities within the service area; and high capital cost generating facilities will have to be installed to provide an adequate source of power. MORESCO is a new cooperative with no competing franchises in the area, which will tap an existing and relatively inexpensive power source and distribute power to a contiguous chain of villages and to the surrounding area. The VRESCO service area comprises principally the estates of wealthy sugar cane planters with large land holdings and the residences of their workers. Substantial financial assistance to the cooperative will be provided by the sugar cane planters' association and by the Victorias Milling Company. The MORESCO service area consists of small agricultural land holders of about 5-hectares average size and of the towns folk of the communities along the coastal road.

B. The Borrower and Sub-Borrower

The Development Bank of the Philippines (DBP), a development bank wholly owned by the GOP, will be the A.I.D. loan borrower. The GOP will guarantee repayment of the loan to A.I.D. The proceeds of the loan will be reloaned by the DBP to the VRESCO Cooperative. The DBP will charge a fee of 1 1/2% to cover administrative expenses and to compensate for its assumption of the risk of loss in the event of default by the cooperative. The Electrification Administration will deposit with DBP the local currency funds for the project, and DBP will make all disbursements.

The VRESCO Cooperative has operated for about two years. Its affairs are managed by a seven-man Board of Directors, serving without pay and elected by the membership. Meetings are held once each month. The present Board members are:

Cornelio M. Consing, President (Planter)
Daniel G. Gustillo, 1st Vice President (Planter)
Vincente Montinola, 2nd Vice President (Planter)
Claudio R. de Luzuriaga, Director (V. Pres., Victorias Milling Co)
Salud Montinola, Director (Planter)
Jose M. Consing, Director (Manager, Rural Bank)
Jeses M. Fermin, Director (Mayor of Victorias)

Two other members also serve in specific capacities:

Edurado Locsin, Treasurer
Romeo R. Ascalon, Secretary

The Directors of the Cooperative are, for the most part, the community leaders, including the landowners. The Cooperative is able to call upon a sophisticated core of businessmen to run the enterprise. This caliber of leadership is, perhaps, the most important single assurance for the success of this undertaking. It is contemplated that when the Cooperative is expanded, at least one member of the Board of Directors will represent the workers, with a gradual increase in their representation.

The Cooperative operates with a small staff. The Manager, Mr. Remo B Ramos, is also Manager of the marketing and supply cooperatives in Victorias. Mr. Robert S. Azachee, the electrical engineer, has been responsible for the construction and operation of the present system. When the system is expanded, it will be necessary for the Cooperative to substantially increase staff. Maintenance and operating personnel will be hired and trained, and a full-time manager will be appointed.

Upon approval of the loan, a membership drive will be undertaken to bring in as many fully subscribed members as possible before initiation of service. The membership fee is ₱5 (\$1.25).

C. Location of the Project

The VRESCO service area is situated in the northwest corner of the island of Negros in the Visayas (central island) region of the Philippines. The area is principally planted to sugar. The climate is relatively aseasonal, with rainfall disbursed throughout the year.

There are 220,000 persons within the service area. The largest part of the rural population consists of sugar cane workers and their families, representing the lowest paid economic group of the area. Average income of this group is ₱1,500/annum (\$357) per family.

There are two other cooperatives operating successfully in the service area, one marketing the output of the sugar plantation and the other a consumer marketing cooperative. Both are managed by the current manager of VRESCO.

VRESCO currently has 156 members, who are principally landowners and their management personnel. Of these 53 installations are presently receiving service. The expanded system is expected to service initially about 40,000 persons within the service area through about 7,000 installations.

Sugar is a large money producing crop. There is sophisticated land management and land utilization. Agricultural diversification attempts are being made to improve utilization of large landholdings, including the raising of livestock. Basic infrastructure such as roads, shipping, and small supporting industries are relatively good. There is also the prospect of integrating the power supplies of the 14 sugar centrals of Negros Occidental and installing a large central generating station. This was recommended in a 1965 study prepared by American Factors Associates for the Sugar Cane Planters' Association of the Philippines. It is hoped that the cooperative effort of Victorias Milling Co. and the cooperative in this project will demonstrate the benefits of increased load utilization in the sugar central areas and thereby accelerate integration of these systems.

III. Economic Analysis

A. Load and Energy Forecasts

Projected load growth has been based upon a detailed study by the NRECA team of conditions which would give rise to demand in the service area and of actual demand upon other utility systems in the Philippines. Conservative estimates of initial demand, of rate of growth, of the number of users, and of average annual increase in demand have been used.

An upward revision of the initial average monthly KWH utilization per worker user from 20 to 25 KWH, which increase is reflected for all operating years, is considered justified by the loan committee and supported by the NRECA team. This is because the landowner planters have agreed to pay the minimum monthly charge of ₱5 (\$1.27) for the worker users and to pay the financing costs for their house wiring, and because the current installation of the excess property generators will permit early initiation and development of load demand.

To indicate the order of magnitude of power utilization indicated in the projections, 25 KWH corresponds to the use of two 50 watt light bulbs six hours per day plus a radio 4 hours per day. A discussion of the basis for the average monthly use projections by class is in Annex 5.

NUMBER OF CONSUMERS

<u>Classification</u>	<u>Year of Operation</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Landowner-Planter	64	74	84	94	104
Overseer	196	216	236	255	275
Worker	6350	6475	6600	6735	6870
Commercial	50	52	54	56	58
Schools & Churches	30	31	32	33	34
Irrigation	10	12	14	16	18
Large Power	3	4	5	6	7
Other Utilities	3	3	3	3	3
Security Light	25	50	75	100	125
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Landowner-Planter	14	124	134	144	154
Overseer	32	365	410	455	500
Worker	7000	7150	7290	7435	7585
Commercial	61	64	67	70	73
Schools & Churches	35	36	37	38	39
Irrigation	21	25	29	34	40
Large Power	8	9	10	11	12
Other Utilities	3	3	3	3	3
Security Light	150	175	200	225	250

AVERAGE KWH/MONTH CONSUMPTION

	<u>Year of Operation</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Landowner	1100	1190	1290	1400	1500
Overseer	350	390	440	490	550
Worker*	20	25	30	35	40
Commercial	125	135	145	155	165
Schools & Churches	100	105	110	115	120
Irrigation	2500	2500	2500	2500	2500
Large Power	20000	21000	22000	23000	24000
Other Utilities	37000	41500	46500	52000	58000
Security Light	50	50	50	50	50
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Landowner-Planter	1630	1760	1900	2050	2210
Overseer	580	610	640	670	700
Worker	45	50	55	60	65
Commercial	175	185	195	205	215
Schools & Churches	125	130	135	140	145
Irrigation	2500	2500	2500	2500	2500
Large Power	25000	25000	25000	25000	25000
Other Utilities	65000	73000	81000	91000	102000
Security Light	50	50	50	50	50

*The worker level has been elevated to 25 KWH/month initially.

These projections predict the basic operating characteristics of the system such as the amount of energy purchased, of energy sold to consumer, the peak kw demand, the percent of losses, the load factor, and the revenues.

KWH Sold and Generated

<u>Year</u>	<u>KWH Generated</u>	<u>Losses</u>	<u>KWH Sold</u>	<u>Annual Load Factor</u>	<u>KW Demand</u>	<u>Revenues</u>
1	6,311,000	17%	5,676,000	38%	2050	840,218
2	8,474,000	17%	7,062,000	40%	2400	1,020,529
3	10,061,000	15%	8,526,000	42%	2750	1,214,653
4	11,864,000	15%	10,140,000	44%	3100	1,421,152
5	13,767,000	14%	11,868,000	46%	3450	1,643,282
6	15,980,000	13%	13,986,000	48%	3800	1,890,460
7	18,194,000	12%	15,960,000	50%	4150	2,151,330
8	20,516,000	12%	18,156,000	52%	4500	2,403,420
9	22,969,000	11%	20,508,000	54%	4850	2,674,186
10	25,859,000	11%	23,088,000	56%	5250	2,961,537

The importance of residential demand in assuring adequate revenues for the system needs to be emphasized. Figure 1 shows total revenue, by user type for the 10 years of projected operation. The prominence of worker revenue highlights the importance of the initial membership drive, the availability of funds for house wiring, and the stimulation of increased per family KWH utilization.

Figure 1 - Revenue - Projected by User

Revenue
(000)

1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100

1 2 3 4 5 6 7 8 9 10
year

WORKER

Overseer

Planter-owned

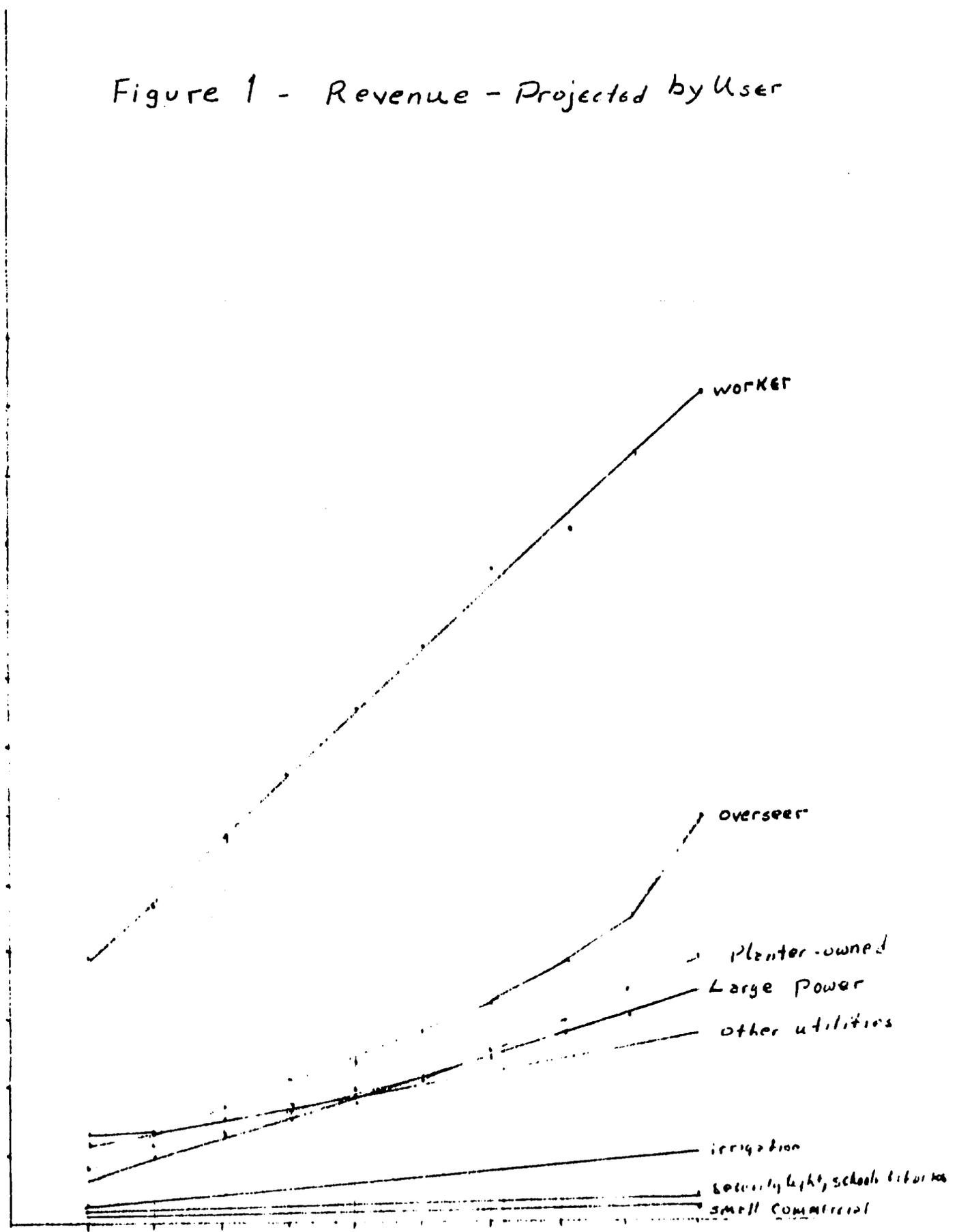
Large Power

other utilities

irrigation

Security, light, schools, libraries

Small Commercial



B. Rates to Consumers

Rate schedules will be adopted by the cooperative in accordance with the NRECA planning. The proposed rates will result in billings in the first year of operation, by class of consumer, as follows:

<u>Class of Consumer</u>	Average Cost	No. KWH	<u>Monthly Charge</u>	
	<u>Per KWH</u> centavos/cents	<u>Per Mo.</u>	<u>₱</u>	<u>\$</u>
Landowner-Planter	11.2c (.0286)	1100	123	(31.38)
Overseer	14.3c (.0265)	350	50	(12.70)
Worker	25c (.0638)	20	5	(1.27)
Commercial	20.8c (.0531)	125	26	(6.63)
Schools and Churches	19.0c (.0485)	100	19	(4.85)
Irrigation	8c (.0204)	2500	200	(51.02)
Large Power	9.9c (.0253)	20,000	1,990	(507.65)
Other Utility	9.4c (.0240)	37,000	3,485	(889.03)
Security Lighting	24c (0.612)	50	12	(3.06)

Rates have been kept as low as possible and will decline with increased consumption. The rate schedule has been designed to accomplish two main objectives: (a) to provide revenue sufficient for direct cash operating costs, debt service, depreciation, maintenance and prudent reserves, and (b) to promote full and expanding use of facilities.

Rates have been minimized for two reasons. First, because unless rates are reduced sufficiently, demand will fall off to the point where overall system economics are adversely affected by the higher per unit power cost; and secondly, because a departure is desired from the current private utility practice to charge very high rates while serving a small demand.

A demand charge of ₱5 KWH demand per month has been included for some classes of service. The rate schedules appear in Annex 8.

C. The Wiring Program and the Minimum Monthly Charge

As part of the local currency component of the project, ₱363,000 will be made available to the cooperative for loans to finance the cost of house-wiring. Because many workers may be unable initially to pay the entire cost of house-wiring (about \$12.50), the cooperative will make the loans to customers during the construction of the expanded system and thereafter, and the loan will be repayable over 5 years with interest at 5 or 5-1/2 percent.

Since worker families as a class represent by far the largest consumers of power, it becomes crucial to assure that the cost of worker house-wiring can be met and that the workers will be willing and able to pay the monthly power bills. The local chapter of the Sugar Cane Planters Association of the Philippines (which represents the same group of planters who participate in the marketing cooperative) has agreed to undertake repayment of the house-wiring loans and to pay the ₱5 minimum monthly charge for the workers employed on the haciendas of the Association's members. Virtually all workers will be included. The monthly bill for service to the worker family will be zero during the first year, based upon the 20 KWH average monthly projections of the report, and ₱1 (\$.26) based upon the 25 KWH/month utilization accepted herein, and will increase in gradual increments to \$2.36 monthly during the tenth year of operation as average KWH utilization increases. This cost is comparable with a current cost in excess of ₱5 (\$1.27) for kerosene for house lighting. A commitment by the Association is a condition precedent to disbursement of A.I.D. loan funds.

House-wiring will be undertaken simultaneously with construction of the system and no delays are foreseen in providing customer service as soon as power becomes available. Metering will be provided to each user, but the meter will be provided by the cooperative and will not be included in the cost of house-wiring.

IV. TECHNICAL ANALYSIS

A. Description of the System

At the present time the cooperative has no generating facilities of its own. It purchases power from the Victorias Milling Co., from the plant in Victorias and from a small (680 kw) diesel unit located in Manapla, on an interruptible basis. For six weeks during each year the Victorias Milling Plant is shut down for cleaning and maintenance and the coop service load is reduced to less than 400 kw.

Recently, the cooperative has completed negotiations through EA for the transfer of five 300 kw generating units which have been declared excess property at O'Donnell Air Force Base, Philippines. The units will permit the cooperative to become self-sufficient now in generating capacity, will permit some expansion of service immediately, and will be of considerable value as peaking and standby capacity for the system.

It is proposed to install generating equipment and to extend a feeder line through the three municipalities, with the installation of distribution lines throughout the service area. Diagrams of the present system, the proposed initial system expansion, and of the proposed system after five years of operation are shown in Annex 2.

The expanded system is to include generating capacity sufficient to serve the demand at all times. Initially, two 2,000 kw stationary units burning bunker "C" fuel oil have been recommended. A third unit is planned for addition during the sixth year of operation of the expanded system, but that unit has not been included for financing under this loan.

The generating units of the cooperative will be interconnected with the generating capacity of the Victorias Milling Company. Victorias Milling has about 7,000 kw installed capacity most of which is provided by **steam turbines which utilize bagasse, (the waste product of sugar cane refining)** as fuel. The cost of generation from these units is extremely small. The VRESKO units will be operated as an integral part of the Victorias Milling Company generating system. The larger turbine units will be base loaded, and generation will be programmed in accordance with lowest cost to the integrated system. Power exchange will be metered and an exchange rate considerably

below the cooperatives unit cost of power generation will be negotiated. Recognition of the positive economic impact of this arrangement (which will be substantial during the early years of operation, when margins are lean, declining thereafter) and of the installation of the excess property generators has not been made in the financial analysis for this project.

Feeder lines are to be extended throughout the service region. A standard 7.6/13.2 kv 3 Phase grounded wye system has been selected in conformity with standards established by the National Power Corporation (NPC) and the Electrification Administration (EA). The basic system will consist of 7.6/13.2 kv stepped up from generation voltage of 4.16 kv or generated directly at distribution voltage and stepping down to the lowest rural voltage of 220 V. The design was recommended on the basis of economy of construction with due regard for safety and strength of components and will provide ample capacity in the lines for expansion and system improvements.

B. Review of the Feasibility Study

Distribution System

The chapters, System Design and Voltage Calculations, Section 5 and Construction Standards and Costs, Section 6 of the feasibility study were reviewed to compare the proposed design and construction of the VRESCO system with similar systems in the United States and with the Rural Electrification Administration guidelines for U.S. electric cooperatives. The existing system which serves 53 metered customers has been built in general conformance with U.S. REA design however it incorporates an overhead neutral using high strength steel which would not be continued in the extension of the proposed system. The design and configuration of the extended system will consist of the standard 7.6/13.2 kv grounded wye which was selected first because it is based on the most common voltage used by U.S. cooperatives, and second because it conforms with the voltage levels established by both the National Power Corporation and the Electrification Administration.

Generation

The Chapter titled Generation, Section 7 of the feasibility study devotes itself to the requirements of diesel generation to meet

expected loads of the proposed system. The existing system currently operates on excess power purchased from the Victorias Milling Company, however, there are certain disadvantages to the present arrangement. One day each week the mill is shut down for cleaning, and in addition, the mill is also shut down for a six week period each year for general mill maintenance and overhaul.

To provide a source of dependable power for the proposed system the report recommends the installation of two diesel generators each of approximately 2,000 kw capacity. Since the units would be the only firm source of power, the report recommends slow speed stationary type units. This is in keeping with the guidelines established by the Federal Construction Council of the National Academy of Science for Continuously Operated Diesel Engines. These guidelines compare advantages and disadvantages of slow speed stationary units with high speed portable equipment for continuous operating base load conditions.

For engines of low rpm, (450 rpm) the advantages are:

1. A longer combustion period, permitting a wider range of acceptable fuels, including the less expensive residuals which are by nature slower-burning.
2. Less wear, hence long periods of uninterrupted service between overhauls.
3. Longer useful life and greater reliability.
4. Lower maintenance costs.
5. Lower fuel consumption per KWH.

For engines of high rpm, (900 rpm) the advantages are:

1. Less size and weight.
2. Shorter "down" time for major overhauls and outages for minor repairs.
3. Lower initial cost.
4. Greater ease of transport.

The principal disadvantage generally cited for low-speed engines is their size and weight, which require larger foundations and other facilities that impose higher initial costs. The asserted disadvantages of high speed engines are increased maintenance cost, shorter engine life and the inability to burn other than the more expensive distilled fuel.

Army Engineer Research and Development Laboratories from data furnished by diesel engine manufacturers, compares the general relationship between rpm of continuously-operated diesel engines and depreciation rate. These data indicate that the useful life of an engine is strongly influenced by rotative speeds; in other words, the higher the rotative speed, the shorter the useful life. The experience of the Rural Electrification Administration Cooperatives is in general accord with these findings.

The proposed electric cooperative system as outlined in Sections 5, 6, and 7 of the report will incorporate standards and practices based on the latest state of the art established in the United States will be in accordance with the U.S. Rural Electrification Administration specifications.

C. Planning and Costs

The plans and cost estimates in the NRECA study have been reviewed and comments have been received from the U.S. Rural Electrification Administration (REA). See Annex 9. Substantive technical and financial plans are complete and the estimated costs of the project are reasonably firm. A detailed breakdown of the costs is shown in Annex 3.

D. Implementation of the Project

The project will be undertaken in two phases. When the initial conditions precedent have been met, the cooperative will undertake selection in accordance with A.I.D. Capital Projects Guidelines, of an appropriate engineer for the detailed design of the system. The engineer will either be a U.S. firm, or a U.S. firm or individual consultant undertaking the design jointly with a Philippine firm. Costs for the U.S. firm or individual will be financed under the A.I.D. loan. The engineer will prepare specifications for procurement of plant and equipment. Procurement under the loan will be in accordance with A.I.D. Capital Projects Guidelines.

When the detailed design has been completed and the conditions precedent to the second phase have been met, procurement of plant and equipment and system construction will be initiated. The cooperative will then select a firm, in the manner described above, to construct the system and to undertake procurement of plant and equipment.

Technical and management assistance will be provided throughout, on an advisory basis, by the NRECA team under contract to USAID.

Conditions and covenants of the loan agreement among A.I.D., the GOP and the cooperative are discussed in Section VII. A timetable for completion of the project appears in Annex C.

V. Financial Analysis

A. Project Costs Summary

	<u>U.S. \$ Cost</u>	<u>Peso Cost In U.S. \$</u>	<u>Total in U. S. \$</u>
Generating Equipment	921,000	53,000	974,000
Outside Plant	807,000	176,000	983,000
General Plant	43,000	12,000	55,000
House Wiring Fund	-	92,000	92,000
Engineering	50,000	65,000	115,000
Working Capital	-	34,000	34,000
SUB-TOTAL	<u>1,821,000</u>	<u>432,000</u>	<u>2,253,000</u>
(10%) Margin for Contingencies*	<u>182,000</u>	<u>43,000</u>	<u>225,000</u>
TOTAL	<u>2,003,000</u>	<u>475,000</u>	<u>2,478,000</u>

Amount of A.I.D. Loan 2,000,000
 Electrification Administration (peso loan) 475,000 (See Annex 16)

The proposed A.I.D. and EA loans will be sufficient to finance both (a) the construction of the facilities to begin service operations and (b) additions to the system during the second and third years of operation. The latter has been included to assure financing so that the cooperative will progress as scheduled during the early years until it can develop a demonstrable load demand and become capable of obtaining financing through favorable channels.

Interest on the A.I.D. loan is 5% to the cooperative and includes a fee of 1 1/2% to the DBP. Interest on the EA loan is at 3%.**

B. Financial Projections

Proforma balance sheets, profit and loss statements and cash flow projections for the first ten years of operations by the cooperative and the financial statements of the existing cooperative are shown in Annex 1.

The projections are based on the cost determinations and analyses contained in the NFECA Feasibility Study, with assumptions and definitions as follows:

*This is in addition to a 10% contingency already included in the cost items above, except for engineering.

**The cooperative will repay the DBP in level payments of principal and interest at 5% interest. The DBP will repay to A.I.D. the principal amounts scheduled to be paid by the cooperative, plus accrued interest at 3 1/2%. This yields slightly less principal repayment in early years than would level repayment of principal and interest at 3 1/2%. (See Annex 11)

1. Long-term financing is assumed to be available for system additions in the following amounts: 1972, ₱2,324,951; 1974, ₱2,652,141; 1976, ₱447,000; and 1978, ₱471,600. The availability of these funds is discussed below (Subsection E).

2. Operating revenues - The calculations are based on the rates and consumption projections shown in Annexes 8 and 4. The operating revenues are conservatively estimated, being based on minimal expectations of kilowatt hour usage by the different types of power consumers.

3. Non-operating revenues are taken to be 7% on cash reserves based on the reserve balance at the end of the previous operating year. This understates non-operating income to the extent that cash reserves generated during the year earn interest during the year and to the extent that working capital funds may draw interest in demand deposit accounts. No consideration has been given to revenue to the cooperative earned from the wiring loans to subscribers. The cooperative will borrow for the wiring program at 3%; subscribers will pay 5 or 5½% to the cooperative on the outstanding balance of the wiring loans.

4. Operating expenses

a. Cost of power - The cost of power has been computed based upon all power being generated by the units newly to be installed by the cooperative. No credit has been given to cost savings resulting from an interchange arrangement with Victorias Milling Company and operation of the generators on the basis of lowest cost to the integrated system. The cost of power consists of depreciation on generating plant, operation and maintenance expenses for generating plant, plus fuel and oil costs, plus interest on borrowings for generating equipment.

b. Operating, maintenance and general administrative charges are computed at 3% of gross plant investment exclusive of generating facilities. This percentage was based on a recent survey of costs in the Philippine electric industry.

c. Depreciation - Rates were computed for all categories of investment. A weighted average rate of 2.9% was proposed for distribution and transmission facilities and 8.4% for general plant. The composite rate on total plant was calculated at 3.2%. A rate of 5% is used for generating equipment. These rates are consistent with U.S. practice but markedly lower than rates used by operating utilities in the Philippines. The rates are believed to be realistic for conditions existing in the Philippines, and the departure from current practice in the Philippines is considered to reflect sound utility accounting.

d. Taxes - NRECA has included taxes at one half of one percent of the gross plant investment based on the provisions of the Philippine Non-Agricultural Cooperative Act. Cooperatives having net assets (net worth) less than ₱500,000 are exempt from sales, income, and other taxes.

We cannot be certain that the cooperative will not lose its tax relief status when net worth exceeds ₱500,000 in year 7. As a condition precedent to disbursement the COP will furnish evidence satisfactory to A.I.D. of duty free status for all commodities to be imported under the loan. This is expected to take the form of a submittal from the Cooperatives Administrative Office that the cooperatives are exempt from taxes including duty on imports and an acceptance from Philippine Customs officials or other official authorized to take such action on behalf of the GOP, that the items will be cleared through customs without assessment of duties. The effect of taxes other than duty on imports will not be significant. An undertaking from the GOP to seek legislative amendment to R.A. 2023 to remove the \$500,000 restriction will also be requested in the loan negotiations.

e. Interest on loans - The effective rates of interest to the cooperative will be 3% for local currency funds and 5% for the dollar portion, the latter representing $3\frac{1}{2}\%$ interest to A.I.D., plus a fee of $1\frac{1}{2}\%$ to DBP to reimburse administrative costs and to compensate for the risk of loss in the event of default by the cooperative. The higher interest charges are reflected in the financial projections in Annex 1. For future borrowings by the cooperative to finance system additions, an interest rate of 5% and maturity in 23 years, including a three year grace period on payment of principal, has been considered probable. Interest at 7% and maturity in 23 years, including three years grace on principal payments, has been considered to represent the least favorable terms which the cooperative may reasonably expect. The financial analysis has used a rate of 7% for additions. See discussion Section V.E, infra.

f. Principal repayments - Amortization of the A.I.D. and Electrification Administration loans over 25 years begins in year 4 of operation reflecting a grace period of five years from the date of first disbursement. Repayment by the cooperative to DBP is in level payments of principal and interest. This will result in non-level payments to A.I.D. composed of the principal amount scheduled to be repaid by the cooperative to DBP plus accrued interest at $3\frac{1}{2}\%$ (See Annex 11). The effect of this approach is to reduce slightly the principal payments to A.I.D. in early years over those which would result from level payments of principal and interest.

C. Balance Sheet and Funds Flow Preparation

1. Reasons for recomputation

Certain events occurring since preparation of the study have necessitated recomputation of the revenue-cost projections:

a. Five 300 kw excess property generators have been purchased by the cooperative.

b. The local chapter of the Sugar Cane Planters Association has agreed to pay the financing charges for house wiring and the minimum monthly use charge for the workers on the haciendas of its members.

c. The Victorias Milling Company has indicated that it will purchase an additional turbine generator, and therefore, will have excess power to make available to the cooperative in the future.

d. It was discovered that the cost of generating equipment purchased from U.S. suppliers in international competitive bidding is significantly lower than when the bidding is restricted to U.S. source and origin. The average cost/kwh installed capacity has been taken to increase from \$150 to \$215, and the size of the units has been increased from 1,750 kw to 2,000 kw, the latter because it corresponds to a standard U.S. equipment size.

e. Effective interest to the cooperative will be 5% for the dollar loan and 3% for the peso loan. A 3 $\frac{1}{2}$ % rate for all financing was assumed in the feasibility study.

As explained in Section III, we have concluded and the conclusion is supported by the NRECA team, that the average monthly kwh utilization for worker users in the first year should be elevated from 20 to 25 kwh with projections for future years being elevated accordingly.

The revenue-cost projections have been recomputed using 20 kwh/month initial average worker utilization, and the cash gain from utilizing 25 kwh/month initial use has also been computed. These figures appear in Annex 1.

2. Basis for recomputation

Revenue-cost projections have been recomputed on the following basis:

a. All demand and revenue projections have been kept consistent with the study; all additions to plant other than generating equipment remain unchanged.

b. The excess property generators have been added at a cost of \$140,000 for transportation and erection. This was financed half by an EA loan, the remainder by the Victorias Milling Company. The loans have been assumed to be at 3% interest, 25 year repayment, 5 year grace period.

c. Two 2,000 kw diesel generators with a cost of \$215/kw installed capacity are to be installed initially. A third 2,000 kw unit to be procured by international competitive bidding at an estimated cost of \$125/kw installed capacity is scheduled for installation in year 6.

d. Interest is at 5% on the dollar loan, 3% on the EA loan, 25 year repayment, 5 year grace period; and 7% for additions after year 3, 23 year repayment and 3 year grace period.

e. Interest during construction of about P150,000 has been included, and the principal repayments have been moved up from year 6 to year 4 to reflect 5 year grace period from date of initial disbursement.

3. Additional beneficial factors

No account has been given in this analysis to the following factors, which will improve the financial position of the cooperative, because there is no clear basis for estimating the magnitude of the financial benefit:

a. The agreement for exchange of power between Victorias Milling Company and the cooperative will permit sale of interruptible power to the cooperative at a favorable rate based upon the very low fuel costs of the Mill and will also elevate the load factor of the cooperative. This will reduce the cost of power to the extent of fuel cost savings on energy purchased.

b. The purchase of excess property generators will permit early load development and early implementation of the project; will facilitate maintenance and provide a reserve for emergencies; will provide a source of peaking power and delay the necessity for installation of additional generating units. The capacity of these units has been taken into account in determining timing for installation of the third 2,000 kw unit in year 6.

4. Effect of current financial position of the cooperative

In the preparation of the financial statements, the projections for future years of operation have been integrated with the current (1967) financial statements of the cooperative. The financial projections, beginning at the end of operating year 1 (1969-70), reflect the status of the cooperative at the end of 1967 with the additions planned for the future superimposed thereon.

The most notable aspects of the current financial statements are a small operating deficit of ₱42,348 (\$10,700), net plant of ₱891,931 (\$227,533), and cash contributions of members of ₱813,058 (\$207,413). The financial statements are in Annex 1.

Amortization of the existing debt has been shown in accordance with the principal repayments of existing debt used in the feasibility study.

D. Financial Feasibility

The cash flow statement reflects generation of sufficient cash to construct the project, operate and maintain the facilities and service all debt. Cash reserves are positive in all operating years, except that interest during construction of about ₱150,000 must be funded out of working capital. This has been reflected as a reduction of cash margins in the first operating year to a net cash loss of ₱112,511. Cash reserves will accumulate, but reserves are low in early years, growing very rapidly during later years.

Because of the very high portion of operating expense attributable to capital cost of the system (about 56%), the time lag before positive net income appears in the financial statements is considerably longer than that for the MORESCO project.

Using the 20 kwh/month average worker utilization, positive net income does not occur until after the third year of operation and positive earned surplus and net worth after the fifth year of operation. Applying the more probable 25 kwh/month average worker utilization, positive net income occurs after two years of operation and positive earned surplus and net worth after four years of operation.

Thus, based upon conservative projections, the Cooperative can meet all its obligations but will require several years before demand grows sufficiently for profitable operations. The alternative of elevating rates to improve cash margins in early years has been rejected for two reasons: (1) higher rates will reduce demand, and in the long run, delay realization of a sound financial position for the cooperative; and (2) there is no demonstrable basis for concluding that higher rates will produce higher revenues throughout the critical period. Because high capital cost generating facilities have been required, it is critical that load be developed as rapidly as possible. It may reasonably be argued that a shorter period of deficit might be contrary to sound utility planning.

The basic question is, given the several year period of operating losses, but with cash reserves growing, what is the probability of success of the cooperative? It has been concluded by the NRECA team, and the conclusions are supported by USAID and the loan committee, that the projections of the study are conservative and that substantial beneficial factors, particularly good management, strong financial backing and certain cost savings, will improve the economic position of the cooperative. More importantly, this period of operating deficit is not unusual for U.S. cooperatives and the record of success of these ventures has been remarkable. (See Annex 15)

Accepting the long term payout, the financial statements indicate that the cooperative will generate sufficient revenue to meet all current obligations, including the A.I.D. loan, and to develop cash reserves as may be prudent to assure against such contingencies as (a) overruns and delays in construction; (b) losses and uncollectible accounts; (c) non-realization of projected demand, load factor, or total sales; and (d) currency devaluation.

Overruns and delays in construction would increase debt service. Adequate funds will be provided to support an overrun of 10% above the 10% contingency included in the study. A 10% overrun would increase debt service by 10%, and operating expense by about 4% during the first 4 operating years. This result would ^{not} change significantly the period in which the cooperative will show an operating deficit.

Losses due to theft and uncollectible accounts are expected to be small. This is based upon current experience of operating utilities in the Philippines, where theft losses have been indicated to be negligible, and uncollectible accounts on the order of 1/4%.

Failure to realize load demand projections will reduce revenue and decrease operating margins, but there is reasonable assurance that demand will not decrease significantly below projections, based upon comparison with experience of other utility companies in the Philippines. (See Annex 5.) Certainly, revenues are not expected to decline below those projected for the 20 kwh average monthly worker utilization and this still leaves adequate cash reserves.

The cooperative bears the risk of loss in the event of currency devaluation. Devaluation would increase debt service expense proportionately on the foreign currency portion of the borrowings. At present, no devaluations are foreseeable. However, the sizeable dollar portion of loan financing in this project and the low cash reserves during early years make this an important consideration.

This problem has been suitably resolved in several instances in Latin America, either by having the government institution bear the risk of loss in event of devaluation and relend with a significant spread to the cooperative, or by passing the risk of loss on to the cooperative, but permitting the government to elect in the event of devaluation to accept repayment in local currency at the original exchange rate and repay the A.I.D. loan on extended terms. The latter approach would require modification of the country terms, and the former approach is considered impractical because proposed interest rates are already significantly higher than for other A.I.D. financed rural electrification projects.*

Fortunately the Philippines has a history of relatively good price and currency stability. There is little likelihood of a devaluation of the peso because of the sound domestic sector and the growth potential for exports, particularly, for a number of agricultural, mining and forestry products as well as manufactured items under strong Government encouragement. An additional favorable factor is the current breakthrough in rice productivity, which is expected to lead to self-sufficiency this year or next. (See Annex 12).

If a devaluation were to occur during the first few operating years, some relief from debt service would be required. By the end of the 6th year of operation, however, the cooperative will have attained a sound financial position and will have cash reserves of 10% of outstanding debt. Because a devaluation is not anticipated in the foreseeable future and because of the relative price stability in the Philippines, and the projected increasingly favorable financial position of the cooperative after the first 4 years of operation, it is concluded that the project warrants support.

*Interest rates to the Government Borrower in the Latin American Rural Electrification Projects range from 3/4% during a 10 year grace period, and 2% during a thirty year repayment period thereafter, to 2 1/2% for both grace and repayment period, a 5 year grace period, repayment in 30 years thereafter. Terms to the cooperative do not exceed 2 1/2% during a grace period of generally 5 years, and range from 2 1/2% to 6% during a repayment period of 25 to 30 years. The risk of maintenance of currency value generally falls with the Government. In some instances the Government may elect repayment in local currency, and repay to A.I.D. on softer terms; 10 year grace period at 3/4%, 30 year repayment at 2%. In only one instance is no relief provided to the cooperative from risk of loss from devaluation.

Availability of long term capital for future additions after the third year of operation is a concern in this paper. Considerable attention has been directed to the institutional role of the GOP and to the public sector financial support, in the form of long-term reasonable-cost loans, which is anticipated for a national program for rural electrification. That significant additional long term capital will be made available by the GOP to support rural electrification is the principal factor upon which A.T.D. is relying in supporting loans for the two projects. Also to be noted is the potential for raising additional capital within the benefiting communities.

Nevertheless, we have considered the effect of unavailability of additional loan funds upon the ability of the cooperative to repay its debt obligations. Using the funds provided in the initial loan, the cooperative will be able to make all expansions programmed through the end of operating year 3 with no new sources. After year 3, we have assumed no new loan funds, but that the cooperative will expand the distribution system as programmed using cash reserves until the limit of firm generating capacity is reached. System improvements and non-essential additions will not be made, but the basic operating standards will be retained. The cooperative will not undertake further expansion unless cash margins provide sufficient internal cash generation. The cooperative might seek elevation of rates to increase internal cash generation. This would occur about the end of year 5.

Based upon these criteria, profit and loss and cash flow statements have been prepared for operating years 4 through 7 (after which operations would be forced to stabilize, unless internal cash generation would support future expansion). These appear in Annex 1. The results indicate positive net income and positive cash margins for all years, with an adequate revenue base for continued operation at the level attained in either year 6 or year 7, including payment of debt service obligations on a current basis.

Based upon the foregoing, it is concluded that the cooperative can meet all obligations on a current basis under foreseeable circumstances.

E. Availability of Long-Term Financing for System Additions

As the financing plan for this project indicates, the Electrification Administration has authority to finance electrification projects on terms of 3%, 25 years. It is expected that, if this project is successfully carried out, demonstrating the feasibility of large scale area coverage electrification for the advancement of rural electrification in the Philippines, the GOP will desire to carry out similar projects, similarly financed. For this reason, USAID is of the opinion that the Congress may be receptive to appropriate additional resources for the EA revolving fund, presumably to be made available by EA on the same 3%, 25 year terms. It is believed probable that capital from other sources would be available at a composite cost of 5%, 3 year grace, repayment thereafter over 20 years, or better.

As a limiting case, additions to the cooperative's system might be alternatively financed, in the opinion of USAID and the NRECA team, through (a) issuance of progress bonds by municipalities and (b) establishment of a foundation with investment by local businessmen in conjunction with an arrangement for tax relief. It is believed that such capital would be available at 7%, with a comparable period of repayment. The financial projections have been based upon 7% interest for system additions after operating year 3. (See Annex 1.)

F. GOP Repayment Capacity

As shown in Annex 7, the financial condition of the Development Bank of the Philippines indicates ability to carry out its responsibilities as borrower of this loan.

Since Philippine external debt service is currently estimated at about 10% of exchange earnings, the country's ability to service this loan appears reasonably certain.

Annex 12 provides a brief summary and discussion of the economic situation in the Philippines. Based on recent and current levels of exchange reserves, projected reliance on traditional agricultural exports for exchange earnings and uncertainties surrounding the renegotiation of the Laurel-Langley agreement, intermediate loan terms as approved by the A.I.B. Administrator continue to appear justified.

VI - Institutional Development

A. Support for Rural Electrification

The ultimate objective of these pilot demonstration projects is that if successful they will be emulated and a nationwide program for rural electrification will be initiated. This will depend upon both private and public sector support.

The private sector support is clearly forthcoming. Communities have shown themselves to be anxious to invest substantial manpower and financial resources in support of reasonable cost electrification.

Public sector support is less clearly identified. The Philippine Government has indicated a strong interest, which USAID considers to be sincere, in support of this program. The President of the Philippines personally supports these projects and has indicated his intention to commit increasing funding resources for a national rural electrification program.

Senator Pelaez of Mindanao, who is a strong supporter of a national program and one of the most influential members of the Philippine Congress, has stated that he intends to introduce legislation to modify the existing governmental structure to permit more meaningful support for rural electrification and has asked the NRECA team to assist in preparation of the legislation. Also, a bill currently pending before the Congress would increase the revolving fund of the Electrification Administration from 20 to 200 million pesos. These funds, if provided, would be available principally for rural electrification projects (Annex 17

B. The Role of Cooperatives in Rural Electrification

The operating philosophy of a rural electric cooperative is to provide service to all within the service area based upon standard rate schedules which have been kept as low as economically feasible in order to promote system expansion. The cooperative ties the members of the community to its operations through their membership and their participation in the selection of directors.

In the Philippines, the cooperative also represents the beginning of a movement. The community support and the backing of local and national politicians, which have included Senator Emmanuel Pelaez and Governor Pedro Roa, both of Misamis Oriental, can become an important influence upon the GOP to increase its participation in rural electrification. As the number of existing cooperatives increases an association of cooperatives can become a political force as well as being an avenue for technical, organizational, and perhaps financial support for new systems.

The cooperative movement in the U.S. has demonstrated these advantages. Of particular importance in the U.S. example has been the development of arrangements for interconnection among small systems to permit transmission of low cost power or the installation of larger size generating units. There is particular need to realize these benefits in the Philippines.

Finally, the cooperative offers the additional advantages of exemption from most taxes including income and property taxes and tax upon importation of equipment, so long as net assets remain less than ₱500,000. It is believed that this requirement can be complied with for these two projects. As a condition precedent to initial disbursement, an opinion of the Secretary of Justice interpreting this provision will be required, and a plan for achieving compliance with the statutory criterion for tax exemption will be submitted by the cooperative.

C. Participating Agencies and Their Role

The borrower, Development Bank of the Philippines, will reloan the funds to the Cooperative and undertake general loan supervision for the GOP.* In implementing the loan, DBP will rely upon the cooperation of NPC to provide technical supervision of the project for the GOP.** This is considered a positive step because NPC has competent personnel to supervise implementation of the loan and because NPC has an interest in developing load demand along its grid system. Exposure to the construction and initial operating experience of the Cooperative will educate and perhaps induce NPC in promotion of load development.

The role of the Electrification Administration will be limited to the furnishing of local currency funds for the project.

A description of DBP, NPC and EA is in Annex 7.

* Contrary to the desire of A.I.D. and of the DBP, the risk of loss in the event of default by the Cooperative will fall upon the DBP, which is the reason a fee of 1 $\frac{1}{2}$ % will be charged. This compares with DBP's normal 2% guarantee fee. In the Philippine legal framework a loan to the GOP to be reloaned to a private organization must be channeled through one of the two GOP development banks, and there is no mechanism by which the GOP may relieve the development bank of the risk of loss in event of default.

** An agreement between DBP and NPC calling upon NPC to provide personnel to monitor the project and to recommend time and magnitude of disbursement of loan funds will be a condition precedent to initial disbursement.

VII. Implementation Plan

A. Plan for Implementation of the Project

The A.I.D. and EA loans will pass through the DBP as borrower to the cooperative as sub-borrower. A.I.D. approval will be required initially for all invitations for bids including specifications and for the awards, for items to be procured (A.I.D./w approval for generators), except those specified in the implementation plan. It is anticipated that after the first several procurements during which procedures will be established, this requirement may be relaxed and prior review required only for major items of procurement which will be identified at that time. With respect to local currency, the peso loan funds will be deposited by EA in escrow account at the DBP. The National Power Corporation or EA will serve the DBP in an advisory capacity. It will advise DBP on technical matters relating to the loan and on status of project implementation.

A timetable for completion of the project is in Annex 6. Three months will be provided from date of signing to time for completion of conditions precedent to initial disbursement. The difficulty in completing the CP's in the FY 67 Irrigation Loan is recognized, but it shall be a part of the negotiation of these loans to work out a timetable for the projects and to adhere to its requirements. Project implementation will be undertaken in two phases: the first will be concerned with detailed design, preparation for construction of the expanded system; the second phase will involve procurement of equipment and construction.

A diagram of implementation responsibilities appears in Figure 2. Design and construction will be carried out by the cooperative through the employment of engineering and construction firms. Monitoring of the project and technical assistance to the cooperative as required will be performed by the NRECA on the A.I.D. side and the NPC or EA for the GOP.

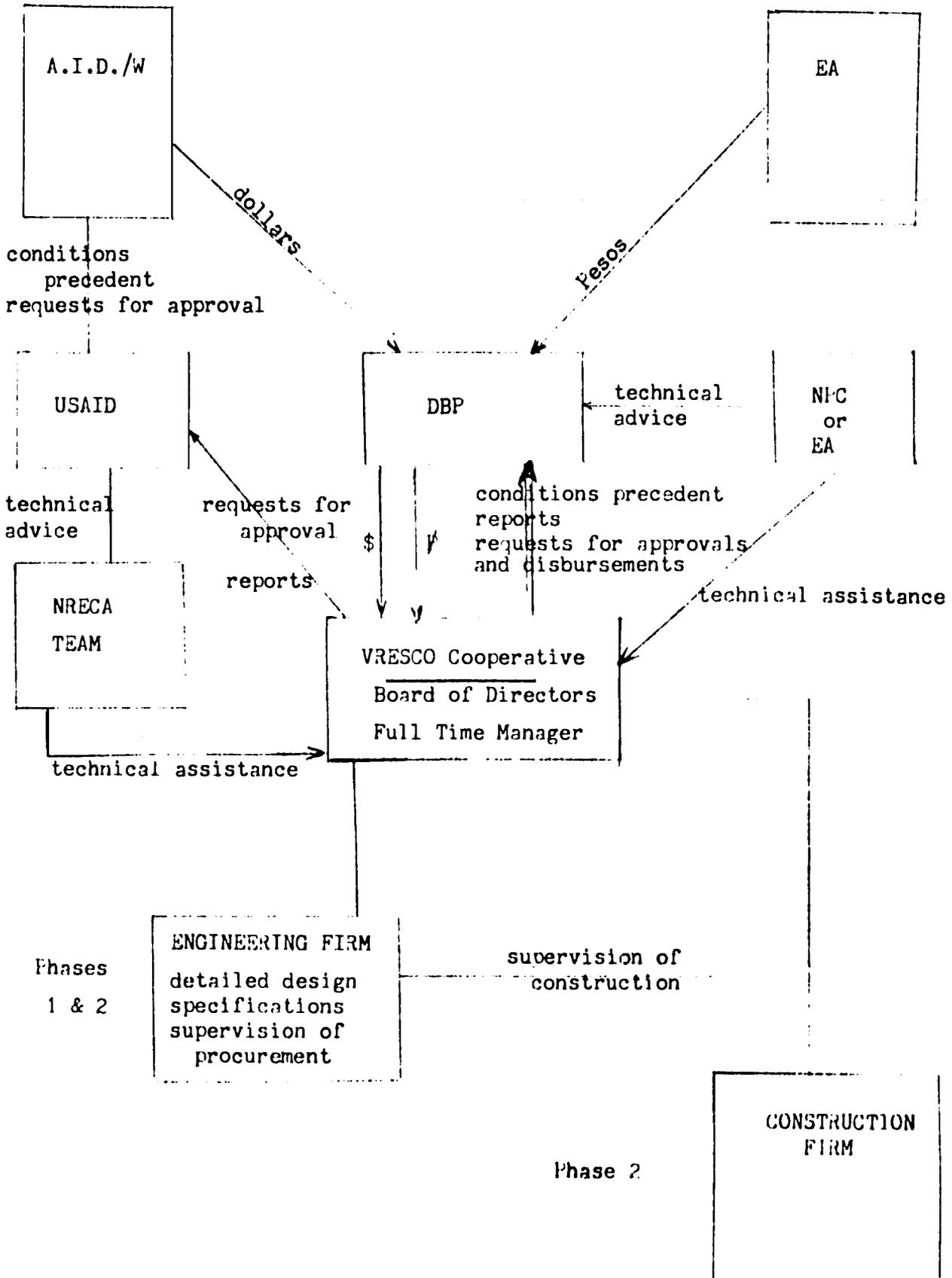
B. Conditions Precedent and Covenants

Conditions Precedent to Initial Disbursement (Phase 1)

Evidence will be submitted affirming that:

1. The obligations contemplated by the DBP and the guaranty from the GOP are valid and there is authority for each GOP agency to undertake the actions planned (A.I.D./w approval);
2. Local currency funds as estimated in the application to A.I.D. for the project have been deposited with the DBP, including adequate support for the house wiring program and for working capital (A.I.D./w approval);

IMPLEMENTATION DIAGRAM



3. the cooperative is validly incorporated, it has authority to undertake the actions contemplated, and it has binding obligation to perform the actions contemplated in the loan agreements (A.I.D./W approval);
4. the cooperative has selected a qualified firm or firms to conduct detailed design, to prepare specifications, and to supervise procurement and construction. The selection will be made in accordance with A.I.D. Capital Projects Guidelines and will be subject to A.I.D. approval (A.I.D./W approval). The firm or firms will be required to have experience in the design and construction of rural electric systems in accordance with standards of the U.S. Rural Electrification Administration. A breakdown of dollar and peso components for engineering services will be required, with only the dollar component being funded under the A.I.D. loan;
5. a certificate of registration has been issued by the Cooperative's Administrative Office;
6. the DBP has entered into an agreement with NPC or EA, whereby NPC or EA will undertake to advise DBP on technical matters relating to the loan and on status of project implementation.
7. duty free status will pertain for all commodities to be imported under the loan (A.I.D./W approval).
8. an undertaking from the local Sugar Planters' Association to bear the cost of financing for house wiring and of the minimum monthly charge for worker families on their haciendas has been provided.

Conditions Precedent to All Other Financing:

Upon completion of Phase 1, the Cooperative will submit to A.I.D.:

1. a detailed design for the system for which A.I.D. approval (A.I.D./W approval) will be required prior to initiation of Phase 2. Also required will be a detailed implementation plan for the project (A.I.D./W approval) which will include:
 - (a) a timetable for construction and initial operation;
 - (b) arrangements for procurement of loan-financed commodities in accordance with A.I.D. Capital Projects Guidelines;
 - (c) a construction cost control and accounting system for the project;

- (d) a plan for maintenance, depreciation, testing and replacement of equipment and an outline of the sources of funds for each and for the establishment of a reserve against contingencies;
 - (e) a program for hiring and training personnel as needed for timely completion of the project and for initial operations; and
 - (f) arrangements satisfactory to A.I.D. with a firm or firms for construction services.
2. evidence that it has adopted the rate schedule proposed in the feasibility study, or a modification thereof acceptable to A.I.D., and that the rate schedule has been approved by the Public Service Commission;
3. evidence that the cooperative has received applications for membership and for receipt of electric service from consumers, who, based upon the average monthly consumption projections of the feasibility study, would cause a load demand at least equal to 80 percent of that projected in the feasibility study for estimated consumers initially connecting to the system.
4. evidence that all rights-of-way have been obtained or will be obtained and that adequate funds have been set aside for their purchase;
5. evidence that the cooperative has employed a qualified full-time manager.

Covenants

The DBP will covenant that:

- 1. it will make timely disbursement to the cooperative of local currency funds for the project and take appropriate action to assure prompt and satisfactory completion of the project;
- 2. it will monitor the loan and submit progress reports periodically to A.I.D. on the status of the project and on financial condition of the cooperative (the agreement will also reserve to A.I.D. the right of inspection and the receipt of regular reports from the cooperatives).

The cooperative will covenant that it will:

1. conduct training and maintenance programs for its employees as outlined in the implementation plan;
2. furnish periodic progress and financial reports;
3. apply to the Public Service Commission for rate adjustments, subject to prior A.I.D. approval, as necessary (1) to provide revenue sufficient for direct cash operating costs, debt service, depreciation, maintenance and prudent reserves and (2) to promote full and expanding use of facilities.
4. not incur any future long term obligations without approval of A.I.D. and the DBP.
5. not pay dividends nor return cash contributions of members without prior A.I.D. approval, other than the membership fee upon separation of a member, unless there remains a cash reserve at least equal to any negative net worth plus the excess of debt service over depreciation, plus a sum equal to the next annual debt service payment.

Authorization

The authorization shall lapse 120 days after signature in the event that a loan agreement has not been signed, unless A.I.D. otherwise agrees in writing.

BALANCE SHEET
(Thousands of Pesos)

Annex 1

<u>Assets</u>	<u>Actual</u>	1	2	3	4	5	6	7	8	9	10
<u>Current Assets:</u>											
Cash	101	531	713	1034	770	1194	1766	2529	3524	4742	6245
Receivables	74										
Deposits	10	340	351	350	350	350	350	350	350	350	350
Inventory	121										
Total <u>Current Assets</u>	314	871	1064	1384	1120	1544	2116	2879	3874	5093	6595
<u>Investments:</u>	1	1	1	1	1	1	1	1	1	1	1
Fixed Assets	1009	8993	9142	9468	9624	9809	11163	11457	11665	11904	12140
Less Accumulated Depreciation	117	470	839	1213	1592	1977	2422	2877	3338	3807	4283
Not Fixed Assets	892	8517	8303	8255	8032	7832	8741	8580	8327	8097	7857
Deferred Charges	13	12	11	10	9	8	7	6	5	4	3
Total <u>Assets</u>	1220	9411	9378	9650	9162	9385	10865	11466	12207	13194	14456
<u>Liabilities</u>											
<u>Current Liabilities:</u>											
Repayables	41	41	41	41	41	41	41	41	41	41	41
Current Portion of Term Debt	12	12	20	792	304	315	333	355	427	455	455
Total <u>Current Liabilities</u>	53	53	61	833	345	356	374	396	468	496	496
<u>Long Term Debts:</u>											
Existing Debt	408	396	384	371	358	344	330	317	304	299	293
House Wiring & WC Loan		500	500	500							
AID Dollar Loan		6781	6893	7140	6934	6717	6489	6250	5999	5735	5458
EA Peso Loan		1203	1239	1319	1253	1187	1121	1055	989	923	857
Excess Property Loan		140	140	133	126	119	112	105	98	91	84
Other Loans					156	341	1695	1981	2171	2325	2462
Less Current Portion	12	12	20	792	304	315	333	355	427	455	455
Total <u>Term Debt</u>	396	9008	9136	8671	8523	8393	9414	9353	9134	8918	8699
<u>Capital</u>											
Membership Subscription	333	371	372	373	374	375	376	377	378	379	380
Surplus	(42)	(501)	(672)	(707)	(560)	(219)	221	860	1747	2921	4401
Deposits by Members	480	480	480	480	480	480	480	480	480	480	480
Total <u>Net Worth</u>	771	350	181	146	294	636	1077	1717	2605	3780	5261
<u>Total Liabilities & Net Worth</u>	1220	9411	9378	9650	9162	9385	10865	11466	12207	13194	14456

PROFIT AND LOSS STATEMENT
(Thousands of Pesos)

Operating Year:	1	2	3	4	5	6	7	8	9	10
Revenue from Sales	840	1,021	1,215	1,421	1,643	1,890	2,151	2,403	2,674	2,962
Non-Operating Revenue	-	-	5	27	44	73	113	166	236	321
Total Revenue	840	1,021	1,219	1,448	1,687	1,964	2,264	2,570	2,910	3,283
Fuel and Oil	129	154	176	207	241	280	318	359	402	453
Operation and Maintenance (Generators)	82	82	82	82	82	102	102	102	102	102
Interest	550*	406	420	425	423	464	506	508	505	505
Depreciation	359	363	374	379	385	445	455	461	469	476
Operating, Maintenance and General Administration	144	148	158	163	168	179	188	194	201	208
Taxes	36	37	45	46	46	54	56	58	58	59
Total Operating Expenses	1,209	1,190	1,255	1,301	1,345	1,518	1,625	1,682	1,736	1,802
Net Income	(459)	(170)	(36)	147	341	440	639	887	1,174	1,480
Cash Gain at 25 KWH/M - Workers	69	71	73	74	75	77	61	62	64	65

* Includes ₱150,054 interest during construction. This amount normally would be, but has not been, capitalized pending the discussion by the cooperative with suitable accounting consultants.

CASH FLOW
(Thousands of Pesos)

	1	2	3	4	5	6	7	8	9	10
Receipts:										
Profits				147	341	440	639	887	1174	1480
Depreciation	359	363	374	379	385	445	455	461	469	476
House Wiring & Working Cap Loan	500									
Existing System Debt										
AID Dollar Loan	6781	112	247							
EA Peso Loan	1203	36	80							
Excess Property Loan	140									
Other Loans				156	185	1354	294	208	239	236
Membership Subscriptions	38	1	1	1	1	1	1	1	1	1
Amortization of Deferred Charges	1	1	1	1	1	1	1	1	1	1
Total Receipts	9022	513	703	684	913	2241	1390	1558	1884	2194
Disbursements										
Current Items	137									
Loss	459	170	36							
Excess Property Generator	140									
Initial Generating Units	3968									
New Generators						980				
Distribution System	3876	149	326	156	185	374	294	208	239	236
Payments:										
Existing System Debt	12	12	13	13	14	14	13	13	5	6
House Wiring & Working Cap Loan				500						
AID Dollar Loan				206	217	228	239	251	264	277
EA Peso Loan				66	66	66	66	66	66	66
Excess Property Loan			7	7	7	7	7	7	7	7
Other Loans							8	18	85	99
Total Disbursements	8592	331	382	948	489	1669	627	563	666	691
Increase (Decrease) in Cash	430	182	321	(264)	424	572	763	995	1218	1503
Beginning Balance	101	531	713	1034	770	1194	1766	2529	3524	4742
Ending Balance	531	713	1034	770	1194	1766	2529	3524	4742	6245
Net Cash Gain at 25 kwh	69	71	73	74	75	77	61	62	64	65

Profit & Loss Statement Funds Flow Statement for Expansion until Generating Capacity is Utilized **
(Thousands of Pesos) No additions to system and no new fund sources thereafter

Operating Year	1	2	3	4	5	6	7 *
Revenue from Operations				1,421	1,643	1,890	2,151
Non-Operating Income ^{1/}				27	33	51	82
Total Revenue				1,448	1,676	1,941	2,233
Operating Expenses							
Fuel and Oil				207	240	280	318
Op. & Main. (Gen.)				82	82	82	82
Taxes				46	46	46	46
Interest ^{2/}				425	423	423	425
Depreciation ^{2/}				379	385	396	406
Op., Main. & Gen Ad. Exp.				163	163	179	188
Total Operating Expense				1,301	1,345	1,406	1,465
Net Income				147	331	535	768
Funds Flow							
(Thousands of Pesos)							
Net Income				147	331	535	768
Depreciation				379	385	396	406
Interest				425	423	423	425
Total Sources				951	1,139	1,354	1,599
Less Debt Service ^{2/}				713	727	738	758
Net Cash Flow				234	413	617	841
Cash Reserve from Prior Year				388	466	722	1,165
Expenditure for additions							
funded from cash reserves				156	156	174	---
Cash Reserve Year End ^{3/}				466	722	1,165	2,006

*Operations will level off after year 6, but at or before end of year 7.

^{1/} Non-operating income decreases to the extent that cash reserves are depleted in funding additions to plant.

^{2/} Principal, interest and depreciation are all reduced to the extent that non-essential additions and additional generation are not added.

^{3/} Cash reserves are depleted to pay the total cost for additions in years 4 through 7.

**Use of 1,500 kw reserve capacity above peak capacity provides adequate generating margin to permit load realization for year 7.

V-M-C RURAL ELECTRIC SERVICE COOPERATIVES, INC.
Victorias, Negros Occidental

BALANCE SHEET
As of December 31, 1967

A S S E T S

		1967	1966
CURRENT ASSETS:			
Cash on Hand and in Banks	P 301,259.61		P 72,427.41
Accounts Receivable - Consumers	73,971.95		26,723.29
Accounts Receivable - Others	00. -		90. -
Deposits	13,000. -		18,000. -
Inventory	<u>121,427.04</u>		<u>126,454.38</u>
Total Current Assets		P 314,658.60	P 243,693.18
INVESTMENTS:			
Philippine Federation of Consumers' Cooperative		1,000. -	1,000. -
FIXED ASSETS:			
Cost	11,000,000.00		P 930,396.49
Less: Accumulated Depreciation	<u>10,998,988.30</u>		<u>37,986.32</u>
Net Book Value		801,011.70	892,420.17
DEFERRED CHARGES:			
Organization Expenses	P 9,977.71		P 10,977.43
Unexpired Insurance	1,012.74		684.40
Other Intangibles	- -		1,785.90
Debits in Progress	- -		3,942.36
Prepaid Interest	<u>1,211.62</u>		<u>1,211.62</u>
Total Deferred Charges		12,902.07	16,730.69
TOTAL ASSETS		11,220,498.04	P 153,895.44

V-M-C RURAL ELECTRIC SERVICE COOPERATIVES, INC.
Victorias, Negros Occidental

BALANCE SHEET
As of December 31, 1967

LIABILITIES AND MEMBERS' EQUITY

	<u>1967</u>	<u>1966</u>
CURRENT LIABILITIES:		
Due to VMC Sugarcane Planters' Cooperative Marketing Association, Inc.	P 146,210.46	P 156,464.95
Due to Victorias Milling Co., Inc.	16,382.45	29,994.04
Acceptances Payable	- . -	12,465.37
Less: Marginal Deposits	- . -	(2,428.44)
Deposits Payable - Farmers	472,003.53	303,677.78
Deposits Payable - Consumers	1,637. -	775. -
Matured Loans Payable	- . -	2,000. -
Matured Interest on Loans Payable	- . -	7,939.76
Other Current and Accrued Liabilities	- . -	1,190. -
	<u> - . -</u>	<u> - . -</u>
Total Current Liabilities	P 644,807.79	P 602,016.46
LONG TERM LIABILITIES:		
Unmatured Loans Payable - Term? Electrification All Institutions	224,800.15	235,208. -
	<u> - . -</u>	<u> - . -</u>
Total LIABILITIES	P 820,607.94	P 837,224.46
MEMBERS' EQUITY:		
Contributed Capital:		
Authorized - 100,000 shares at P 10.00	P 1,000,000.00	
Subscribed	P 1,124,700. -	P 1,149,000.00
Less: Subscription Receivable	702,000. -	823,350. -
	<u> - . -</u>	<u> - . -</u>
Issued & Outstanding	353,350. -	P 325,650. -
Reserve	(42,347.90)	(8,977.62)
	<u> - . -</u>	<u> - . -</u>
TOTAL LIABILITIES AND MEMBERS' EQUITY	P 1,220,498.04	P 1,151,895.44

V-M-C RURAL ELECTRIC SERVICE COOPERATIVES, INC.
Victorias, Negros Occidental

BALANCE SHEET
As of December 31, 1967

PROFIT & LOSS STATEMENT
For the Year Ended December 31, 1967

	<u>1967</u>	<u>1966</u>
Electric Operating Revenue	P 1189,257.63	P 48,510.23
Less: Electricity Purchased for Resale	<u>87,521.94</u>	<u>19,138.75</u>
Gross Profit	P 1101,735.69	P 29,371.48
Less: General and Administrative Expenses:		
Salaries and Wages	P 13,276.70	P 1,243.25
Traveling and Communication	4,887.78	1,322.20
Interest Expense	7,505.14	3,089.77
Office Supplies	786.78	152.74
Insurance Expense	4,101.56	785.40
Rent Expense	2,371.05	719.87
Legal and Audit Fees	1,866.25	282.60
Depreciation and Amortization	2,896.00	519.15
SSE Contribution	273.20	70.00
Publicity Expense	4,676.65	110.00
Amortization of Organization Expense	1,219.72	1,219.72
Depreciation	61,505.58	33,983.51
Bank Charges	- . -	6.00
Miscellaneous Expenses	716.97	12.65
Repairs & Maintenance - Electric		
Labor & Material	4,603.98	- . -
Fuel & Oil Expenses	2,526.95	- . -
Registration Fees & Licenses	1,271.00	- . -
Medical Expenses	795.50	- . -
Supervision & Engineering	<u>5,320.63</u>	- . -
Net Loss from Operations	P 140,601.44	P 43,516.95
	<u>38,865.75</u>	<u>14,145.47</u>
Less: Other Income:		
Interest Income	P 4,725.50	P 5,143.45
Membership Fees	25.00	25.00
Dividend Income	80.00	- . -
Gain on Sale of Equipment	524.18	- . -
Correction of Prior Years	<u>80.19</u>	- . -
	<u>5,494.87</u>	<u>5,168.45</u>
	P 33,370.88	P 8,977.02

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Diagrams of Existing and Proposed Systems

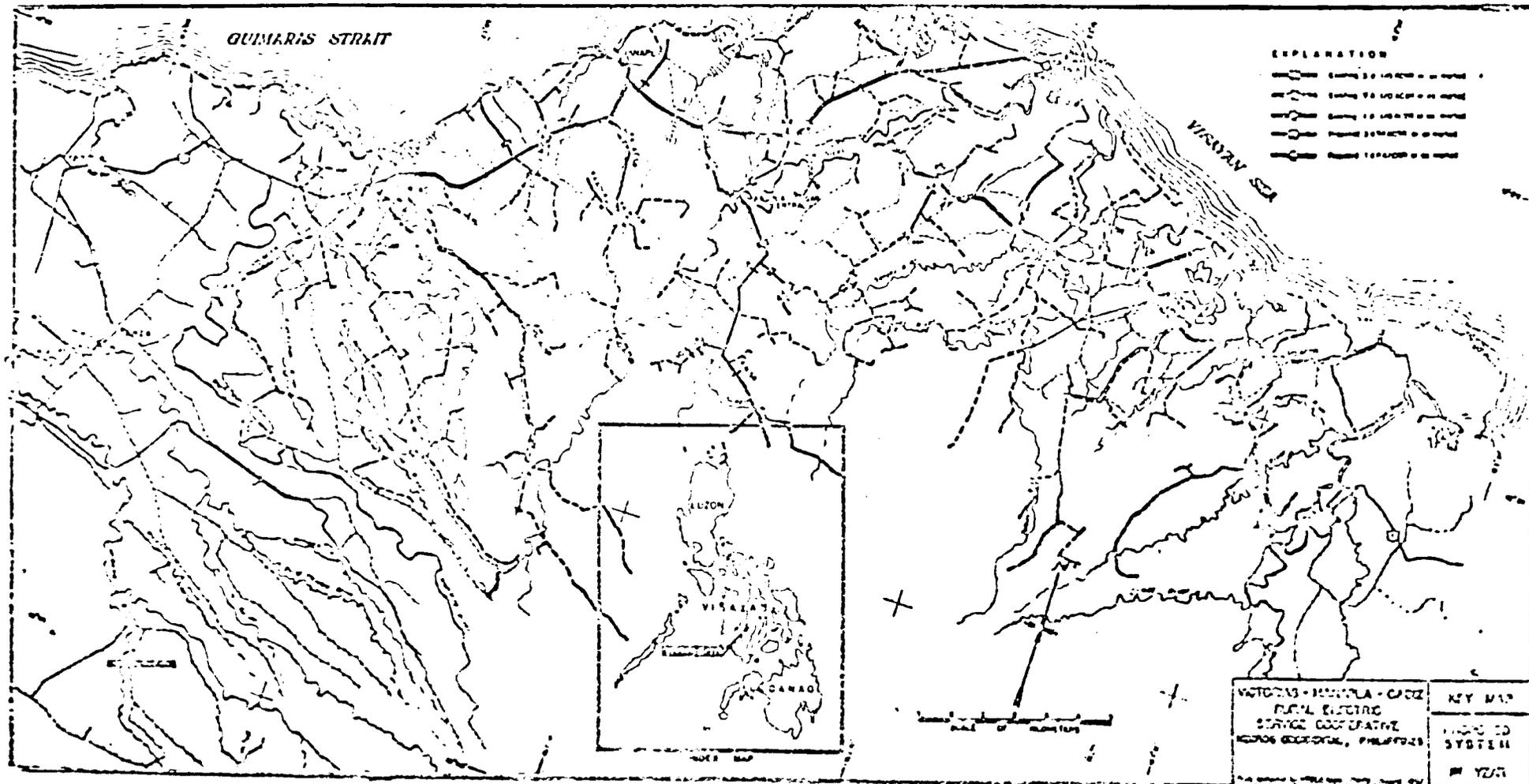


FIGURE 1

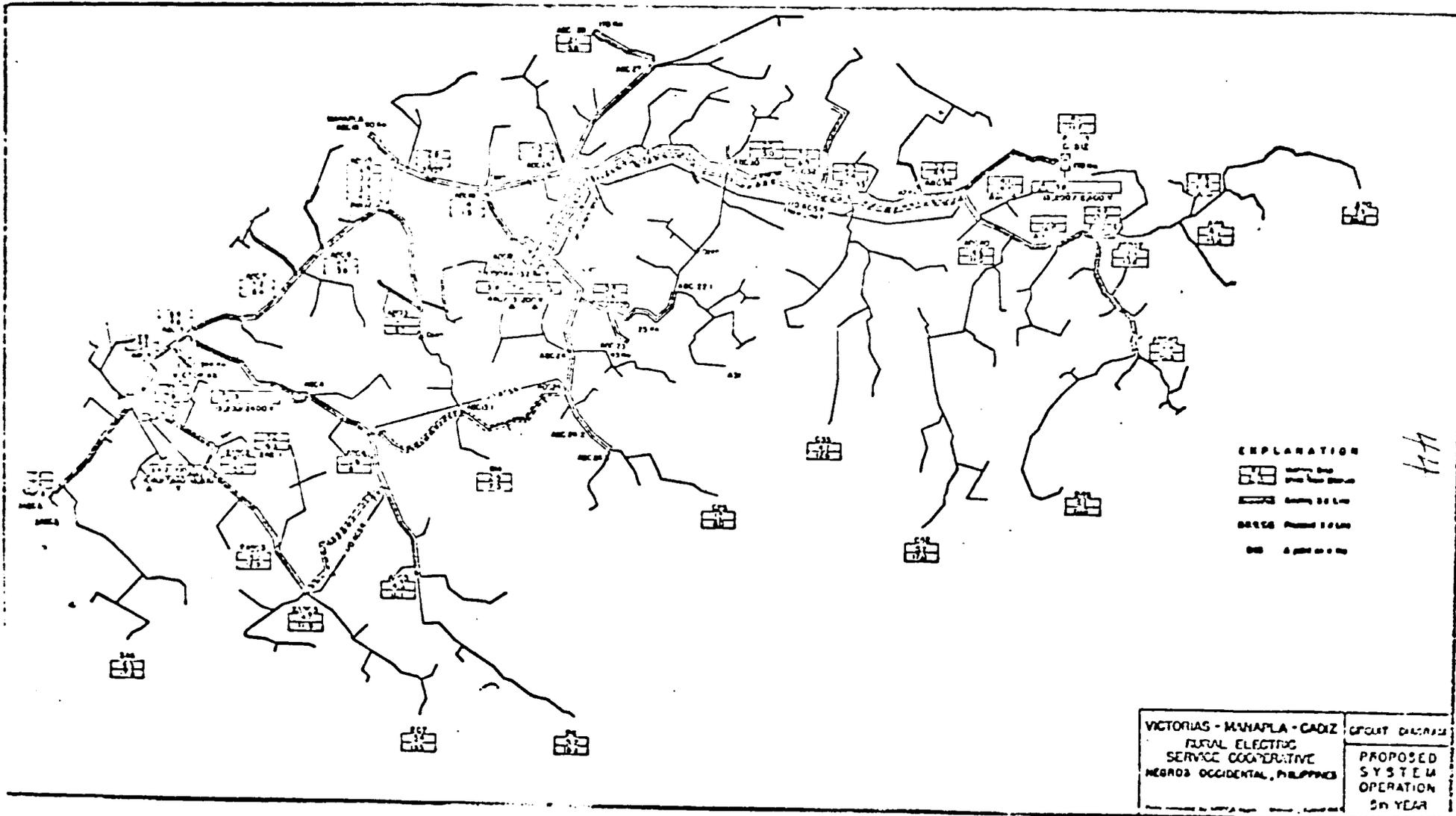


FIGURE 2

COST ESTIMATE
U. S. DOLLAR-PESCO COST COMPONENTS

AID-DLC/P-731
June 14, 1968

Annex 3

Description of Work:

	<u>KW</u>	<u>Pesos</u> <u>Cost/KW</u>	<u>Pesos</u> <u>Total Cost</u>	<u>US\$</u>	<u>PESOS</u>
First Year Construction					
New 1 ϕ ACSR Line (Main Line	260.0	3,610.00	938,600	192,040	187,720
New 1 ϕ ACSR (Subsidiary Taps)	50.0	3,610.00	180,500	36,930	36,100
New 1 ϕ 1/o ACSR Line	7.0	3,790.00	26,530	5,430	5,300
New 3 ϕ 4 ACSR Line	21.0	6,820.00	143,220	29,300	28,650
New 3 ϕ 1/o ACSR Line	14.0	7,080.00	99,120	20,290	19,800
New 3 ϕ 1/o ACSR-Future D.C.	3.0	8,500.00	25,500	5,220	5,100
Conversion					
2 ϕ 1/o to 3 ϕ 1/o ACSR	2.0	2,610.00	5,220	1,060	1,050
1 ϕ 4 ACSR to 3 ϕ 1/o ACSR	3.0	5,010.00	15,030	3,080	3,000
1 ϕ 4 ACSR to 3 ϕ 4 ACSR	2.0	2,700.00	5,400	1,100	1,100
Third Year Construction					
Construct 3 ϕ 1/o ACSR	17.0	7,080.00	120,360	24,600	24,100
Convert 3 ϕ 1/o ACSR to D.C. 1/o ACSR	3.0	3,590.00	10,770	2,190	2,200
Convert 1 ϕ 1/o ACSR to 3 ϕ 1/o ACSR	8.0	2,640.00	21,120	4,330	4,200
Services					
Secondary's	202.0	1,400.00	282,800	57,850	56,600
Underbuilt	84.0	4,510.00	378,840	77,500	75,800
Transformers-KVA	38.0	2,000.00	76,000	15,550	15,200
Meters	5000 KVA	100.00/KVA	500,000	121,480	25,000
Oil Circuit Recloser	7000 Units	80.00/ea.	560,000	128,900	56,000
Generator & Plant-1st Year	74 Units	800.00/ea.	59,200	13,630	5,900
Switching Station	2-2000 kw Units	842.80/kv	3,371,200	827,900	126,000
Right-of-Way Clearing	1 Unit	50,000.00/ea.	50,000	10,230	10,000
Sub-Total	100	200.00	20,000	-0-	20,000
Contingencies & Overhead @ 10%			76,889,410	\$1,570,510	7708,820
Engineering @ 7%			666,990	136,470	133,400
SUB-TOTAL			466,800	47,830	279,800
			<u>76,022,200</u>	<u>\$1,762,910</u>	<u>71,122,020</u>
General Plant Investment					
Transportation Equipment			100,000	25,600	-0-
1-Jeep Station Wagon					
1-Line Truck-A-Frame 2-1/2 Ton					
2-Pick Up Truck-4 Wheel Drive					
1-Pole Trailer					

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COST ESTIMATE
U. S. DOLLAR-PESO COST COMPONENT

Annex 3
Page 2

	<u>Qty</u>	<u>Cost/Qty</u>	<u>Pesos</u> <u>Total Cost</u>	<u>US\$</u>	<u>PESOS</u>
Communication Equipment					
3 Base Station			50,000	12,800	-0-
6 Mobile Unit					
1 Antenna & Assoc. Equipment					
Line Tools-Shop Tools			25,000	6,400	-0-
Office Equipment			60,000	13,800	6,000
Total			<u>₱235,000</u>	<u>\$58,600</u>	<u>₱6,000</u>
Wiring Plan Investment					
Wiring Plan (Nipa) 6,600 @ P50.00 ea.			330,000	-0-	330,000
Contingencies @ 10%			33,000	-0-	33,000
Total			<u>₱363,000</u>	<u>-0-</u>	<u>₱363,000</u>
Sub-Total			₱6,621,200	\$1,821,510	₱1,491,020
Working Capital Required			137,000	-0-	137,000
Grand Total Required			<u>₱8,758,200</u>	<u>\$1,821,510</u>	<u>₱1,628,020</u>

* Pesos to US Dollar Rate - 3.92

14/6

LOAD, COST, AND REVENUE PROJECTIONS

DETERMINATION OF OPERATING REVENUE

	<u>Y E A R</u>									
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
<u>OVERSEER HOUSE</u>										
A. Average Mo. kWh Per Consumer	350	390	440	490	550	630	610	640	670	700
B. Charge as per Rate Schedule/kwh	14.3¢	13.8¢	13.4¢	13.1¢	12.7¢	12.6¢	12.5¢	12.3¢	12.2¢	12.1¢
C. Average Monthly Revenue/Cons.	P 50.00	P 54.00	P 59.00	P 64.00	P 70.00	P 75.00	P 76.00	P 79.00	P 82.00	P 85.00
D. Average Number of Consumers	195	216	328	255	275	320	365	410	455	500
E. Average Monthly Revenue	P 9,800	P 11,664	P 13,924	P 16,320	P 19,250	P 23,560	P 27,740	P 32,390	P 37,310	P 42,500
F. Annual Revenue	P117,600	P139,968	P167,088	P195,640	P231,000	P282,320	P332,880	P388,680	P447,720	P510,000
<u>PLANTER-OWNED</u>										
A. Average Mo. kWh Per Consumer	1130	1150	1290	1400	1500	1630	1780	1900	2050	2210
B. Charge as per Rate Schedule/kwh	11.2¢	10.9¢	10.7¢	10.5¢	10.3¢	10.1¢	10.0¢	9.9¢	9.7¢	9.6¢
C. Average Monthly Revenue/Cons.	P 123.00	P 130.20	P 138.20	P 147.00	P 155.00	P 165.40	P 178.80	P 187.00	P 199.00	P 211.80
D. Average Number of Consumers	84	74	84	94	104	114	124	134	144	154
E. Average Monthly Revenue	P 7,872	P 9,634	P 11,608	P 13,818	P 16,120	P 18,855	P 21,799	P 25,658	P 28,656	P 32,617
F. Annual Revenue	P 94,464	P115,617	P139,305	P165,816	P193,440	P226,267	P261,560	P307,896	P343,872	P391,408
<u>WORKER</u>										
A. Average Mo. kWh Per Consumer	20	25	30	35	40	45	50	55	60	65
B. Charge as per Rate Schedule/kwh	25¢	24¢	23.3¢	22.8¢	22.5¢	22.2¢	22.0¢	21.5¢	21.0¢	20.6¢
C. Average Monthly Revenue/Cons.	P 5.00	P 6.00	P 7.00	P 8.00	P 9.00	P 10.00	P 11.00	P 11.80	P 12.60	P 13.40
D. Average Number of Consumers	6350	6475	6600	6735	6870	7000	7150	7290	7435	7585
E. Average Monthly Revenue	P 31,750	P 38,850	P 46,200	P 53,880	P 62,010	P 70,000	P 78,650	P 86,022	P 93,681	P101,630
F. Annual Revenue	P381,000	P466,200	P554,400	P646,560	P744,120	P840,000	P943,800	P1,032,264	P1,124,172	P1,219,668
<u>SMALL COMMERCIAL</u>										
A. Average Mo. kWh Per Consumer	125	135	145	155	165	175	185	195	205	215
B. Charge as per Rate Schedule/kwh	20.8¢	20.4¢	20.1¢	19.2¢	19.6¢	19.4¢	19.2¢	18.0¢	18.9¢	18.7¢
C. Average Monthly Revenue/Cons.	P 26.00	P 27.60	P 29.20	P 30.80	P 32.40	P 34.00	P 35.80	P 37.20	P 39.80	P 40.40
D. Average Number of Consumers	50	32	54	56	58	61	64	67	70	73
E. Average Monthly Revenue	P 1,300	P 1,435	P 1,576	P 1,724	P 1,879	P 2,074	P 2,278	P 2,492	P 2,718	P 2,943
F. Annual Revenue	P 15,600	P 17,222	P 18,921	P 20,697	P 22,550	P 24,888	P 27,340	P 29,908	P 32,602	P 35,320
<u>SCHOOL AND CHURCHES</u>										
A. Average Mo. kWh Per Consumer	100	105	110	115	120	125	130	135	140	145
B. Charge as per Rate Schedule/kwh	13.0¢	12.7¢	12.5¢	12.2¢	12.0¢	11.8¢	11.6¢	11.4¢	11.2¢	11.1¢
C. Average Monthly Revenue/Cons.	P 13.00	P 13.35	P 13.70	P 13.95	P 14.40	P 14.75	P 15.10	P 15.45	P 15.68	P 16.05
D. Average Number of Consumers	30	31	32	33	34	35	36	37	38	39
E. Average Monthly Revenue	P 390.00	P 409.65	P 438.40	P 461.25	P 489.60	P 515.75	P 543.60	P 572.25	P 601.52	P 631.95
F. Annual Revenue	P 4,680	P 4,915.80	P 5,260.80	P 5,535.00	P 5,875.20	P 6,191.25	P 6,523.20	P 6,867.00	P 7,218.24	P 7,583.40
<u>IRRIGATION</u>										
A. Average Mo. kWh Per Consumer	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
B. Charge as per Rate Schedule/kwh	8¢	8¢	1¢	8¢	8¢	8¢	8¢	8¢	8¢	8¢
C. Average Monthly Revenue/Cons.	P 200	P 200	P 200	P 200	P 200	P 200	P 200	P 200	P 200	P 200
D. Average Number of Consumers	10	12	14	16	18	21	25	29	34	40
E. Average Monthly Revenue	P 2,000	P 2,400	P 2,800	P 3,200	P 3,600	P 4,200	P 5,000	P 5,800	P 6,800	P 8,000
F. Annual Revenue	P 24,000	P 28,800	P 33,600	P 38,400	P 43,200	P 50,400	P 60,000	P 69,600	P 81,600	P 96,000

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Y E A R

LARGE POWER	1	2	3	4	5	6	7	8	9	10
A. Average Mo. kWh Per Consumer	20000	21000	22000	23000	24000	25000	25000	25000	25000	25000
B. Charge per Rate Schedule/kwh	9.9¢	9.8¢	9.7¢	9.6¢	9.5¢	9.4¢	9.4¢	9.4¢	9.4¢	9.4¢
C. Average Monthly Revenue/Cons.	P 1,990	P 2,065	P 2,140	P 2,215	P 2,290	P 2,365				
D. Average Number of Consumers	3	4	5	6	7	8	9	10	11	12
E. Average Monthly Revenue	P 5,970	P 8,260	P 10,700	P 13,290	P 16,030	P 18,920	P 21,285	P 23,650	P 26,016	P 28,380
F. Annual Revenue	P 71,640	P 99,120	P 128,400	P 159,480	P 192,360	P 227,040	P 256,420	P 283,800	P 312,180	P 340,560

SMALL UTILITIES

Total kWh for Month (2)	111,000	124,500	139,500	156,000	174,000	195,000	219,000	243,000	273,000	303,000
A. Average Mo. kWh/cons.	37,000	41,500	46,500	52,000	58,000	65,000	73,000	81,000	91,000	102,000
B. Charge per Rate Schedule/kwh	9.42¢	9.31¢	9.22¢	9.17¢	9.09¢	9.00¢	8.96¢	8.91¢	8.81¢	8.74¢
C. Average Monthly Revenue/Cons.	P 3,485	P 3,863	P 4,287	P 4,768	P 5,272	P 5,850	P 6,533	P 7,217	P 8,017	P 8,914
D. Average Number of Consumers	3	3	3	3	3	3	3	3	3	3
E. Average Monthly Revenue	P 10,456	P 11,590	P 12,861	P 14,305	P 15,816	P 17,550	P 19,600	P 21,651	P 24,031	P 26,744
F. Annual Revenue	P 125,474	P 139,081	P 154,342	P 171,662	P 189,799	P 210,600	P 235,206	P 259,816	P 288,616	P 320,932

SMALL LIGHTS

A. Average Mo. kWh Per Consumer	50	50	50	50	50	50	50	50	50	50
B. Charge per Rate Schedule/kwh	24¢	24¢	24¢	24¢	24¢	24¢	24¢	24¢	24¢	24¢
C. Average Monthly Revenue/Cons.	P 12.00	P 12.00	P 12.00	P 12.00	P 12.00	P 12.00	P 12.00	P 12.00	P 12.00	P 12.00
D. Average Number of Consumers	25	30	75	100	125	160	175	200	225	250
E. Average Monthly Revenue	P 300	P 600	P 900	P 1,200	P 1,500	P 1,800	P 2,100	P 2,400	P 2,700	P 3,000
F. Annual Revenue	P 3,600	P 7,200	P 10,800	P 14,400	P 18,000	P 21,600	P 25,200	P 28,800	P 32,400	P 36,000

S U M M A R Y

ANNUAL REVENUE	1	2	3	4	5	6	7	8	9	10
OVERSEAS	P 117,600	P 130,968	P 167,088	P 195,840	P 231,090	P 230,320	P 332,850	P 308,650	P 447,720	P 610,000
INDUSTRIAL	94,454	115,617	129,305	165,816	193,440	220,227	231,190	290,650	322,672	371,600
WORKERS	331,000	408,200	554,400	646,500	744,120	840,000	943,900	1,022,024	1,124,172	1,219,000
SMALL COMMERCIAL	15,000	17,222	18,921	20,637	22,650	24,828	27,340	29,903	32,522	35,200
SCHOOLS AND CHURCHES	2,850	7,309	7,795	8,226	8,812	9,345	9,832	10,456	11,025	11,620
IRRIGATION	24,500	28,100	33,600	38,400	43,200	50,400	60,000	69,600	81,600	93,600
RESIDENTIAL	71,650	99,120	128,400	159,480	192,360	227,040	256,420	283,800	312,180	340,560
OTHER UTILITIES	125,474	139,081	154,342	171,662	189,799	210,600	235,206	259,816	288,616	320,932
SECURITY LIGHTS	3,600	7,200	10,800	14,400	18,000	21,600	25,200	28,800	32,400	36,000
TOTAL REVENUE	P 849,218	P 1,029,520	P 1,214,653	P 1,421,152	P 1,643,282	P 1,809,420	P 2,181,350	P 2,403,420	P 2,674,105	P 2,961,857
ADDITIONAL SOLD	5,672,000	7,222,000	8,123,000	10,140,000	11,803,000	13,126,000	16,000,000	18,150,000	20,808,000	23,000,000
AVERAGE REVENUE PER kWh SOLD	14.2¢	14.2¢	14.2¢	14.0¢	13.8¢	13.6¢	13.4¢	13.2¢	13.0¢	12.8¢

Total kwh generated P6,811,200 P8,474,400 P10,060,680 P11,863,800 P13,766,800 P15,980,400 P18,194,400 P20,516,280 P22,968,960 P25,858,560

System Loss (%) .17 .17 .15 .15 .14 .13 .12 .12 .11 .11

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Supporting Data for Projections

The projections of the feasibility study have been based upon the experience of systems operating in the Philippines and upon the judgment of the NRECA team. Additional supporting data is available from one of the several A.I.D. financed rural electrification projects in Latin America. The project in Nicaragua has been in operation for about 1¹/₂ years. The other projects have not progressed far enough to offer reliable data.

The items under review are ability to pay power bill, demand projections, load factor, theft losses and uncollectible accounts.

1. Income levels

VRESCO	average worker income	₱1500/yr (\$375)
MORESCO	average worker income	₱1750/yr (\$446)
	average family income for the community	₱2500/yr (\$368)
Iligan)) higher but not significantly different
Cagayan de Oro)	
Nicaragua	average worker income	\$642/yr
	average family income	\$1,044/yr

2. Cost of power (\$)	<u>20 KWH</u>	<u>30 KWH</u>	<u>40 KWH</u>	<u>50 KWH</u>	<u>60 KWH</u>	<u>75 KWH</u>
VRESCO*	1.28	1.79	2.30	2.81	3.21	3.83
MORESCO	1.02	1.40	1.79	2.17	2.55	3.13
Iligan	1.02	1.40	1.79	2.17	-	3.01
Cagayan de Oro	.92	1.38	1.84	2.19	-	3.09
Nicaragua	2.61	3.75	4.61	5.47	6.32	7.30

* \$1.25 paid by sugar planters

3. Load Projections	year			
	1	2	3	4
VRESCO	25	30	35	40
MORESCO	40	45	50	55
Iligan (actual)	-	-	-	-
Cagayan de Oro (actual)	80	-	-	-
Nicaragua - (projected)	51	44	44	44
(actual)	64	71	-	-

4. Load Factor

Load factor for Nicaragua was taken initially at 40 percent. This was exceeded during the first year and has continued above projections thereafter. Load factors for Iligan and Cagayan de Oro are both substantially above 40 percent.

5. Theft losses and uncollectibles

Iligan, Cagayan de Oro, and Visayan Electric Company of Cebu City all report theft losses as negligible and uncollectibles of about 1/4%. The Nicaraguan system was originally municipally owned. Uncollectibles were at 50 percent, with public officials considering free service as incident to their position. The municipality began threatening disconnection for non-payment and uncollectibles fell immediately to 15 percent.

Explanation of Projections of Load Growth by User

1. Workers

Projections from worker utilization of electric power are based upon initial electrification to 80 percent of the worker families on haciendas within the service area. Since the installation costs and the minimum rate of ₱5 for the first 20 KWH will be paid by the planters, and since there is very strong support by the planters for electrification, this figure is considered reasonable.

A modest level of increase in the number of worker families receiving service is projected over the ten year period, taking into account normal service increases, population growth, and population movement into the service area.

An increase in average demand of 5 KWH per month each year for the first ten years of operation is projected. This average includes new service additions. However, the initial average level is taken as the 25 KWH, which reflects a cost of ₱1 (\$.26) to the worker. At the end of ten years of operation the average worker family will consume an average of 70 KWH at a cost of ₱14.20 (\$3.63). This corresponds to a charge of ₱9.00 (\$2.36) per month to the worker (₱14.20 less ₱5 minimum charge paid by the planter). While this represents a significant cost to the worker family, the low capital goods consumption level of the worker's mode of living should be considered. For example, the typical nipa hut which provides shelter for the worker family has a capital cost of about ₱300 (slightly more than \$200).

2. Landowner-Planter

The load forecast estimate of 1100 KWH per month for this class of customer was taken from existing records of the Cooperative. The Cooperative is now serving 48 haciendas and on each hacienda the owner has his residence, which is modern with many conveniences. Upon receiving electricity the owners will install a variety of electric appliances. The main house will be air-conditioned, electric ranges installed, water pumps, electric irons, and many other small appliances purchased. It is expected that all new customers in this rate classification will do as their neighbor - go all electric. The rate of growth is taken from the existing consumer load growth curves, and therefore, it is expected that within the study period each landowner-planter will be using an average of 2210 KWH per month in the tenth year. This represents a progressive growth each year with the initial KWH usage doubling during the 10th year. This class of customer in the U.S. would normally have a rate of growth that would double his KWH usage in 6 to 7 years with a higher initial consumption.

3. Overseer

The load growth of this class of customer was taken from growth charts of similar customers served by other electric utilities in the Philippines.

4. Small Commercial

The number of small commercial users was estimated based on an actual field count of such establishments and again the usage and load growth is taken from experience of the NRECA team and comparison of similar customers of other electric utilities in the Philippines, namely, A.S. Diaz Electric Company of Bacolod City, Negros.

5. Irrigation

KWH usage for irrigation is based on installed H.P. motors and pumps. A special off-peak incentive rate was designed for this class of customer and it is expected that the Planters will use irrigation to increase their crop yield.

Many of the planters in the cooperative area have expressed an interest in irrigation. A special pilot irrigation project has been set up on the cooperative's existing lines.

6. Schools and Churches

Community activities are centered around the schools and churches in the region. All of these community and public buildings will install or have installed electricity. The KWH usage and load growth projection are judgments based on other applicable experience. The electricity will be used for lights, fans, and water pumps.

7. Other Utilities

The Cooperative has an existing contract with three private franchiseholders. These private companies serve the Poblacions of Victorias, Manapla and Cadiz, which are prosperous and have some light industry. Once electric power is made available to these franchiseholders in an unlimited quantity new load will be added and improvement made in their electric systems. The Cooperative has just taken over service in Manapla.

Consumption rates of each utility have been determined by checking the Cooperative's records. An average load growth of 11% is projected and experience of other utilities has shown this estimate to be realistic.

VRESCO: Implementation Timetable

Annex 6

	MONTH																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Engineering design and survey	—————																	
Plans and specifications			———															
Construction contract bidding					———													
Material orders				—————														
Construction							—————											
Close-out																		———

This is a preliminary estimate of timetable for the project. The Engineering firm will prepare a more detailed chart when design work is accomplished.

Participating Agencies of the GOP

1. Development Bank of the Philippines

DBP is the larger of the two public sector development banks. The DBP loans and guarantees portfolio includes generally medium and long term financing for the entire spectrum of the private sector, with principal emphasis on the urban industrial sector. Recently, increased emphasis has been placed upon agricultural and agribusiness projects in rural areas. Interest rates are about 9 percent and the normal guarantee fee is 2 percent.

DBP has authority to undertake foreign borrowing. DBP has floated bond issues within the Philippines and abroad. Foreign borrowings may be guaranteed by the GOP.

Relations between AID and DBP are good. AID's predecessor ICA made a local currency loan to DBP for a program of small agricultural loans. Implementation of that loan has not been wholly satisfactory, because the very sizable requirement for administrative time and attention was not forthcoming. Recently, DBP has entered into an agreement with AID to accept assignment of a defaulted AID loan and make repayment on a rescheduled basis, undertaking themselves to recover from the borrower.

Under this project, DBP will serve as a conduit for the funds, and the A.I.D. loan will be guaranteed by the GOP. DBP will receive a fee of $1\frac{1}{2}\%$ to cover the costs of administering the project, plus the risk of loss in the event of default by the Cooperative including reimbursement of NPC for expenses incurred in technical administration of the project for the GOP.

Financial statements for DBP appear on the following page.

CONSOLIDATED STATEMENTS OF CONDITION

	June 30, 1967	June 30, 1966
RESOURCES		
Cash and Due from Banks	P 174,374,351	P 64,243,332
Investments in Securities	107,217,805	48,321,537
Agricultural Loans	277,390,183	244,020,795
Industrial Loans	766,455,769	679,563,839
Real Estate & Miscellaneous Loans	101,403,178	88,056,952
Stocks & Advances - Private Development Banks	45,671,564	42,469,584
Bank Premises, Furniture and Fixtures	27,218,579	18,679,720
Other Resources	30,083,392	23,282,547
Trust Fund Resources	162,993,001	159,544,904
Total Resources	<u>P1,692,807,827</u>	<u>P1,368,208,210</u>
LIABILITIES AND CAPITAL		
Long Term Liabilities	P 958,320,678	P 726,044,436
Savings & Time Deposits	74,115,671	38,218,574
Other Liabilities	72,252,879	36,309,834
Capital & Surplus	425,125,598	408,090,412
Trust Funds	162,993,001	159,544,904
Total Liabilities & Capital	<u>P1,692,807,827</u>	<u>P1,368,208,210</u>
CONTINGENT ACCOUNTS		
Loans Guaranteed Outstanding		
Long Term	P 193,755,636	P 98,568,098
Short Term	26,896,052	—
Commitment on Deferred Payment Loans	10,959,879	17,519,067
Total	<u>P 231,611,567</u>	<u>P 116,087,165</u>

CONSOLIDATED STATEMENTS OF EARNINGS

	YEAR ENDED JUNE 30	
	1967	1966
EARNINGS		
Interest on Loans	P 83,818,350	P 63,831,629
Other Earnings	20,540,176	7,784,877
Trust Funds Earnings	7,225,590	6,595,281
Total Earnings	<u>P 111,584,116</u>	<u>P 78,211,787</u>
EXPENSES		
Administrative Expenses	P 32,158,565	P 23,180,669
Interest Expenses	44,319,577	37,043,537
Income Tax	8,167,823	2,859,302
Trust Funds Expenses	1,093,297	1,143,637
Total Expenses	<u>P 85,739,262</u>	<u>P 64,227,145</u>
Net Income Before Reserves	P 25,844,854	P 13,984,642
Reserve for Contingencies	1,200,000	1,200,000
Net Income	<u>P 24,644,854</u>	<u>P 12,784,642</u>

2. National Power Corporation

The National Power Corporation is a wholly-owned Government Corporation of the Philippines, created by the Commonwealth Act No. 120 in 1936, and reconstituted after the Japanese occupation in 1945. The Act nationalized all potential hydroelectric sites and reserved them for use of NPC for development of hydroelectric power. NPC's corporate existence has been extended to the year 2000. NPC has been given broad power to carry out the purposes of its creation. These include: the right to own, operate and construct facilities; to sell, lease and mortgage property; to sell electric power and to fix rates which shall not be subject to review by the Public Service Commission; and to exercise the right of eminent domain. The Corporation is exempt from all taxes, except real property tax, and from all importation or other fees of the Government of the Philippines or local governments. The total authorized indebtedness of the Corporation is 500,000,000 pesos. Long term indebtedness at the end of 1967 was about 316 million pesos (\$80 Million). Projects increasing the indebtedness must be approved by the National Economic Council (NEC).

The Corporation is authorized to borrow up to \$100,000,000 of foreign exchange from the Ex-Im Bank, IBRD or any other international financial institutions. At the end of 1967, long term foreign exchange borrowings were:

IBRD	₱188.3 million	\$48.03
Ex-IM Bank	27.5 million	7.02
Japanese Reparations	17.8 million	4.54
Approximate Total	₱233.6	\$59.59

In addition a loan of approximately ₱48 million, (12 million dollars) was authorized by IBRD for the 75 mwe Bataan Thermal plant.

The President of the Philippines is authorized to guarantee these borrowings unconditionally on behalf of the GOP. Authorized capital stock is ₱250,000,000 wholly-owned by the government. NPC also is authorized to float bond issues, with approval from the President of the Philippines. Therefore, there is considerable capacity in NPC to obtain both dollar and local financing to support a program of rural electrification.

The Corporation is run by a five-man Board of Directors, appointed by the President, for a term of three years. Administrative responsibilities rest in a General Manager but basic decisions are generally submitted to the Board.

Electric power generated by NPC is almost entirely from hydroelectric stations. A 75 mw thermal plant is presently under construction. NPC maintains and operates two distribution grids: one in northern Luzon region, the other on the Island of Mindanao. The grid system in northern Luzon is interconnected with the Manila Electric Company (MERALCO). Meralco has

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been expanding its installed generating capacity at a very rapid rate and NPC is threatened with possible excess capacity in the not too distant future.

NPC load demand for northern Luzon is about 180 megawatts and for Mindanao is somewhat less than 50 megawatts.

The Mindanao system consists of 69 KV distribution line running from Maria Christina hydroelectric station near the City of Iligan to the City of Cagayan de Oro.

The Maria Christina site has a potential of 700 megawatts of hydroelectric power, of which 150 megawatts of firm capacity are expected to be completed within the next year. Because the Iligan Steel Mill may abandon its plans for an electric furnace, load demand is considerably below expectations and there is a large block of low cost power available for any potential market.

NPC is a favored institution for the promotion of a national program for rural electrification. It stands to benefit substantially through expanded sales from the development of systems inter-connected with its transmission lines in northern Luzon and Mindanao; it has a competent engineering and planning staff of more than sufficient size, particularly at present since no hydroelectric power plants are under construction; technical assistance can easily be offered to projects financed under AID loans or other loan sources; and NPC enjoys good relations with international lending institutions and foreign banks, particularly with IBRD.

3. Electrification Administration

The Electrification Administration was created by RA No. 2717 in June 1960. This was implemented on October 1962, with the Agency charged with the following functions:

1. To furnish cheap and dependable electric power and facilities in order to promote and accelerate the agricultural and industrial development of the country;
2. to make loans for electrification;
3. to plan, coordinate, program and supervise production, transmission and distribution systems for electric power;
4. to make studies concerning the condition and progress of electrification of any region of the country;
5. to encourage and aid local governments and cooperative electric consumers associations;
6. to publish and disseminate information; and
7. to undertake research for the greater use and development of locally available fuel.

The agency is responsible directly to the President. Offices are established in Quezon City with a permanent staff of 125, plus casual labor. The Administrator is Mr. Rizalino E. Lopez. Funds for the administration and operation of the agency are provided annually by Congressional action on the national budget proposal.

A revolving fund is established for financing the loan program. This fund is authorized at ₱25 million, but to date only about ₱20 million have been made available. Loans are made at 3% interest and for periods not more than 25 years, but require a maximum return on rate base of 6%. For all practical purposes, this eliminates private utility operations. Principal repayments are returned to the revolving fund. Interest is used in a special fund at the discretion of the Administrator.

In FY 1965 A.I.D. extended assistance to the Electrification Administration in the amount of ₱5 million from P.L. 480 Funds to be used for supplies and equipment in association with the procurement of diesel generators under the Reparations Agreement with Japan. This program aimed to bring electric power to over 217 municipalities in rural areas of the country which were without any source of electric power supply. In FY 1967 the amount of peso loan was reduced from ₱5 million to ₱3.4 million owing to delays in the receipt of reparations equipment. The number of municipalities receiving assistance was also reduced.

The Performance of EA

There is a general absence of established policies and procedures at EA. There is no long-range planning or program and decisions are made in accordance with the expediency or pressure of the moment. All major decisions and many minor, even trivial ones are reserved exclusively to the Administrator. The agency is grossly overstaffed in relation to its accomplishments.

Funds available to EA are inadequate to support a substantial nationwide program. The direction of funds has been influenced by political judgements and emphasis has been placed upon a wide distribution of funds to induce recognition from a large number of people. Small generating plants have been authorized, and most lack the capacity and feasibility to help the economy of rural areas. Many projects have never been completed.

The Role of EA in the Nationwide Program

President Marcos has recognized the inability of EA to mobilize and support a successful nationwide program for electrification. The President indicated by his own words and through Secretary Salas that the support of other agencies, particularly the National Power Corporation, is essential. Therefore, the GOP has endorsed a role for EA, limited to financing the local currency cost for this project.

Existing Schedule to be RetainedSchedule III - GENERAL POWER RATESAvailability:

In the area covered by the distribution system of the Cooperative. Customers located in areas covered by the franchise holder of the town of Victorias are excluded. Also available to the franchise of Victorias.

Applicability:

Franchise holder of the town of Victorias and customers who guarantee a minimum monthly billing demand of 40 kilowatts.

Character of Service:

13,200 volts, 60 cycles, 3-phase.

Rates (Per Month):

Demand Charge: For each kilowatt of billing demand -
₱5.00 per KW per month.

Energy Charge: ₱0.075 per KWH.

Minimum Monthly Bill:

To be based on the billing demand but not less than ₱300.00 per month.

Note 1: Billing demand shall be determined by measurement using a maximum demand-meter with a 15-minute demand interval.

Note 2: Power Factor Adjustment Clause:

The energy charge of ₱0.75 per KWH is based on a power factor of 85% lagging which the customer agrees to maintain. If the customer's average monthly power factor vary from 85% lagging, the KWH metered during the month shall, for billing purposes, be multiplied by the following constants:

Existing Schedule to be RetainedSchedule III - GENERAL POWER RATES (continued)

<u>Average Monthly Power Factor</u>	<u>Constant</u>
1.00	0.960
0.95	0.970
0.90	0.980
0.85	1.000
0.80	1.025
0.75	1.050
0.70	1.075
0.65	1.100
0.60	1.150
0.55	1.200
0.50	1.250

For Power Factors between any two steps above, use the constant corresponding to the higher power factor.

NOTE: RATE SCHEDULE IN CASE NOS. 63-5143
AND 63-5144 ARE PROVISIONALLY APPROVED
BY THE PUBLIC SERVICE COMMISSION.

New Rate Schedule
Replaces Existing Schedule ISchedule A - RESIDENTIAL METER RATESAvailability:

In the area covered by the distribution system of the Cooperative.

Applicability:

Residential customers for all domestic purposes, and/or small churches or schools. Where a customer conducts a business or industry in the same premises, this Schedule A will apply, provided that more than half of the total connected load are for residential and domestic purposes. Otherwise, said customer shall be billed under Schedule B, Commercial Rate or Schedule C, General Power Rates, whichever is applicable.

Character of Service:

Single-phase, 60 cycles, at available secondary voltage.

Rates (Per Month):

For the first	20 KWH at P5.00
For the next	30 KWH at P0.20 per KWH
For the next	50 KWH at P0.16 per KWH
For the next	200 KWH at P0.13 per KWH
For the next	700 KWH at P0.10 per KWH
All over	1000 KWH at P0.80 per KWH

Minimum Per Month - P5.00

New Rate Schedule
Replaces Existing Schedule II

Schedule B - COMMERCIAL METER RATES

Availability:

In the area covered by the distribution system of the Cooperative.

Applicability:

Commercial customers using the premises for business purposes. Where a customer resides in the same premises, this Schedule B will apply, provided that more than half the total connected load is for commercial purposes.

Character of Service:

Single-phase or three-phase, 60 cycles, at available secondary voltages.

Monthly Energy Charge:

- For the first 40 KWH at P10.00
- For the next 60 KWH at P0.20 per KWH
- For the next 300 KWH at P0.16 per KWH
- For the next 600 KWH at P0.13 per KWH
- All over 1000 KWH at P0.10 per KWH

Monthly Demand Charge:

- First 20 KW, no demand charge
- Next 230 KW, of billing demand at P5.00 per KW
- Minimum per month - P10.00 or contract demand.

SCHEDULE - IRRIGATION

Availability:

In the area covered by the existing three-phase distribution lines of the Cooperative.

Applicability:

To any customer, for irrigation purposes, who agrees to use electric services only during off-peak hours of the electric distribution system, and agrees also to pay the cost of system improvement and additions necessary to provide the service. Otherwise, Schedule B will be applicable for such service.

Character of Service:

Three-phase, 60 cycles, at available secondary voltages.

Monthly Energy Charge:

Energy charge - ₱0.08 per KWH

Minimum Monthly Bill:

Minimum ₱30.00 per month.

Capital Investment:

The customer agrees to provide all funds to the Cooperative for any new capital investment the Cooperative would have to make to serve such irrigation load.

SCHEDULE SLAvailability:

In the area covered by the distribution system of the Cooperative, and where the municipal street lighting service rates do not apply.

Applicability:

Applicable, only under contract, to security lighting of customer property by means of Mercury-Vapor luminaries supported by short brackets mounted on wood poles of the Cooperative's existing distribution system or extensions from this system. In all cases the Mercury-Vapor luminaire, bracket and control equipment shall be installed, owned and maintained by the Cooperative. Security lighting service will be provided only at locations which are accessible to the Cooperative trucks for servicing purposes.

Rate (Per Lamp per Month):

Lamp Size

7000 LUMEN-175W

P12.00

- NOTE: 1. Where it is necessary for the Cooperative to install an additional wood pole in order to provide security lighting service, a monthly charge of P4.00 shall be made for each such pole.
2. The word "maintain", as it applies to security lighting, is defined to mean the replacement of lamps, glassware and photo-control units as required, as soon as can reasonably be done after notification of the Cooperative by the customer that service has been interrupted. However, the customer shall reimburse the Cooperative for the cost of all such maintenance work which is required because of vandalism.

UNITED STATES DEPARTMENT OF AGRICULTURE
RURAL ELECTRIFICATION ADMINISTRATION
WASHINGTON, D.C. 20250

FEB 26 1968

Mr. John P. Glaws
East Asia Engineering
Agency for International
Development
Washington, D. C. 20523

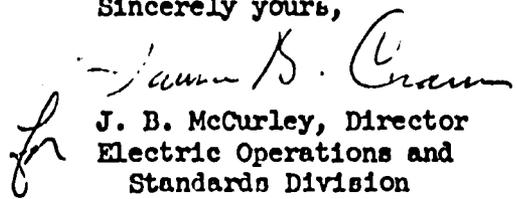
Dear Mr. Glaws:

We have reviewed the engineering feasibility and loan application report for the Victorias-Manapla-Cadiz Rural Electric Service Cooperative, Negros Occidental, Philippines, which you left with us earlier this month. In our opinion this is a well prepared, comprehensive and detailed report to support the loan application. If the distribution system can be extended and the load and energy forecasts develop as outlined in the report, the distribution portion of the project should be feasible. However, we have some reservations about the diesel generation investment cost estimates and the lack of details of the proposed operating agreement with Victorias Milling Company. Our specific comments are:

1. The cost estimate of \$150 per kw for the diesel units is less than what we would use for installation of similar sized units in the U. S. The estimate of \$150 per kw appears to be approximately one-half of what could be expected for this proposed installation.
2. It would be desirable to have a definite understanding in an operating agreement with the Victorias Milling Company as to the operation of the diesel units, handling of the accounting, etc. as the proposed power supply arrangement will be one of the critical factors in the feasibility of the project.
3. The cost estimates for distribution materials appear to be reasonable. However, 20% of the material costs for labor is low by U. S. standards.
4. The system load factor increases during a ten-year period from 38% to 56% and the reduction in system losses from 17% to 11% both appear to be optimistic.

We appreciate the opportunity of reviewing this report and are pleased that REA standards and procedures have been used for the proposed distribution construction, the financial forecast and voltage drop calculations.

Sincerely yours,


J. B. McCurley, Director
Electric Operations and
Standards Division

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
Manila, Philippines

1200 Roxas Boulevard

Telephone: 5-80-11

CERTIFICATION PURSUANT TO SECTION 611 (e) OF THE
FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED.

I, W. C. Haraldson, the principal officer of the Agency for International Development in the Philippines, having taken into account, among other things, the maintenance and utilization of projects in the Philippines previously financed or assisted by the United States, do hereby certify that in my judgment the Philippines has both the financial capability and the human resources capability to effectively maintain and utilize the proposed Rural Electrification Project Loan.

This judgment is based upon the project analysis as detailed in the Philippine Rural Electrification Capital Assistance Loan Paper and is subject to the conditions imposed therein.

W. C. Haraldson
W. C. Haraldson

Feb 28 1968
Date

Amortization Schedule

The Amortization Schedule has been prepared for ₦7,140,176 (\$1,821,473), representing the estimated cost of the project as outlined in the feasibility study, as amended. Including the 10 percent margin above cost estimates, the total principal amount will not exceed \$2,000,000.

Preparation of the Amortization Schedule is based upon repayment by the cooperative to the DBP in level payments of principal and interest. Interest is at 5%, including $3\frac{1}{2}\%$ on the A.I.D. loan and a fee of $1\frac{1}{2}\%$ to the DBP. DBP will repay to A.I.D. the principal amount scheduled to be repaid by the cooperative plus interest accrued through date of payment at $3\frac{1}{2}\%$.

The use of level payments of principal and interest, rather than level payment of principal, decreases substantially principal payments during the early years. Use of level payments of principal and interest by the cooperative at 5% interest, rather than by DBP at $3\frac{1}{2}\%$ interest, decreases very slightly the principal payments during the early years.

Initials Date
Prepared by *[Signature]*
Approved by *[Signature]*

Payable 25 years - 5 yrs. Grace
Level semi-annual installments

7,140,176.00
5%

Original No.	A.I.D. Total	DBP Total	A.I.D. Interest at 3 1/2 %	DBP Interest at 5 %	Principal	Outstanding Balance
						7140176.00
1	226928	28037940	124952	17850440	10187500	7038301.00
2	227592		125170	17525753	10122111	6922791.53
3	228375		121343	17334698	10103212	6820840.71
4	229178		119470	17067117	10070823	6717138.17
5	230001		117550	16722816	11245091	6604687.51
6	230844		115582	16511719	11526271	6487425.33
7	231709		113565	16223563	11814377	6371281.56
8	232594		111497	15928204	12109736	6250184.20
9	233503		109378	15625961	12412417	6126159.41
10	234434		107207	15315149	12722791	5998821.50
11	235389		104980	14997707	13040861	5868422.87
12	236366		102697	14677105	13366883	5731754.06
13	237369		100358	14336885	13701055	5597743.51
14	238397		97961	13974357	14042581	5457307.70
15	239450		95509	13643267	14394671	5313360.99
16	240529		92984	13223102	14754538	5165815.61
17	241636		90402	12714539	15122401	5014581.60
18	242770		87755	12536151	15501486	4859366.74
19	243932		85042	12148917	15889223	4700676.51
20	245124		82262	11751691	16286249	4537914.02
21	246345		79412	11344535	16693405	4370879.97
22	247597		76490	10927200	17110740	4199772.57
23	248881		73496	10499431	17538509	4024387.18
24	250197		70427	10060969	17976971	3844617.77
25	251545		67281	9611544	18426396	3660353.81
26	252927		64056	9150825	18887055	3471483.26
27	254343		60751	8678708	19359232	3277890.14
28	255795		57363	8194727	19843213	3077458.81
29	257284		53891	7698647	20339223	2876665.88
30	258820		50342	7190165	20847775	2667588.13
31	260393		46693	6668970	21368970	2453898.43
32	261975		42943	6134746	21903174	2234816.49
33	263618		39110	5587166	22450774	2010558.75
34	265301		35181	5025897	23012043	1780231.32
35	267027		31154	4450596	23587344	1541361.88
36	268796		27026	3860912	24177028	1302394.60
37	270610		22795	3256187	24781453	1051780.07
38	272469		18459	2636950	25400990	800710.17
39	274373		14013	2001725	26036015	510110.02
40	276326		9457	1351025	26686915	213510.87
41	278339		4787	688853	27354087	-
		28037940	4787	688853	27354087	
		114955540		435537940	714017600	

ALL AMOUNTS STATED IN PESOS

PHILIPPINES ECONOMIC PROBLEMS AND PROSPECTSSummary

While both the domestic and external sectors have short-run difficulties, the Philippine economy as a whole is in better condition than it has been in some years. After a setback in growth in 1966 when the GNP registered only a 4.2% increase (a per capita gain of less than one percent), the tempo speeded up in 1967 with the GNP growing by 5.6% (per capita 2%). Construction, which jumped from a decrease of 6% in 1966 to a 10.7% growth in 1967, increased more rapidly than any other sector but still accounts for only 4% of total GNP. Agriculture, one of the most important sectors, made a less dramatic but more significant recovery, particularly in the output of rice and corn. The industrial sector is growing at about 5% a year but has not yet recovered the momentum of the 1950's.

The major difficulty which developed in 1967 was in the balance of payments, largely because of an excessive expansion of imports while exports fell, but improvement is expected in 1968. In addition to the well-known "Rice and Roads" program, the Marcos administration is taking steps to increase government revenue, improve the climate for investment, restore and expand the infrastructure to a level necessary for accelerated growth in the economy and also streamline the machinery of government.

Agriculture

Although the land is fertile and the climate is suitable for year-round production, only about two-thirds of the arable land is under cultivation, and during the last 20 years output has failed to keep up with population growth. Until the recent breakthrough in rice productivity, which hopefully will soon put the Philippines in another class, it was grouped with countries having very low productivity per acre. Because of the primary role of agriculture (85% of export earnings, almost a third of GNP, almost 60% of total manpower), this is of fundamental importance.

The outstanding development of the past year was the 4.2% increase in rice production which represents a sizeable improvement over recent years. This achievement is all the more impressive because it was attributable only in minor degree to the utilization of increased acreage. Among the primary contributing factors were the development and dissemination of new improved varieties of seed, the widespread availability of fertilizer and pesticides from the private sector, the initiation of supervised credit programs on terms the farmers could afford, the improvement of irrigation facilities and the effective coordination and upgraded technical knowledge of agricultural extension personnel.

Corn output showed significant progress in 1967, with gains achieved under rather low support prices (to the farmers) which are internationally competitive. Agricultural export crops were less encouraging, as neither production nor yields showed much change. Sugar did not keep up with the demand represented by the U.S. quota and domestic consumption. Coconuts suffered from unfavorable weather and abaca production was static, absorbing more than its optimum share of resources. It should be recalled, however, that the acreage under rice and corn cultivation is more than twice that under coconut, sugarcane and abaca combined.

Mining

The mining sector has been growing rapidly, reaching a level in 1966 of 9% above the previous year, and in 1967 more than 13% above the 1966 output (see Table I). In spite of the stagnation in the mining of coal, which because of technical difficulties in extraction fell in 1967 to the level reached a decade ago, this sector promises to continue growing rapidly, and if the current trend continues could double its foreign exchange earnings by the middle of the next decade.

Manufacturing

Whereas there are many government agencies servicing agriculture, direct participation of the government in manufacturing is relatively minor. Differential incentives, credit controls, import taxes and tariffs are used to induce private investors to go into preferred lines. The fact that these are the primary means used by the GOP to stimulate manufacturing is a partial explanation for the failure of intermediate and heavier capital industries to make much progress. New planned investment in producer goods for FY 1968/71 amounts to almost P3 billion, but is an unrealistic target compared with the P280 million of investment completed in 1966 and 1967, and taking into account limitations of GOP administrative machinery and the shortage of experience and expertise in this field.

The manufacturing sector has not recovered from the setback it suffered following the removal of import controls in the early 1960's. However, the combined-value-added of mining and manufacturing contributes over 20% to the net national product, which puts the Philippines in a relatively advanced stage of development compared with other Southeast Asian countries. Industry had recorded annual rates of growth in the 1950's of 10% and more, because of the liberal policy of incentives and import restrictions which provided a protected home market. Unfortunately, development took place primarily in consumer goods industries with a high dependence on import components. Manufacturing still suffers from considerable unused capacity stemming from the large number of small plants originally established in the 1950's. Idle capacity due to technical problems or a static market is also common.

Although intermediate and heavier capital goods industries did not experience the hoped-for progress, those industries which had engaged in excessive short-term borrowing during the years prior to the 1962 decontrol are receiving help from the Development Bank of the Philippines in restructuring their capitalization. A substantial amount has been committed by the Bank to long-term loan and equity investments for such distressed firms.

In 1966 this sector employed only 330,000 workers, a gain of 18% since 1962 for establishments of at least five employees. Unfortunately, the rate of growth in employment slowed down considerably in 1966 and 1967. The substitution of more capital intensive equipment and/or increased productivity may account for part of this trend, as output increased substantially in both years.

Growth of the GNP

Construction made a strong recovery in 1967, jumping to a 10.7% growth after an actual decline in 1966, the first dip in this sector in some years. Its share--3.9%--of the GNP, however, remained low. Agriculture (increasing at 5.5%) was the other important contributor to the 5.6% GNP growth in 1967, just as it had been the main cause for the disappointing performance of only 4.2% in GNP growth in 1966. The value of its output rose in 1966 by only 3.4% and its share of national income was less than it had been in some years. Mining, manufacturing, and services registered progress also in 1967, while transport showed declining growth rates. While both personal and government consumption expenditures rose in 1967, gross investment rose more rapidly, showing almost a 13% jump over 1966 (in constant prices) and is estimated at about 17.3% of the GNP. This compares with a level of only 16.4% from 1963 to 1966. (Source: IBRD)

Balance of Payments

In June 1967 measures were taken aimed at reducing bank liquidity and diverting credit from import financing to domestic production and the expansion of exports. The customary steps were taken to limit the availability of credit and raise the cost of Central Bank credit, but financing of rice imports continued on preferred terms and large overdraft facilities were extended. In addition, open market operations (buying) were expanded.

The result was a 14% expansion in domestic credits of the banking system together with an expansion of ₱46 million in the money supply during the first nine months of 1967. A much greater increase--₱365 million--occurred in the last three months of the year, bringing the total expansion up to ₱411 million. Increased government expenditures on public works and the financing of the larger rice crop were the principal factors accounting for the much higher rate of credit expansion during the last quarter of the year. The total net credit expansion in 1967 for official entities was 45.8%. Net credit to the private sector increased by 16.8% in 1967 compared to 13.4% in 1966.

These factors, together with a high level of U.S. expenditures, which doubtless influenced imports, contributed to an excessive expansion of imports. This development, coupled with a decline in exports (ending a long period of annual increases) caused a sizeable merchandise trade deficit in 1967, which was only partially offset by receipts from invisibles.

Gross foreign exchange reserves (gross reserves of the Central Bank and net reserves of commercial banks) rose from \$204 million in October 1967 to \$241 million in January 1968, but then declined to \$219 million in March. The \$37 million increase from October to January was about half of the increase in foreign borrowings of the Central Bank (\$28 million) and drawings of \$45 million from the IMF during this period. Nearly half the gross reserves of the Central Bank was pledged against loans from U.S. commercial banks.

Although there were sizeable U.S. expenditures in the Philippines in 1967, the economy ended the year with a negative net reserve position after taking into account the short-term indebtedness of the Central Bank to the IMF and to foreign commercial banks. Net reserves dropped to minus \$19.7 million in March 1968.

Pressure on the peso became increasingly great in 1967 and continued during the early part of 1968, but by late March-April there were signs that it was beginning to gain strength. Compared to the same period of 1967, disbursements for invisibles have declined substantially in the early part of 1968, primarily because of new requirements and procedures concerning payments for imports on open account. This has improved the balance of payments position despite the fact that import payments have not declined. Another encouraging sign has been the decline in dollar sales at the Foreign Exchange Trading Center, the only place where the agent of the Central Bank operates directly on behalf of the Bank to control the exchange value of the peso. Latest reports indicate that the spot rate for the peso has dropped from 3.919 to 3.916 to the U.S. dollar.

Government Finances

The fiscal performance of the GOP has been one of the important factors limiting economic growth. There has been no change in the tax structure for a decade and current revenues have stagnated primarily because of the lack of growth in indirect taxes. Rather than make the painful effort to introduce new taxes or improve collections, the Government has primarily resorted to deficit financing to cover the yearly cash deficits (see Tables I and II). Finally, to curb the inflationary potential, the private sector has been denied its share of credit.

GOP efforts to economize in the past have usually hurt that part of the budget which was then considered of low priority, namely, development expenditures. In fact, expenditures for capital maintenance plus new capital investment declined nearly 20% between FY 1963 and FY 1966. The resultant breakdown of the economic infrastructure has caused a significant drop in the efficiency of major sectors of the economy.

Progress Under the Marcos Administration

President Marcos has made considerable progress on many fronts during the period he has been in office. The rice and corn self-sufficiency program, in which he has taken a leading role, is proving an outstanding success. Other achievements include an agreement with the Government of Malaysia concerning smuggling, an anti-smuggling campaign that contributed to a 37% rise in customs revenues in a year, reorganization of the pricing system for cereals, effective use of the armed forces for public works, successful sale of some \$200 million in Progress Bonds to raise industrial credit without inflationary potential, and a major effort to improve tax administration, resulting in an 20% increase in tax revenues in one year.

Furthermore, his initial steps in streamlining the Government show what could be accomplished in coordinating the multiplicity of agencies hamstringing government operations. He has already started to put the machinery in motion to improve and expand the deplorable condition in which he found the economic infrastructure, and has initiated a program of export promotion in the industrial sector. His tax program, if enacted into law, will probably be more successful than the recently-enacted Investment Incentives Law, which promises little to attract foreign capital and which gives an open field to domestic capital but little else in the form of new incentives.

Economic Prospects

A number of lessons for the future may be gleaned from the difficulties experienced by the GOP in the external sector in 1967. The liberal amount of credit provided outside normal channels by government-owned banks to public sector entities was one of the primary contributing factors to the serious imbalance in international payments which became especially critical during the fourth quarter of the year. In December President Marcos established a Financial Policy Committee to ensure against a repetition of this occurrence. The Committee will be responsible for seeing that aggregate bank credit to the public sector shall not be incompatible with the maintenance of economic stability. Moreover, the order was given that the Central Bank should not allow credit to the Philippine National Bank or the Development Bank of the Philippines beyond a predetermined ceiling.

The monetary squeeze imposed in the face of balance of payments problems is expected to continue in 1968, and price inflation of 5-6% is anticipated. The proposed new tax program would ease inflationary and balance of payments pressures and also help pay for needed public works. The recovery of exports adversely affected by weather conditions in 1967, and an accelerated expansion of other major exports together with a moderate rate of imports, are basic objectives to restore order in the international sector.

The economy should be able to meet a substantial proportion of its external resource needs from direct private capital investment. To this end, a vigorous promotion program needs to be mounted to repatriate capital, attract the inflow of new private capital investment and reverse the outflow of capital abroad. Finally, the home climate for investment must be such as to attract new foreign firms and encourage investors to reinvest their earnings.

A basic shortcoming in the fiscal situation is the inelasticity of the present tax structure and the opposition of Congress to not only new tax measures but the replacement of phased-out taxes. The Marcos Administration has tried to cope with these problems by reducing current expenditures and increasing revenues from existing taxes through improved administration. Fortunately, the downward trend since 1963 of public revenues in relation to national income is being halted.

The Congress now has under consideration an impressive new tax program, for which President Marcos has marshaled considerable support. If these measures can be enacted, the prospects for increasing national tax revenues by over 20% will be promising. With the passage of the new tax program, there should be less need to resort to monetary policy for preventing deterioration in the balance of payments, or to deficit financing for carrying out public sector projects.

In manufacturing, a major aim of the Government is to encourage the production of intermediate goods which heretofore have been largely neglected. This aim will probably be reflected in the industrial priorities now under consideration by the newly established Investment Board created under the Investment Incentives Act of 1967. It is to be hoped, however, that in encouraging investments which are deemed economically desirable, the Board will give as equal a break to foreign investors as the law allows.

Debt service on the external public debt currently absorbs nearly 10% of foreign exchange earnings. In recent years there has been a preponderance of short-term debt, at times accounting for more than half the total external indebtedness. In the last few years, the Philippines has paid off more in short-term obligations than was received in grants, long-term loans and reparations. Even if foreign indebtedness should be substantially increased in the next few years, the ratio of debt service to foreign exchange earnings would likely not exceed a manageable level.

SELECTED ANNUAL TRENDS

PHILIPPINES

†	ITEM	UNIT	1963	1964	1965	1966	1967	1968
1	A. POPULATION: (Annual Growth: 3.4%) (Midyear) (Percent Urban: 30%)	Thousands	30,241	31,270	32,345	33,477	34,656	35,830
PRODUCTION								
2	B. AGRICULTURE ^a							
	1. Total production index	1957-59=100	119	127	130	134	139 ^P	104 ^P
	2. Per capita production index	"	102	105	104	103	104	104
	3. Sugarcane ^b	"	14,230	15,800	16,100	13,280	14,600 ^P	14,390 ^P
	4. Rice, rough	"	3,840	3,990	4,070	4,160	4,390 ^P	4,540 ^P
	5. Copra ^c	"	1,490	1,490	1,470	1,490	1,540 ^P	1,470 ^P
	6. Corn, shelled	"	1,290	1,310	1,380	1,440	1,470 ^P	
1,3	C. INDUSTRY/MINING							
	1. Manufacturing production index ...	1963=100	100	108	111	121	125(9 mos)	207(Jan)
	2. Cement	1,000 MT	950	1,200	1,530	1,610	1,670	
	3. Mining, index	1963=100	100	101	110	120	136	
	4. Coal	1,000 MT	160	115	95	94	40(7 mos)	
	5. Iron ore (metal content)	"	790	780	820	830	450(6 mos)	
3	D. MARINE/FORESTRY							
	1. Fish catch	1,000 MT	570	620	690			
	2. Roundwood production	Mill.cu.Mtr.	7.8	9.0	9.5			
3,4	E. ELECTRICITY							
	1. Total production	Mill. KWH	4,220	4,610	4,960			
	2. Per capita production	KWH	110	150	150			
5	F. GROSS NATIONAL PRODUCT**							
	1. Total GNP, current prices	Mill. pesos	17,472	18,875	20,445	22,338	24,542	
	2. Total GNP, current prices	Mill. US \$	4,480	4,840	5,242	5,728	6,293	
	3. Total GNP, 1966 dollars	"	5,063	5,190	5,497	5,728	6,050	
	4. Plus imports of goods & services ..	"	789	966	1,054	1,122	175	
	5. Minus exports of goods & services ..	"	-893	-942	-1,092	-1,206		
	6. Equals Total Available Resources ..	"	4,959	5,214	5,459	5,644	6,225	
	7. Private consumption	"	3,501	3,571	3,736	3,919	4,955	
	8. Gov't consumption (incl. defense) ..	"	488	508	538	555		
	9. Gross fixed investment	"	905	1,050	1,097	1,091	1,200	
	10. Change in stocks	"	65	85	88	79	70	
	11. Change in total GNP (1966 dollars) ..	Percent	+7.6%	+2.5%	+5.9%	+4.2%	+5.6%	
	12. GNP per capita (1966 dollars)	Dollars	167	166	170	171	175	
DOMESTIC FINANCIAL DATA								
	G. PRICE INDEXES							
1	1. Wholesale prices: Manila	1963=100	100	105	107	112	117	122(Jan)
1	2. Cost of living: Manila	"	100	108	111	118	125	126 "
7	3. Cost of living: Philippines	"	100	108	112	117	123(3 mos)	
6	H. MONEY SUPPLY INDEX [®]	1963=100	100	98	105	113	131	125(Jan)
8	I. CENTRAL GOVERNMENT FINANCES							
	1. Domestic revenues, total	Mill pesos	1,949	2,109	2,163	2,152	2,574 ^d	2,949 ^e
	2. Expenditures, total	"	1,995	2,232	2,629	2,686	2,819	3,170
	3. Deficit or surplus	"	-46	-123	-466	-534	-245	--221
	Method of Financing:							
	4. Foreign grants and loans	"	13	67	314	370	132	90
	5. Domestic borrowing and reserves ..	"	33	56	152	164	113	131
	6. External public debt [®]	"					1,440	

† - Numbers indicate basic sources listed on next page. n.a. or blank space = Not available; a dash indicates zero.
* - Less than one-half the unit shown. ** - Converted at 3.9 pesos per US\$.

P - Preliminary. E - Estimate. ® - End of period.

a - Crop year beginning in year stated. b - Bulk of crop harvested in following year. c - Commercial production only. d - Revised budget. e - Budget.

PHILIPPINES

SELECTED ANNUAL TRENDS (cont'd)

†	ITEM	UNIT	1963	1964	1965	1966	1967	1968
FOREIGN TRADE								
6	J. COMMODITY TRADE							
	1. Exports, f.o.b.	Mill. US \$	727	742	768	838	813	
	2. Imports, c.i.f.	"	-687	-868	-894	-957	-1,172	
	3. Trade balance	"	+40	-126	-126	-119	-359	
SELECTED TRADING PARTNERS								
9	K. Exports to:	Mill. US \$						
	1. United States	"	331	361	349	333	252(10 mos)	
	2. Japan	"	198	184	217	278	217	"
	3. Netherlands	"	70	62	60	68	35	"
	4. Communist bloc	"		3			*	"
9	L. Imports from:	"						
	1. United States	"	282	347	312	325	332(10 mos)	
	(c.i.f.) 2. Japan	"	117	173	213	264	272	"
	3. Indonesia	"	21	24	20	28	21	"
	4. Communist bloc	"		3				"
6	M. MAIN EXPORTS (f.o.b.)	Mill. US \$						
	1. Coconut products	"	242	247	268	280	215	
	2. Sugar	"	147	148	132	116	142	
	3. Wood	"	153	143	161	208	177	
7	N. MAIN IMPORTS (c.i.f.)	Mill. US \$						
	1. Machinery and transp. equip.	"	209	274	276	297	370(11 mos)	
	2. Petroleum and products	"	62	77	77	84	86	"
	3. Cereal and preparations	"	59	66	95	53	68	"
	4. Dairy products	"	19	24	26	29	27	"
6	O. PRICES OF MAIN EXPORTS	\$ per 100 lbs.						
	1. Copra	"	6.99	7.24	8.15	6.46	7.34	10.29(2 mos)
	2. Sugar (Manila)	"	7.32	5.85	5.42	5.94	6.42	6.44 "
6	P. TERMS OF TRADE (Exp + Imp)	1963=100	100	99	99	98	99	
	1. Export prices	"	100	100	102	102	104	
	2. Import prices	"	100	101	103	104	105	
PAYMENTS & RESERVES								
10	Q. BALANCE OF PAYMENTS (selected items)	Mill. P \$						
	1. Balance on goods and services	"	104	-24	38	84		
	2. Private direct investment	"	-4	-4	-10	-15		
	3. Official grants (net)	"	12	14	24	39		
	4. Official loan receipts (net)	"	5	-1	47	-19		
6	R. OFFICIAL RESERVES, GROSS[®]	Mill. US \$	110	123	189	194	180	183(Mar)
	1. Gold	"	28	23	38	44	60	64 "
	2. IMF gold tranche	"	-	-	4	28	-	- "
	3. Foreign exchange	"	82	100	147	122	119	118 "
6,7	S. OTHER OFFICIAL FOREIGN ASSETS, GROSS[®]	"						
	T. COMMERCIAL BANK FOREIGN ASSETS, GROSS[®]	"	88	74	92	121	122(June)	
7	U. CENTRAL BANK LIABILITIES[®]	"						
	V. COMMERCIAL BANK LIABILITIES[®]	"	50	123	189	135	125(June)	
6	W. EXCHANGE RATE (official)[®]	Pesos/US \$						
	1. IMF par value	"	2.00	2.00	3.90 ^b	3.90	3.90	3.90(Mar)
	2. Official "free rate"	"	3.91	3.91	3.90 ^b	-	-	

† BASIC SOURCES:
 1. UN "Monthly Bulletin of Statistics."
 2. USDA Economic Research Service (ERS) special calculations
 3. UN "Statistical Yearbook."
 4. UN "World Energy Supplies" and AID/W estimates.
 5. Based on national data adjusted by US Embassy and AID/W.
 6. IMF "International Financial Statistics."
 7. Central Bank "News Digest" and "Statistical Bulletin."
 8. Based on US AID replies to AID Form 10-74 as adjusted by PPC/SRD.
 9. IMF "Direction of Trade."
 10. Tables on pages 11 and 12; data based on IMF reports.

n.a. or blank space = Not available; a dash indicates zero. ® - End of period. E - Estimate. P - Preliminary.

a - Includes reparations. b - The Philippine peso was devalued on Nov. 8, 1965 from 2 pesos per dollar to 3.9 pesos per dollar.

PHILIPPINES

TABLE II
CENTRAL GOVERNMENT FINANCES^a

ITEM	Fiscal Year ending June 30				
	1965	1966	1967 ^b	1968 ^c	1968 ^{c,d}
	- Millions of Pesos -				\$Millions
A. REVENUE - TOTAL	<u>2,186</u>	<u>2,175</u>	<u>2,611</u>	<u>2,977</u>	<u>763</u>
1. Domestic Revenues	<u>2,163</u>	<u>2,152</u>	<u>2,574</u>	<u>2,949</u>	<u>756</u>
a. Income taxes	477	487	577	647	166
b. Sales taxation	815	843	1,041	1,220	313
c. Customs	381	363	450	527	135
d. Other taxes	159	125	142	153	39
e. Other revenues	331	334	364	402	103
2. Foreign Grants	<u>23</u>	<u>23</u>	<u>37</u>	<u>28</u>	<u>7</u>
a. U.S. Government	9	9	16	7	2
b. Other (incl. reparation)	14	14	21	21	5
B. EXPENDITURES - TOTAL	<u>2,629</u>	<u>2,686</u>	<u>2,819</u>	<u>3,170</u>	<u>813</u>
1. Current	<u>2,091</u>	<u>2,227</u>	<u>2,238</u>	<u>2,567</u>	<u>658</u>
a. National defense	297	299	352	394	101
b. Grants and shared taxes	229	213	272	296	76
c. Interest	55	75	75	80	20
d. Other current	1,510	1,640	1,539	1,797	461
2. Capital	<u>538</u>	<u>459</u>	<u>581</u>	<u>603</u>	<u>155</u>
a. Direct	281	224	365	398	101
b. Grants/loans for capital outlay ...	200	39	80	105	27
c. Government enterprises	57	196	136	100	27
C. DEFICIT BEFORE FOREIGN GRANTS	-466	-534	-245	-221	-57
DEFICIT AFTER FOREIGN GRANTS	<u>-443</u>	<u>-511</u>	<u>-208</u>	<u>-193</u>	<u>-50</u>
D. FINANCING THE DEFICIT	<u>443</u>	<u>511</u>	<u>208</u>	<u>193</u>	<u>50</u>
1. Domestic sources (net)	<u>152</u>	<u>167</u>	<u>173</u>	<u>131</u>	<u>34</u>
2. Foreign borrowing (net)	291	347	95	62	16
a. U.S. Government	(15)	(31)	(19)	(20)	(5)
b. Other	(276)	(316)	(76)	(42)	(11)
E. GROSS DEBT OUTSTANDING^e			<u>1,531</u>		
1. Domestic			1,091		
2. Foreign			1,440		
a. U.S. Government			(207)		
b. Other ^f			(1,233)		

- a - Accrual basis.
- b - Revised budget.
- c - Budget.
- d - Converted at 3.90 pesos per dollar.
- e - End of period.
- f - Including local currency debt to U.S. Government.

BALANCE OF PAYMENTS

(Millions of U.S. Dollars)

Annex 12
Page 10

ITEM	1962	1963	1964	1965	1966	1967 ^c
A BALANCE ON GOODS AND SERVICES	-62	104	-24	38	84	
1.a. Exports, f.o.b.	571	740	757	784	863	793
b. Imports, f.o.b.	-587	-618	-780	-808	-853	-1043
Trade balance	-16	122	-23	-24	10	250
2. Nonmonetary gold ^a	(15)	(13)	(15)	(15)	(16)	
3. Freight and insurance	-47	-41	-57	-52	-55	
4. Other transportation, net	-3	-2	-2	-6	-2	
5. Travel	-38	-22	-14	-25	11	
6. Investment income ^b	-17	-17	-26	-32	-37	
7. Government, n.i.e.	25	28	31	61	44	
a. U.S. military expenditures ...	(16)	(20)	(25)	(42)	(57)	
8. Other services	34	36	67	117	79	
Total services	-46	-18	-1	62	74	
B. TRANSFER PAYMENTS						
9. Private	79	65	93	73	52	
a. Pensions paid war veterans by U.S.	(46)	(42)	(43)	(41)	(41)	
10. Central government (net)	13	13	16	26	44	
a. U.S. Grants (net)	4	3	3	2	6	
b. Reparations from Japan	8	9	11	22	33	
c. Other	1	1	2	2	5	
C. CAPITAL AND MONETARY GOLD						
<u>Nonmonetary sector</u>						
11. Direct investment	-3	-4	-4	-10	-15	
12. Other private long-term	3	-16	38	-11	3	
a. Loan receipts	17	16	91	27	42	
b. Loan repayments	-14	-31	-48	-38	-38	
c. Unpaid balance owed on Manila Railroad & Electric Company ..	-	-11	-5	-	-1	
13. Other private short-term	-27	29	-109	-118	-17	
15. Central government, net	21	5	-2	48	-23	
a. Loan receipts - total	18	27	11	85	-27	
b. Loan repayments	-2	-22	-12	-38	-46	
c. Portfolio securities	-	-	-	-	-	
d. Local currency deposits for U.S. account	5	-	-	-	-	
e. Other liabilities	-	1	1	1	2	
f. Assets	-	-1	-2	1	-6	
<u>Monetary sectors</u>						
16. Commercial banks: liabilities ...	6	40	25	30	-53	
a. Special loans from U.S. banks .	(-)	(-)	(-)	(-)	(-)	
17. Commercial banks: assets (incr -)	-13	-12	14	-17	-29	

* - Less than \$500,000.

Source: International Monetary Fund.

Note: The item numbers correspond to the item numbers used by IMF.

SEE REVERSE SIDE FOR FOOTNOTES

BALANCE OF PAYMENTS (CONT'D)

(Millions of U.S. Dollars)

ITEM	1962	1963	1964	1965	1966 ^P
18. Central institutions: liabilities	7	-32	14	68	29
a. To IMF	25	-	-6	-14	12
b. Other	-18	-32	20	82	17
19. Central institutions: assets (incr-)	-43	-23	-10	-53	-
a. IMF subscription	-	-	-	-	-35
b. Committed assets (reflected in 16a) ..	-12	12	4	12	12
c. Monetary gold	-13	12	5	-15	-5
d. Other	-18	-47	-19	-50	28
D. NET ERRORS AND OMISSIONS	19	-159	-51	-75	-75

a - Non-monetary gold included with totals for commodity trade.

b - Data exclude reinvested earnings of foreign-owned establishments.

c - Extracted from May 24, 1968 IBRD Report on the Philippines.

STATUTORY CRITERIA CHECKLIST FOR DEVELOPMENT

ASSISTANCE: Development Loan Fund

COUNTRY PERFORMANCEA. Progress Towards Country Goals

1. FAA §201(b)(5), 201(b)(7), 201(b)(8), 208. Discuss the extent to which the country is:

- (a) making appropriate efforts to increase food production and improve means for food storage and distribution;
- (b) creating a favorable climate for foreign and domestic private enterprise and investment;
- (c) increasing the people's role in the developmental process;
- (d) allocating expenditures to development rather than to unnecessary military purposes or intervention in other free countries' affairs;
- (e) willing to contribute funds to the project or program;
- (f) making economic, social and political reforms such as tax collection improvements and changes in land tenure arrangement; and making progress toward respect for the rule of law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise;
- (g) responding to the vital economic, political and social concerns of its people, and demonstrating a clear determination to take effective self-help measures.

(a) Food production is top priority of Marcos Administration with goal of achieving self-sufficiency in rice and corn and accelerated production of livestock, poultry, fish, fruits and vegetables. Plans for expanded warehousing and distribution of the increased output of grains are being prepared and carried out.

(b) The climate for foreign investment is clouded by growing nationalism. The Investment Incentives Act of 1967 provides tax benefits and other inducements to investment in certain types of industries, but favors domestic investors.

(c) The rice self-sufficiency program is increasing the productive capability of Philippine farmers. The Presidential Arm for Community Development carries out programs at the barrio (village) level throughout the Philippines. A Decentralization Act providing more autonomy to the Provinces was enacted in 1967. Provincial Development Councils are operating or being established in fifteen pilot Provinces.

(d) More than 70% of the national budget is allocated to social and economic development. One-fourth of the budget goes to education, nearly 10% to agriculture and natural resources, and almost 20% to transportation and communications. (Unfortunately these are predominantly operating rather than capital expenditures.) Less than 15% of the budget goes for national defense. (See Annex 12).

(e) The GOP will provide all local currency requirements of this project loan. See Sections V and VII.

(f) Improved tax and customs administration contributed to a 20% rise in central government revenues during FY 1967. Some eighteen new tax measures are being considered by the Philippine Congress, with enactment of many of them considered likely. In the past two years President Marcos has declared some 34 new land reform districts, but implementation is in the early stages. A National Police Commission has been established, and an anti-smuggling campaign mounted. Private enterprise is strongly encouraged and supported.

(g) President Marcos has mounted large-scale school construction and textbook programs as well as embarking on road building, irrigation and other infrastructure programs. New tax legislation is designed to increase revenues by 1.2 billion Pesos to finance accelerated social and economic development.

B. Relations with the United States

1. FAA §620(c). Is the government indebted to any U.S. citizen for goods or services furnished or ordered where such citizen has exhausted available legal remedies, including arbitration, or the debt is not denied or contested by the government, or the indebtedness arises under such government's or a predecessor's, unconditional guarantee?

A.I.D. has no evidence that the Philippines is so indebted.

2. FAA §620(d). If the loan is intended for construction or operation of any productive enterprise that will compete with U.S. enterprise, has the country agreed that it will establish appropriate procedures to prevent export to the U.S. of more than 20% of its enterprise's annual production during the life of the loan?

Not applicable.

3. FAA §620(e)(1). Has the government, or any government agency or subdivision within the country, (A) nationalized or expropriated property owned by U.S. citizens or by any business entity not less than 50% beneficially owned by U.S. citizens, (B) taken steps to repudiate or nullify existing contracts or agreements with such citizen or entity, or (C) imposed or enforced discriminatory taxes or other exactions, or restrictive maintenance or operational conditions? If so, has it failed within a reasonable time to take appropriate steps to discharge its obligations under international law toward such citizen or entity?

4. FAA §620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction by mob action of U.S. property, and failed to take appropriate measures to prevent a recurrence and to provide adequate compensation for such damage or destruction?

5. FAA §620(l). Has the government instituted an investment guaranty program under FAA §221(b)(1) for the specific risks of inconvertibility and expropriation or confiscation?

6. FAA §620(o). Has the country seized, or imposed any penalty or sanction against, any U.S. fishing vessel on account of its fishing activities in international waters?

7. FAA §620(q). Has the country been in default, during a period in excess of 6 months in payment to the U.S. on any FAA loan?

A.I.D. has no evidence that the Philippines, including government agencies or subdivisions has taken any such action.

A.I.D. has no evidence that the Philippines has permitted or failed to take adequate measures to prevent the damage or destruction by mob action of U.S. property.

The requisite guarantee programs have been instituted in the Philippines.

A.I.D. has no evidence that the Philippines has taken any such action.

There is no condition of default under any loan to the Philippines made under the authority of the FAA.

8. FAA §620(t). Have diplomatic relations between the country and the U.S. been severed? If so, have they been renewed?

Diplomatic relations between the U.S. and the Philippines have not been severed.

9. App. §106. Describe any attempt made by the country to create distinction because of race or religion in granting personal or commercial access or other rights otherwise available to U.S. citizens generally.

The Philippines does not attempt to create such distinctions.

C. Relations with other nations and the U.N.

1. FAA §620(i). Has the country been officially represented at any international conference when that representation included planning activities involving insurrection or subversion directed against the U.S. or countries receiving U.S. assistance?

A.I.D. has no evidence of such representation on behalf of the Philippines.

2. FAA §§620(a), 620(n); App. §§107(a), 107(b), 116. Has the country sold, furnished, or permitted ships or aircraft under its registry to carry to Cuba or North Vietnam, items of economic, military or other assistance?

The Philippines does not sell or furnish items of economic, military or other assistance to Cuba or North Vietnam, and has taken appropriate steps to prevent ships or aircraft under its registry from engaging in such trade.

3. FAA §620(u); App. §114. What is the status of the country's U.N. dues, assessments or other obligations? Does the loan agreement bar any use of funds to pay U.N. assessments, dues or arrearages?

The Philippines is not in default with respect to its dues, assessments or other obligations to the U.N. The Loan Agreement and disbursement procedures will ensure that loan funds are not used for payment of U.N. obligations.

D. Military Situation

1. FAA §620(i). Has the country engaged in or prepared for aggressive military efforts directed against the U.S. or countries receiving U.S. assistance?

In our judgment the Philippines is neither engaged in nor preparing for aggressive military efforts against any country.

2. FAA §620(s). What is (1) the percentage of the country's budget devoted to military purposes and (2) the amount of the country's foreign exchange resources used to acquire military equipment? Is the country diverting U.S. development assistance or P.L. 480 sales to military expenditures? Is the country diverting its own resources to unnecessary military expenditures? Findings on these questions shall be made for each country at least once each fiscal year and as often in addition as may be required by a material change in relevant circumstances.

Defense expenditures were 12.5% of the 1967 budget, and of the total estimated FY 1968 Philippine budget, 14.4% is devoted to National Defense. Approximately one-third of this amount is for maintenance of peace and order. No Philippine foreign exchange resources are known to be used to acquire military equipment. We know of no diversion of either development assistance or of P.L. 480 sales to military expenditures. We are not aware of any diversion of Philippine resources for unnecessary military expenditures.

3. App. §119. Since January 1, 1968, has the country purchased "sophisticated weapons systems", disbursements for which are required during the current A.I.D. fiscal year? If so, has the withholding of an equivalent amount of A.I.D. assistance been adequately provided for? (Not applicable to Greece, Turkey, Iran, Israel, Republic of China, the Philippines and Korea.)

Not applicable to the Philippines.

2. FAA §611(a)(1). If substantive technical or financial planning is required, have engineering, financial, and other plans necessary to carry out assistance, and a reasonably firm estimate of the cost of assistance to the U.S., been completed?

Yes.

3. FAA §611(b); App. §101. Have plans for a water or related land resource construction project or program included a cost-benefit computation; has the project or program met the relevant U.S. construction standards and criteria used in determining feasibility?

Not applicable.

4. FAA §611(e). If this is a capital assistance project with U.S. financing in excess of \$1 million, has the principal A.I.D. officer in the country certified as to the country's capability effectively to maintain and utilize the project?

The USAID Director has so certified. See Annex 10

B. Relation to Achievement of Country and Regional Goals

-- Country Goals

1. FAA §§207, 281(a). Describe this loan's relation to:

- (a) institutions needed for a democratic society and to assure maximum participation on the part of the people in the task of economic development;
- (b) enabling the country to meet its food needs both from its own resources and through development, with U.S. help, of infrastructure to support increased agricultural productivity;

This loan will utilize the mechanics of a cooperative to help the rural populace provide electric power to support increased agricultural productivity. See Sections I and II.

- (c) meeting increasing need for trained manpower;
- (d) developing programs to meet public health needs;
- (e) assisting other important economic, political and social development activities, including industrial development; growth of free labor unions, cooperatives and voluntary agencies; improvement of transportation and communication systems; capabilities for planning and public administration; urban development; and modernization of existing laws.

2. FAA §201(b)(4). Describe the activity's consistency with and relationship to other development activities, and its contribution to realizable long-range objectives.

The activity related closely to the national goal of increased agricultural productivity, which is a key element in the achievement of self-sustaining growth. See Section I.

3. FAA §201(b)(9). How will the activity to be financed contribute to the achievement of self-sustaining growth?

The activity related closely to the national goal of increased agricultural productivity, which is a key element in the achievement of self-sustaining growth. See Section I.

4. FAA §201(f). If this is a project loan, describe how such project will promote the country's economic development, taking into account the country's human and material resource requirements and the relationship between ultimate objectives of the project and overall economic development.

This is a demonstration project directed at long-range extension of rural electrification to help accelerate economic and social development. See Section I.

CONDITION OF THE LOAN

A. General Soundness

-- Interest and Repayment

1. FAA §§201(d), 201(b)(2). Is the rate of interest excessive or unreasonable for the borrower? What capacity does the borrower have to repay the loan at a reasonable rate of interest? Is the rate of interest less than 2% per annum during the grace period? Is the rate of interest higher than the country's applicable legal rate of interest?

The rate of interest is considered reasonable and repayment of the loan with interest is within the financial capability of the borrower. Interest throughout the loan, including the grace period will be at the rate of 3 1/2% per annum, which rate is not higher than the applicable legal rate of interest in the Philippines.

-- Financing

1. FAA §201(b)(1). To what extent can financing on reasonable terms be obtained from other free-world sources, including private sources within the U.S.?

The Export-Import Bank and the IBRD are unwilling to consider this application. Financing is not considered to be available from private sources.

-- Economic and Technical Soundness

1. FAA §§201(b)(2), 201(e). Describe the activity's economic and technical soundness; did the application, together with information and assurances, indicate that funds will be used in an economically and technically sound manner?

The project has been thoroughly reviewed for economic and technical soundness by a team of Rural Electrification specialists (NRECA team) as well as by the responsible EA Staff offices and the loan committee. For detailed analysis see Sections III and IV. Controls to be incorporated in the Loan Agreement will ensure that the funds are used in accordance with the above analysis and project plan.

5. FAA §201(b)(3). In what ways does the activity give reasonable promise of contributing to development of economic resources, or to increase of productive capacities?

It is expected that rural electrification will promote increased agricultural productivity and expansion of agricultural business.

6. FAA §281(b). How does the program under which assistance is provided recognize the particular needs, desires, and capacities of the country's people; utilize the country's intellectual resources to encourage institutional development; and support civic education and training in skills required for effective participation in political processes?

The program is directed at the rural population, which comprises the majority of the country's total population but has the lowest income levels. It will provide an opportunity through membership in the cooperative for direct participation in institutional development and democratic political processes.

7. FAA §601(a). How will this loan encourage the country's efforts to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture, and commerce; and (f) strengthen free labor unions?

(a) Only indirectly through promotion of self-sustaining economic growth; (b) the loan recipient is a private cooperative organization. The availability of low cost power will create more opportunity for private initiative, see Section II; (c) same as (b) above; (d) not applicable; (e) see answers to (b) and (c); (f) not applicable.

8. FAA §202(a). Indicate the amount of money under the loan which is: going directly to private enterprise; going to intermediate credit institutions or other borrowers for use by private enterprise; being used to finance imports from private sources; or otherwise being used to finance procurements from private sources.

All funds are to be channeled through the Development Bank of the Philippines to private sources. All items to be procured under the loan will be of U.S. source and origin.

9. FAA §611(a)(2). What legislative action is required within the recipient country? What is the basis for a reasonable anticipation that such action will be completed in time to permit orderly accomplishment of purposes of loan?

No legislative action is required for completion of the project. In order to accomplish the expanded program which the loan is intended to stimulate, legislation should be revised to (1) provide increased long-term loan funds for rural electrification projects; and (2) improve the institutional channel through which funds will be made available to the power systems.

Regional Goals

1. FAA §619. If this loan is assisting a newly independent country, to what extent do the circumstances permit such assistance to be furnished through multilateral organizations or plans?

The Philippines is not a newly independent country.

2. FAA §209. If this loan is directed at a problem or an opportunity that is regional in nature, how does assistance under this loan encourage a regional development program? What multilateral assistance is presently being furnished to the country?

This loan is not directed at a problem or an opportunity that is regional in nature. The Philippines is presently a recipient of assistance from the IBRD, IFC, and UN Technical Assistance agencies.

C. Relation to U.S. Economy

-- Employment, Balance of Payments, Private Enterprise

1. FAA §§201(b)(6); 102, Fifth. What are the possible effects of this loan on U.S. economy, with special reference to areas of substantial labor surplus; describe the extent to which assistance is constituted of U.S. commodities and services, furnished in a manner consistent with improving the U.S. balance of payments position?

The project's output of electricity will not compete with or adversely affect the U.S. economy in any respect; all commodities and services procured will be of U.S. source and origin; it is probable that none of the items financed under the loan would be purchased but for the loan.

2. FAA §§612(b), 636(h). What steps have been taken to assure that, to the maximum extent possible, foreign currencies owned by the U.S. and local currencies contributed by the country are utilized to meet the cost of contractual and other services, and that U.S. foreign owned currencies are utilized in lieu of dollars?

The GOP will provide all local currency required for completion of the project. The Philippines is not an excess currency country and foreign currency is not available to be utilized in lieu of dollars.

3. FAA §601(d); App. §115. If this loan is for a capital project, to what extent has the Agency encouraged utilization of engineering and professional services of U.S. firms and their affiliates? If the loan is to be used to finance direct costs for construction, will any of the contractors be persons other than qualified nationals of the country or qualified citizens of the U.S.? If so, has the required waiver been obtained?

Engineering and other professional services will be procured in accordance with the Capital Projects Guidelines from either U.S. firms or their affiliates. No construction will be performed by third-country nationals.

4. FAA §608(a). Provide information on measures to be taken to utilize U.S. Government excess personal property in lieu of the procurement of new items.

U.S. Government excess property will be utilized where practicable in lieu of new items.

5. FAA §602. What efforts have been made to assist U.S. small business to participate equitably in the furnishing of commodities and services financed by this loan?

Small Business Notification procedures will be utilized.

6. FAA §621. If the loan provides technical assistance, how is private enterprise on a contract basis utilized? If the facilities of other Federal agencies will be utilized, in what ways are they particularly suitable; are they competitive with private enterprise (if so, explain); and how can they be made available without undue interference with domestic programs?

A team from the NRECA which has prepared the feasibility study for the project will continue to provide technical assistance. The NRECA specializes in rural electrification problems and is peculiarly suited for service in the present case.

7. FAA §611(c). If this loan involves a contract for construction (that obligates in excess of \$100,000), will it be on a competitive basis to the maximum extent practicable?

Contracts for construction will be let on a competitive basis to the maximum extent practicable.

-- Procurement

1. FAA §602(a). Will commodity procurement be restricted to U.S. except as otherwise determined by the President? Yes.

2. FAA §604(b). Will any part of this loan be used for bulk commodity procurement at adjusted prices higher than the market price prevailing in the U.S. at time of purchase? No.

3. FAA §604(e). Will any part of this loan be used for procurement of any agricultural commodity or product thereof outside the U.S. when the domestic price of such commodity is less than parity? No.

D. Specific Requirements

1. FAA §201(b). Is the country among the 20 countries in which development loan funds may be used to make loans in this fiscal year? Yes.

2. App. §112. Does the loan agreement provide, with respect to capital projects, for U.S. approval of contract terms and firms? Loan Agreement will provide for A.I.D. approval of firms and terms of contracts for provision of engineering, procurement and construction services.

3. FAA §620(k). If the loan is for construction of a productive enterprise, with respect to which the aggregate value of assistance to be furnished will exceed \$100 million, what preparation has been made to obtain the express approval of Congress? Not applicable.

4. FAA §§620(b), 620(f); App. §109(b). Has the President determined that the country is not dominated or controlled by the international Communist movement? If the country is a Communist country (including, but not limited to, the countries listed in §620(f)) and the loan is intended for economic assistance, have the findings required by FAA §620(f) and App. §109(b) been made and reported to Congress?

The Philippines is not dominated or controlled by the international Communist movement.

5. App. §109(a). Will any military assistance, or items of military or strategic significance, be furnished to a Communist nation?

No.

6. FAA §620(h). What steps have been taken to insure that the loan will not be used in a manner which, contrary to the best interest of the United States, promotes or assists the foreign aid projects of the Communist-bloc countries?

The loan agreement will contain implementation controls prohibiting such use.

7. App. §118. Will any funds be used to finance procurement of iron and steel products for use in Vietnam other than as contemplated by §118?

No.

8. FAA 6636(i). Will any part of this loan be used in financing non-U.S. manufactured automobiles? If so, has the required waiver been obtained?

No.

9. FAA §§620(a)(1) and (2), 620(p); App. §117. Will any assistance be furnished or funds made available to the government of Cuba or the United Arab Republic?

No.

10. FAA §620(g). Will any part of this loan be used to compensate owners for expropriated or nationalized property? If any assistance has been used for such purpose in the past, has appropriate reimbursement been made to the U.S. for sums diverted?

No. We have no information that any assistance has been used for such purpose in the past.

11. FAA §201(f). If this is a project loan, what provision has been made for appropriate participation by the recipient country's private enterprise?

The private sector is the ultimate recipient of the loan. The GOP serves merely as a conduit and as guarantor of repayment.

12. App. §104. Does the loan agreement bar any use of funds to pay pensions, etc., for persons who are serving or who have served in the recipient country's armed forces?

The loan agreement will so provide.

CAPITAL ASSISTANCE LOAN AUTHORIZATION

Provided from Development Loan Funds
(Philippines: Victorias Rural Electric Service Cooperative)

Pursuant to the authority vested in me as Assistant Administrator for the Bureau for East Asia of the Agency for International Development (hereinafter called "A.I.D.") by the Foreign Assistance Act of 1961, as amended, and Delegations of Authority issued thereunder, I hereby authorize the establishment of a loan to the Development Bank of the Philippines, a development bank wholly owned by the Government of the Republic of the Philippines of not to exceed Two Million (\$2,000,000) Dollars, the said funds to be relent to the Victorias Rural Electric Service Cooperative to finance the foreign exchange costs of machinery, equipment and related services for the purpose of operation, transmission and distribution of electric power in the project area, Negros Occidental, Philippines. This loan is to be subject to the following terms and conditions:

1. Interest Rate and Terms of Repayment

This loan shall be repaid by the Development Bank of the Philippines within twenty-five years after the date of the first disbursement under the loan, including a grace period of not to exceed five (5) years. The interest on the unrepaid principal balance of the loan shall be at the rate of three and one-half (3½) per annum from the date of first disbursement.

2. Currency of Repayment

Provision shall be made for repayment of the loan and payment of interest in United States dollars.

3. Other Terms and Conditions

(a) Equipment, materials and services financed under this loan shall have their source and origin in the United States.

(b) A.I.D. approval of the detailed design for the system will be required prior to financing of the construction phase of the project.

(c) This loan shall be subject to such other terms and conditions as A.I.D. may deem advisable.

This authorization shall lapse one hundred twenty (120) days from the date hereof unless a satisfactory agreement has been negotiated and signed by the Development Bank of the Philippines, the Victorias Rural Electric Service Cooperative, and A.I.D. prior to that date.

John C. Bullitt
Assistant Administrator, East Asia

UNITED STATES DEPARTMENT OF AGRICULTURE
RURAL ELECTRIFICATION ADMINISTRATION

WASHINGTON, D.C. 20250

OFFICE OF THE ADMINISTRATOR

JUN 4 1968

Mr. Lawrence M. Lorenzen
Administrator, Far East Program
International Program Division
National Rural Electric
Cooperative Association
Washington, D. C.

Dear Mr. Lorenzen:

This is in response to your request for comments concerning REA's electric loan feasibility study procedures.

The majority of our loans are made to existing borrowers under what we call the short form procedure. Under the short form procedure, the loan feasibility study is essentially a recapitulation and review of the borrower's history and trends bearing upon loan repayment capabilities.

It is my understanding, however, that you are more concerned with our procedures as they would relate to new systems and to systems where the development of the borrower has been comparatively less rapid. In such situations we would generally request the loan applicant to furnish us a 10-year financial forecast, based on a year-by-year forecast of plant investments, retirements, revenues and expenses, and including pro forma balance sheets prepared as of the 5th and 10th years of the forecast.

Margins for each year are determined according to standard accrual accounting principles. We also obtain a cash flow summary. The cash flow summary is the more significant part of the feasibility study for several reasons: REA makes only loans, not grants, which must be repaid with interest. Secondly, over a period of time it would be possible for a borrower to operate in the black but still not have a cash flow adequate to make principal payments when due. Third, from our experience, new systems typically begin with operating deficits on an accrual basis even though, on a longer term basis, they will have a cash flow adequate to repay their loans.

We would not expect a new system to operate with margins on an accrual basis in its early years, and possibly for several years. From a cash standpoint, the loan to a new system would probably include a small amount for working capital that could be used to help meet operating expenditures for an initial period, such as 90 days. The loan would include funds with which to make interest payments during the construction period and possibly for an initial

operating period. Principal payments would not be required until probably 5 years after the date of the note. Such steps help to ease cash burdens in the early years, when the system can be expected to be incurring deficits on an accrual basis. As the system becomes stronger, its principal repayments can be made greater.

One of the significant aspects of the electric utility industry is not only that it is capital-intensive, but also that construction and operating costs are heavily influenced by size. In general, the larger the unit of utility plant, whether that unit is a generator or a mile of wire, the cheaper the cost per kilowatt or other unit of capacity. In general, the more kilowatt hours a system can sell, the lower the cost of producing and distributing the electric service on a per KWh basis. A new system necessarily starts with comparatively high costs; as loads develop and sales increase, unit costs will go down.

Another significant aspect is that most items of electric utility plant can be expected to have a service life of 25 to 40 years. Our experience is that, during this time period, the loads will multiply several times. Thus, to be economical over the long haul, and in order to avoid premature retirements and replacements of plant, most of the facilities that are installed need to have a capacity considerably greater than required to meet current loads. While this is true for old systems as well as for new systems, the economic consequences fall much harder on the new system. The disparity between capacity provided and the use made of the service is never so great as in the beginning.

The question may arise: Why not set rates high enough to cover the full cost of service from the beginning? From our experience, it appears that such a rate would probably be so high as to make the proposal unfeasible. Rather, rates are set to reflect sales and costs on the basis of economic estimates as to the probable use of electricity and expenses after a few years of operation. Such rates are much more likely to promote the increased use of electricity which will result in the lower unit costs needed to make the system operate in the black.

As described above, in general we would consider a loan to a distribution system feasible if the financial forecast showed that it could meet its cash obligations that were due during the forecast period and if the forecast showed trends indicating a continuing ability to meet its obligations.

Enclosed is a copy of our Bulletin 105-5, "Financial Forecast - Electric Distribution Systems," and the related forms.

Sincerely yours,



Richard H. Wood
Assistant Administrator

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C O P Y

AID-DLC/P-730
AID-DLC/P-731
June 14, 1968

Annex 16

REPUBLIC OF THE PHILIPPINES
NATIONAL ECONOMIC COUNCIL
P. O. Box 1116, Manila

May 30, 1968

Dear Mr. Haraldson:

This refers to our letter of April 30, 1968 regarding the application for a loan to finance the two pilot rural electrification projects under the Program of Rural Electrification through Service Cooperatives.

With the authority of the Development Bank of the Philippines, we request a loan of US \$3,130,999 to cover the foreign exchange requirements of the Victorias-Manapla-Cadiz Rural Electric Service Cooperative in the amount of \$1,996,500 and \$1,134,469 to cover the foreign exchange requirements of the Misamis Oriental Rural Electric Service Cooperative. The total loan requested for the two electric cooperatives were based on the feasibility study reports and recent revisions on these feasibility reports which were prepared by the National Rural Electric Cooperative Association team under the NEC-AID technical assistance program.

It is the understanding of this Office and of the Development Bank of the Philippines that the dollar loan will be for a term of 25 years, bearing interest of not more than 3- $\frac{1}{2}$ percent per annum, with annual repayment of principal to begin after the first 5-year period. The DBP will extend loans to the rural electric cooperatives at an interest rate not to exceed 5 percent per annum. The peso requirement of ₱1,850,000 for the Victorias-Manapla-Cadiz Rural Electric Cooperative and ₱2,137,029 for the Misamis Oriental Rural Electric Cooperative will be provided through loans to be extended to these cooperatives by the Electrification Administration at 3% interest. The usual fix charges for engineering services, insurance and commitment fee will be waived by the Electrification Administration on these two projects. The peso fund will be released in full and deposited with the Development Bank of the Philippines in the account of each cooperative. The National Power Corporation and the Electrification Administration will provide the

Mr. Wesley Haraldson
Director
USAID Mission to the Philippines
Manila

necessary technical assistance to the Development Bank of the Philippines in the administration of the loan and to the electric cooperatives in the installation of the facilities. The technical assistance will be provided at actual cost to the cooperatives, that is, the cooperatives will only pay the per diems and travel expenses of the technical personnel from the National Power Corporation and Electrification Administration working directly on the project, while their regular salaries and overhead expenses will be borne by their respective mother agencies.

Sincerely yours,

/s/

EDUARDO Z. ROMUALDEZ
Acting Chairman

C O P Y

EMMANUEL PELAEZ
SENATOR

CHAIRMAN

COMMITTEE ON AGRICULTURE
COMMITTEE ON CODES AND CONSTITUTIONAL
AMENDMENTS
COMMITTEE ON SCIENTIFIC ADVANCEMENT

VICE-CHAIRMAN

COMMITTEE ON FOREIGN RELATIONS
COMMITTEE ON JUSTICE
COMMITTEE ON NATURAL RESOURCES



REPUBLIC OF THE PHILIPPINES
SENATE
MANILA

MEMBERS

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COMMITTEE ON COMMERCE AND INDUSTRY
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TOURISM
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COMMITTEE ON HOUSING, URBAN DEVELOP-
MENT AND RESETTLEMENT
COMMITTEE ON INVESTIGATION (BLUE RIBBON)
COMMITTEE ON LABOR AND IMMIGRATION
COMMITTEE ON NATIONAL DEFENSE AND SE-
CURITY
COMMITTEE ON NATIONAL ENTERPRISES AND
GOVERNMENT CORPORATIONS
COMMITTEE ON PROVINCIAL AND MUNICIPAL
GOVERNMENTS AND CITIES
COMMITTEE ON PUBLIC WORKS AND COM-
MUNICATIONS
COMMITTEE ON SOCIAL JUSTICE AND WEL-
FARE

May 29, 1968

Mr. Ray Love
U.S. AID
M a n i l a

Dear Mr. Love,

On the eve of your departure from our country, I would like to express my gratitude for your sincere efforts to help us in our program of national development. I refer particularly to the deep interest you have shown in the establishment of the first two pilot rural electric service cooperatives in the Philippines.

Governor Roa and the other officials of my province of Misamis Oriental, as well as the members of the Misamis Oriental Rural Electric Service Cooperative, have also requested me to convey their thanks to you. They have noted, particularly, that you took time out from your busy schedule to fly to my province on a week-end, in order to meet with them and inspect the area of the cooperative.

Having been in public life for almost two decades now, I have had the opportunity to watch at close range the results of U.S. assistance to the Philippines all through these years. I have seen many of these projects bring about a beneficent impact on the lives of our people. But, praiseworthy as they have been, not one of them offers so much towards the betterment of the living and economic conditions of our people as rural electrification.

Since the first day last December when I met Messrs. Robert Williams and Phillip Parker to discuss the establishment of a rural electric service cooperative in my province, the idea of rural electrification has so obsessed me that all these months I have devoted most of my time to this subject. And the more I consider its rami-

fications, the more convinced I am that rural electrification is one of the principal keys that will unlock the door to national progress.

I am happy to inform you that my enthusiasm has been shared by the highest officials of our government, including President Marcos. I believe that the President himself is now convinced that rural electrification partakes of the nature of an infrastructure, as much as law and order and roads and bridges, and that therefore it must be given the highest priority in our program of development. Such is the President's interest in the establishment of these pilot projects in rural electrification that he has personally issued directives to the governmental agencies concerned to give their unconditional support to them.

As I look towards the future, I feel certain that the establishment of these two pilot projects will bring about a chain reaction that will accelerate our development. In fact, I am equally certain that as soon as the approval of these two projects by both the Philippine and United States governments is announced there will be a rush towards the establishment of similar projects throughout the country. For this reason, I am now preparing a bill governing the establishment of rural electric service cooperatives along the lines of U.S. legislation on the subject matter. I hope to present this bill, with the President's certification on the urgency of its enactment, either in the special session of Congress next month or, at the latest, in the regular session early next year.

I think you should also know that, with the new interest in electricity and electric power engendered by the proposal to establish these two pilot projects, President Marcos' administration is now giving rural electrification the highest priority. Thus, we are reviewing the policies of the National Power Corporation, so that instead of merely serving existing private electric franchise holders, it shall give priority to serving rural electric service cooperatives. We are also taking steps to extend NPC's transmission lines through the construction of a grid to serve almost all of Mindanao.

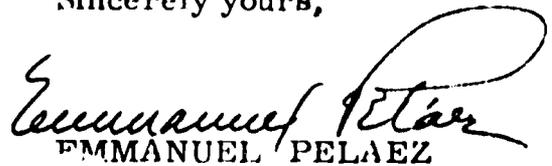
We are also initiating a review of our irrigation program. Whereas up to the present the Irrigation Service Unit has programmed irrigation projects having in mind pumps to be driven by diesel engines, we are now studying the feasibility of using the electricity generated by the Am-

buklao and Binga hydroelectric projects to run these pumps.

I have gone at length to inform you of these developments the better to underscore the crucial importance of the establishment of the two pilot projects in rural electrification. I hope that with this information, you will be in a better position to emphasize to the authorities in Washington how meaningful these projects are to President Marcos and his administration and to our people. We will give them our fullest support. With yours to boot, they cannot fail. Instead they will open the gateway to real progress in our country.

Bon voyage and may you come back soon to see the realization of this and other projects which will serve as symbols of the friendship between our peoples.

Sincerely yours,



EMMANUEL PELAEZ