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**ELECTRIC COOPERATIVE
MERGERS/CONSOLIDATIONS
IN THE PHILIPPINES**

DECEMBER 1993

**PREPARED BY NRECA INTERNATIONAL, LTD. under
Contract 492-0429-C-00-0065-00 with USAID**

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ELECTRIC COOPERATIVE MERGERS/CONSOLIDATIONS

INTRODUCTION

In recent years questions have been raised regarding the advantages and/or disadvantages of possible mergers or consolidations of the electric cooperatives (ECs) in the Philippines.

It is the goal of this report to reduce the uncertainty on these issues.

In the electric utility industry, when utility "A" is absorbed into utility "B" this is normally referred to as a merger. The resulting entity is usually named "B." When two utilities form a new organization with rather equal input from both, this is normally referred to as a consolidation. The new organization usually has a completely new name. For simplicity sake, this report will generally refer to both types of reorganization as a consolidation. Some discussions will take place in the report where it is important to differentiate between the two forms of reorganization. The term merger will then also be used.

This report is founded on written and electronic information gathered in the Philippines and on an extensive interview process with people in the Philippines who have considerable insight into rural electrification in the country. Additionally, a thorough knowledge of rural electrification in the United States was brought to bear where applicable to rural electrification matters in the Philippines.

Many analyses have previously been performed on Philippine rural electrification issues. In reviewing these earlier works it was determined that much valuable labor has already been done in the field. This report can build on the foundation of previous work, it can update previous work and it can bring new perspectives to the field. It is very important that previous work still has considerable use at this time. That work has been done by multinational, U.S., and Filipino lending institutions and consultants working for those institutions. It should be comforting to those interested in Filipino rural electrification to know that funds spent on previous studies are still providing benefit to the nation. These studies will be referenced throughout this report.

Considerable data for use in this report was available from the National Electrification Administration (NEA), the Energy Regulatory Board (ERB), the World Bank, the U.S. Agency for International Development (USAID) and the National Economic and Development Authority (NEDA). The information from NEA was made available in hard copy and in electronic form on disk. The large volume of the information, the fact that it is current information and the willingness of the staff of NEA to make it readily available assisted greatly in the preparation of this report. The

author wishes to thank the staff of NEA for its outstanding cooperation and congratulate it for having so much information readily available to aid it and others in the decision making process.

EXECUTIVE SUMMARY

The most important findings in the report will be summarized in this section. The reader can refer to the body of the report and the appendices for additional support for the findings.

FINANCIAL STRENGTH OF THE ECs:

In the past three years there has been significant improvement in the financial health of the ECs. The ECs can, therefore, be expected to remain a vital part of the electric utility industry of the nation.

Not all ECs are equally healthy. Certain ECs remain financially weak, and the financial health of some seems to be deteriorating. Consolidations could help strengthen some of the weaker cooperatives. Consolidations can also further strengthen already healthy cooperatives.

PREDICTORS OF INCREASED FINANCIAL STRENGTH:

The ECs in the Philippines have been analyzed to determine if there are predictors of financial health and if these bear any relationship to the potential for consolidations.

An excellent measure of the impact of an EC on its consumers is the "non power cost" at that cooperative. The non power cost is the distribution price mark up over the price of wholesale power.

There is a relationship trend between the size of ECs and their non power cost. This relationship can be found when size is determined either by MWh sales or by number of consumers. The connection between size and non power cost is an inverse relationship. That is as the size of cooperatives goes up, the non power cost trends down.

This relationship has been tested in different ways. The first test is demonstrated by the table immediately below which presents the non power cost trend in relation to the four size classifications of ECs as determined by NEA.

P's/KWh

NON POWER COST/ENERGY SOLD VERSUS SIZE CLASSIFICATION				
CLASS.	EXTRA LARGE	LARGE	MEDIUM	SMALL
NON PR CST	.625	.816	.978	1.591

The average non power cost is considerably higher for the cooperatives classified as small when compared to the other larger

classifications. In fact with every larger class, the non power cost average goes down in relation to the next smaller class.

Immediately following the Executive Summary are two pages containing one graph each. The second test is demonstrated by these graphs which show all 118 ECs in the Philippines with their respective non power costs plotted in comparison to size. One chart displays size in regard to MWh sales, the other in regard to consumers served. Both show a general trend towards lower non power costs as larger ECs are plotted. The graphs also show there are exceptions to the rule.

Regression analysis was used as the third analytical tool to view the relationship between cooperative size and non power cost. This approach confirms the above two methods. That is, it shows a definite and inverse relationship between EC size and non power cost. It also shows that many exceptions to the trend keep size from being an absolute predictor of non power cost.

It is vital to understand that the non power cost is an indicator of control over expenses and economies of scale. It is not that lower costs are the only goal of mergers. Rather, the goals of merger are many - improved efficiencies, better service, excellent maintenance, enhanced ability for planning and hopefully, lower rates as a fallout of the improved operation.

**LARGER COOPERATIVES TEND
TO HAVE BETTER CONTROL OF
THEIR COSTS**

These three methods of relating cooperative size to non power cost confirm the potential for larger cooperatives to have better control on their costs. This potential is sufficiently great that the conclusion of this report is that

all of the ECs in the nation should be looked at for possible consolidation.

It is equally clear that because of the many exceptions to the inverse relationship of size to non power costs, each situation must be individually studied. The exceptions do not invalidate the trends, but they must be recognized. Not every combination of ECs that would unite to form a bigger organization would necessarily result in greater efficiencies and/or lower costs. Many combinations will produce those results, and those combinations should be sought out.

The 865 electric cooperatives in the U.S. were also analyzed to see if there are relationships between non power costs and size. Less importance is placed on the results of this analysis than on the analysis of the ECs in the Philippines. However the analysis is of interest since there are so many more observations of the relationship because of the large number of ECs in the U.S.

The results of the analysis of the U.S. cooperatives were similar to that of the Filipino ECs. That is, there is also an inverse relationship in the U.S. between size and non power cost.

DETERMINING LIKELY CONSOLIDATION CANDIDATES:

The smaller ECs have the greatest potential to improve their non power cost situation through consolidation since they have the highest such cost. However, any cooperative might benefit from a consolidation. Yet, size is definitely one of the determining factors of where first to look for likely consolidation candidates.

Another factor is current financial and operating health of an EC. NEA has a useful categorization of ECs. This categorization of ECs from "A" through "D" also shows a relationship to non power cost. That is, as the grade goes down the non power cost goes up. Therefore, while it is prudent to look towards all ECs for possible consolidation, a good starting place is in the "D" and "C" categories.

The first section of the "PROCEDURES FOR CONSOLIDATION STUDIES:" part of this report provides additional thoughts on the general procedure for seeking out likely candidates for consolidation.

The respective roles proposed for NEA and the ECs in this report are of particular significance. It is clear that if consolidations are to take place, the initiative must be local. Therefore, NEA's role should first be to stimulate interest among the ECs.

NEA should develop documentation it can provide to all ECs demonstrating the potential benefits of consolidation. It should further encourage each EC to study its own situation in regard to consolidation. It can also make special contact with ECs it thinks are the most likely to benefit from consolidations.

NEA can also counsel with ECs during their exploration of consolidations. Additionally, in order to assure that its loan repayments are not put in jeopardy, NEA will have approval rights of any eventual consolidations. The initiative for any specific consolidations, however, must come from the local level or the consolidation is not likely to take place.

GUIDELINES FOR INDIVIDUAL CONSOLIDATION STUDIES:

The second section of the "PROCEDURES FOR CONSOLIDATION STUDIES" part of this report presents a nine step process for interested ECs to undertake if they are interested in studying consolidation.

This section again emphasizes the respective roles of the ECs as initiators of the specific process and NEA as guidance counselor.

SPLITTING OF COOPERATIVES:

Some EC managers have put forward the concept that an electric cooperative can get too big to manage effectively, and that some should be considered for splitting into two cooperatives.

As reported elsewhere in this report, a larger percentage of "Large" ECs are graded "A" than the percentage of "Extra Large" that are graded "A". This relationship is also true for the "A" and "B" ratings combined. This could indicate some ECs are too large. However, it must also be noted that the non power cost averages less for the Extra Large cooperatives than it does for the Large ones.

The bottom line test is the same for splitting a cooperative as it is for consolidating cooperatives. That is, what are the results of future projections on rates and general operating efficiencies? If lower rates are not predicted for both new cooperatives after the split, the split should not be pursued. The members who would become part of the new cooperative with higher future rates are not likely to vote for the split. The desire to split ECs is not expected to occur often and will not require a program by NEA to get such endeavors started. Each case will require individual analysis.

ALTERNATIVE ORGANIZATIONAL STRUCTURE:

CREATION OF G&TS SHOULD BE EXPLORED

There is an alternative organizational structure that might allow the ECs to provide even better service to their members. That organizational structure would involve the creation of several Generation and Transmission (G&T)

cooperatives which are themselves made up of some of the ECs. Most distribution cooperatives in the U.S. are members of G&Ts which provide generation and/or transmission service to the distribution members. Any G&Ts formed in the Philippines would likely be of the type that provide transmission service and power purchasing coordination.

This study on mergers/consolidation of ECs demonstrates the potential benefits of such consolidations. Hopefully there will be consolidations of ECs in the Philippines. The result will be even stronger ECs. In addition to such EC consolidations, the ECs and the Government of the Philippines should stimulate interest in groups of ECs forming their respective G&Ts.

A G&T can negotiate on behalf of its members to obtain the best plan of power supply for the group. The G&T can assist its members in load forecasting, engineering, system planning, etc. The G&T could own the transmission system so that the ECs. can focus on

retail service. A G&T providing transmission service over a large geographical area could provide some comfort to the owners of large industrial loads being served from that system.

The creation of G&Ts should not be considered as an alternative to considering EC consolidations. Rather the utilization of G&Ts should be investigated as an additional area of strength in the EC community. There may well be situations where ECs will decide to consolidate and also become part of a G&T.

The G&Ts could provide economies of scale that even very large ECs could not provide on their own. Also, a G&T could provide a unity among several ECs that might not fit well into a consolidation due to geography or other reasons. The ECs, of course, keep their individual identity under the umbrella of the G&T.

A companion study to this one is considering the issue of the ECs serving all the industrial loads in their respective franchise areas. That study concludes that the industrial loads should in general be served by the ECs. If G&T organizations were handling transmission activities for the ECs, the owners of the industrial loads to be transferred to the ECs might be more comfortable with the transfers.

KEY ACTIONS RECOMMENDED:

NEA should prepare a communique to all ECs presenting the possible benefits of consolidations and urging all cooperatives to consider the matter. The communique can also highlight the general factors which make a particular EC a likely candidate for consolidation. The ECs should be educated to the concept of G&Ts so that they will consider such organizations in their planning considerations.

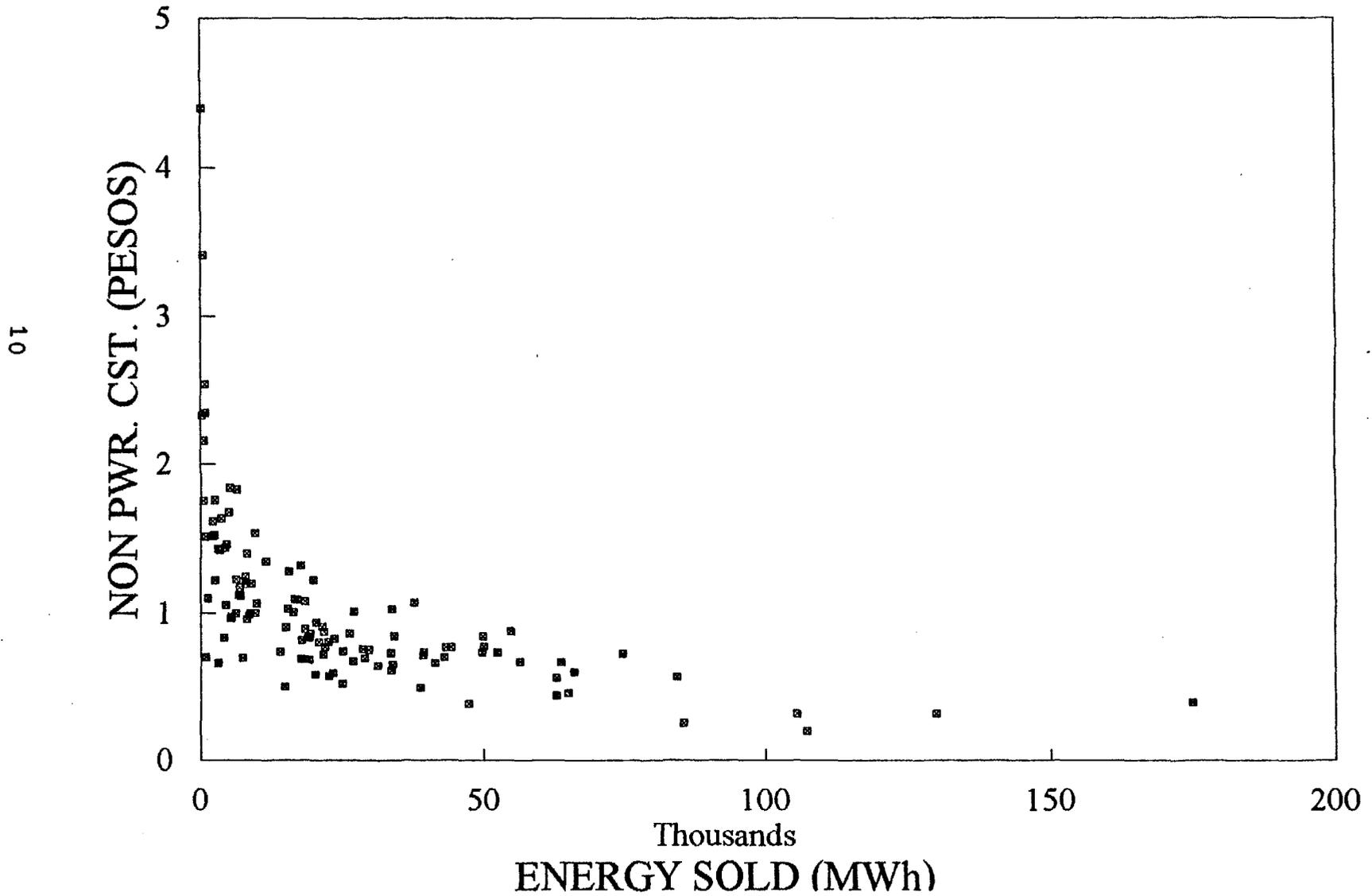
NEA should determine if there are sufficient consulting firms available in the country to assist those ECs that will need help analyzing consolidation issues. NEA should be the organization to do the studies only as a last resort.

Interested ECs should undertake consolidation studies in accordance with the section of this report titled "Guidelines for Individual Consolidation Studies."

Interested groups of ECs should undertake studies of the possible benefits of organizing into a G&T.

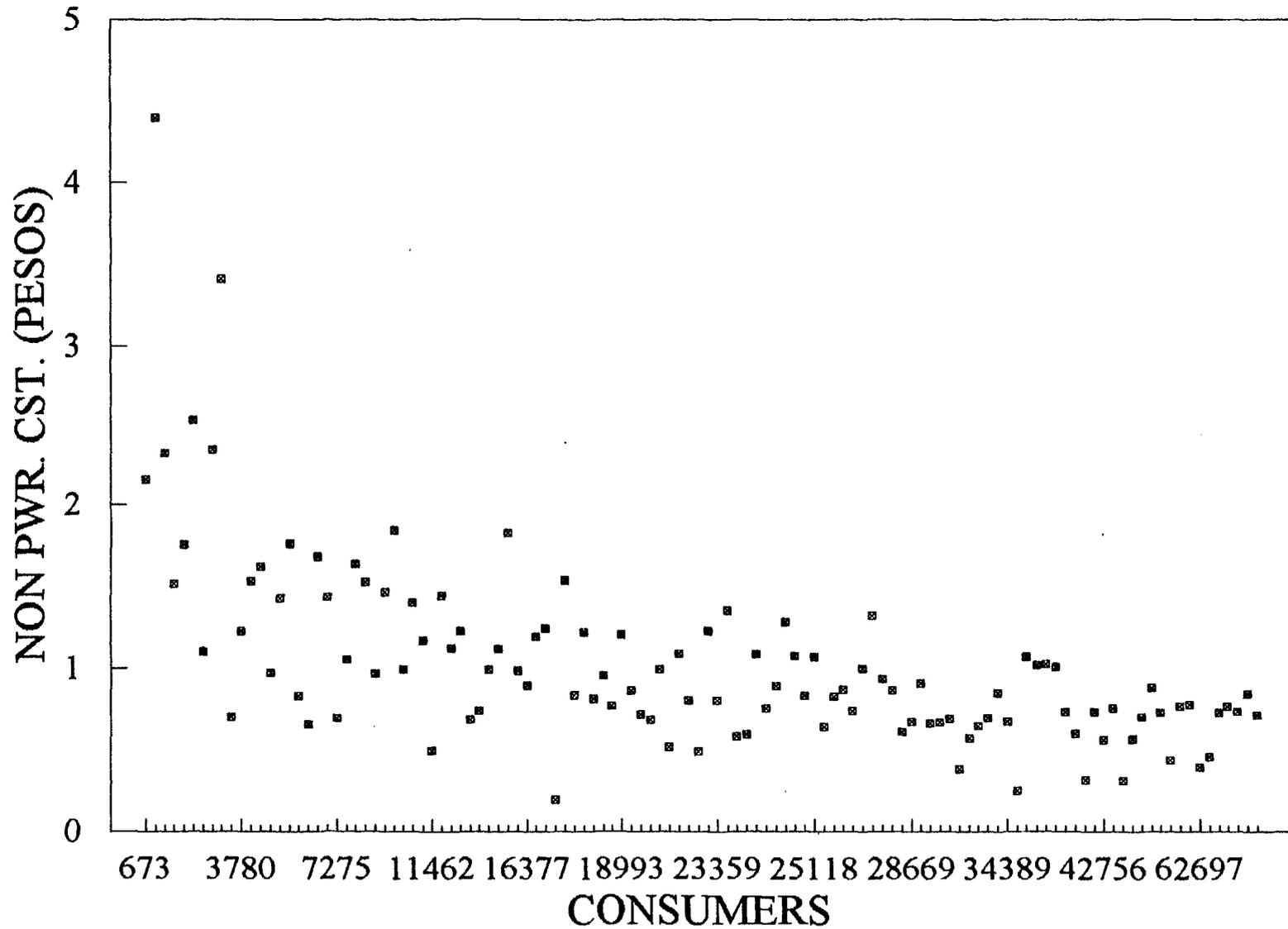
NON POWER COST RELATIONSHIP

RE: ENERGY SOLD



NON POWER COST RELATIONSHIP

RE: NO. CONSUMERS



BACKGROUND AND IMPORTANT TRENDS

In order to best understand the issue of the potential for consolidations among the ECs, it is useful to first consider the status of rural electrification in the Philippines.

In the early 1960's the Philippine rural electric program was started. In 1969, Republic Act 6038 was enacted to formalize the rural electrification effort. The NEA was created by Presidential Decree No. 269, and the NEA Charter was established. By 1971 the first EC was energized. By 1992 there were 118 ECs included in the year end reports prepared by NEA. These ECs serve approximately three million connections. The statistics on all of these ECs have been analyzed for the purposes of this report.

Each EC receives its franchise to serve a geographic area. NEA is an interested lender to the ECs. It provides funds and/or materials to the ECs. It also provides guidelines to these borrowers to improve their operations. Additionally, NEA has the right to approve or disapprove the board of directors selection of manager at each of the ECs. The EC obligations to NEA are evidenced through the signing of loan agreements and mortgage documents.

Recently, the central government has given rate approval authority over the ECs to ERB. The established procedure calls for NEA to coordinate closely with the ERB in regard to each EC rate approval request. The NEA recommendation regarding the rate request is sent to ERB.

The National Power Corporation (NPC) is responsible for the national high voltage transmission grid which includes most transmission systems nationwide. It is also responsible for most power generation in the nation. The ECs obtain their wholesale power from NPC and are responsible for the distribution of electricity to many of the provincial urban centers as well as to much of the rural area of the nation.

There are important current trends among the rural electric cooperatives. The conventional wisdom among those who do not follow the ECs closely is that they are mostly troubled organizations. Current information shows that this conventional opinion is no longer correct. The general financial health of the rural electrification program in the Philippines did deteriorate in the 1980's. Since the most recent studies were completed on the ECs, however, there has been a positive reversal in the economic health of the ECs. There has also been a useful change in the focus of NEA.

The recently prepared report "ELECTRIC COOPERATIVE OWNERSHIP IN THE PHILIPPINES" shows by way of several indicators that the ECs are becoming much stronger financially. That report also demonstrates

that not all ECs are participating equally in the improving financial situation. Thus, there is room to explore ways to further improve the financial health of certain ECs. An excerpt from the ownership report follows, for it helps set the background upon which this report builds.

"Appendix "A" summarizes the trends of net margins at the ECs for the years 1990, 1991 and 1992. The cooperatives in each of the nations 12 electrification regions have been grouped into four categories. The first group is those cooperatives whose trend in net margins has improved during the three years. The second group is those cooperatives whose margins have held relatively steady during the most recent three years and whose margin level is generally good. Group three is those cooperatives whose margins have held relatively steady during the three years but whose margin level is generally weak. The last group is those few cooperatives whose margin levels in the past three years have been deteriorating and are at unacceptable levels at this time.

It is particularly important to note that 39 percent of the ECs had improving margins while an additional 36 percent had stable margins at healthy nominal levels. This leaves 18 percent of the ECs with stable margins, but at weak nominal levels, and only 9 percent of the ECs with deteriorating margins in the test period. Bringing distribution rates up to be more in line with costs of operation has produced the changes.

Information from NEA demonstrates that in 1990 the total margins at the 118 reporting ECs was only 25 million pesos. Six of the 12 regions had negative margins on balance. In 1991 total margins had climbed to 396 million pesos, and only one region had a small negative balance. Even in 1992 with a severe "brownout" situation on the power grid, the ECs had margins of 262 million pesos, and only four regions had negative balances--each of these negative balances being small. These figures are listed in Appendix "B". The improved picture on margins is even more impressive when previous years margins are considered. Table 5.4 of World Bank Report No. 9810-PH shows the following total margins for the ECs: (in millions of Pesos)

YEAR	1985	1986	1987	1988	1989
MARGIN	(52)	11	(22)	(8)	(35)

Those figures are in sharp contrast to the 1990-1992 figures.

YEAR	1990	1991	1992
MARGIN	25	396	262

As can be seen in the preceding tables, dramatic, but unheralded, changes have taken place at the cooperatives. Changes have also taken place at NEA.

NEA is regaining its proper focus on the ECs. NEA loans to cooperatives will be conditioned on the proper implementation by the cooperatives of "Performance Improvement Programs" (PIP's). These PIP's will focus on five areas.

1. Reduction of technical losses.
2. Reduction of non-technical losses.
3. Improvement of collection efficiency.
4. Better control of non-power costs.
5. Quality of service.

NEA is now guided by a "Statement of Operating Policy" (SOP). Under that SOP, NEA will finance and support projects initiated by the ECs which in the opinion of NEA are technically feasible and which would maintain or improve the financial viability of the executing utility. With this renewed focus on EC financial viability, NEA will be a more successful lender again.

There is a "Revitalization Project" underway between NEA and the ECs with cooperation from the World Bank. The World Bank and NEA have agreed to certain conditions regarding NEA's on-lending program which are designed to keep NEA financially strong.

The World Bank Report No. 9810-PH discusses revitalization of the rural electrification sector by, among other things, the "Restructuring of NEA". In particular the World Bank states that 'NEA needs to reorient itself to the role of interested lender. As such, it needs to streamline its activities by dropping a number of functions that are not directly related to electricity distribution in rural areas, while strengthening functions that relate to programming, formulation and administration of loans and direct engineering services that enable ECs to implement investment projects. On the financial side, NEA needs to (i) get relief from past loans and other liabilities that it lacks the capacity to repay; and (ii) implement a workable strategy for financing the ECs that includes pricing of new loans at levels adequate to cover costs (including provisions against potential foreign exchange risks), and application of appropriate conditionality.'

The World Bank report states that 'During 1990-91, NEA greatly improved its investment planning methodology'. The report also states that 'The ECs that would be financed under the proposed project were chosen at random; they represent a cross section of all ECs based on geographical distribution, operational and financial performance, and future prospects.' This is a very important position for the World bank to take. It indicates that the World Bank did not feel it necessary to screen out any ECs from being eligible to receive assistance from its loan to NEA. This is

a vote of support for the general rural electrification program in the Philippines.

The work done in preparation of this report also verified that the revitalization of NEA is evident in the background and dedication of the Board and Administrator of NEA. They have not only agreed to certain conditions in the World Bank loan, but they themselves are determined that NEA be an efficient lender.

For year end 1991, NEA graded the ECs on several criteria and grouped them into four groups--"A" through "D". The grading criteria are included in an NEA memorandum which is attached as Appendix "C". Appendix "D" lists the grade and size of each EC as graded by NEA. Appendix "E" is a table in which this report takes the NEA gradings and further groups the ECs by size within the grades. This will be important for later discussions on the potential for sale of ECs. Reliable data was available for 116 out of the 118 ECs for purposes of this grouping.

While the draft of this report was being finalized the year end 1992 grading of the ECs by NEA became available. For 1992 NEA rates 49 ECs as "A", 21 ECs as "B", 11 as "C" and 36 as "D". Based on the same grading criteria, it can be seen that the situation improved in 1992. The number to ECs rated "A" went up considerably. The number of ECs rated in each of the three lower categories went down. This is a very encouraging trend.

Independent analysis done for the purposes of this report shows that the ECs are getting healthier. This is demonstrated in appendix "A" and Appendix "B".

For purposes of this report, analysis was also done on the situation of debt repayment arrearages at the ECs. This has been, and still is, an area of weakness at the ECs. At year end 1991, according to information available at the World Bank, only 26 cooperatives were current in their debt service payments. Analysis for this report shows that at year end 1992, 48 ECs were current on their debt service payments. This is still not a satisfactory figure, but it is a great improvement during the period. Recommendations on methods to deal with previous debt service shortfalls will be given later in the report.

Yet another statistic demonstrating improving trends among the ECs is that of line loss. NEA reports that losses went down from 24 percent in 1988 to 21.68 percent by the end of 1990. Losses stood at 20.79 percent for all the ECs at the end of 1992.

While this improving trend in line losses is encouraging, much more needs to be done. This will be addressed later in the report. Also, Appendix "F" demonstrates expected benefits of additional reductions in line losses. Each EC in the nation was analyzed to estimate the benefits to it of reducing its line loss to the 12

percent level that NEA estimates is the real level of technical line loss to be expected in systems like the ECs. 'Losses in excess of 12 percent are normally attributed to non-technical factors, primarily pilferage and poor line maintenance.' (See attached NEA Memo to All Electric Cooperatives dated 5/April/93 re: Categorization of Electric Cooperatives--Appendix C). Analysis of the 866 rural electric cooperatives in the U.S. demonstrates that 12 percent is a reasonably conservative goal in the Philippines. In the U.S. the average of line losses among the 865 rural electrics was 7.6 percent in 1991.

The improving financial health of the ECs and the changed focus at NEA combine to change in a positive direction prognostications of the future of rural electrification in the Philippines."

The appendices referred to in the above excerpt are also included with this report.

An important conclusion to be drawn from the improving financial health of the cooperatives is that the ECs will remain a vital part of the electric utility industry in the country. It is equally important to focus on the fact that not all ECs are equally healthy.

The financial trends among the ECs are in general good. However, as can be seen from Appendix "A" some ECs remain weak and some even have a deteriorating trend in margins. It is, therefore, useful to explore the possibility of improving the financial health of the weaker cooperatives by considering consolidations. It is also possible that some already healthy ECs can be further strengthened by consolidations.

During the course of discussions with cooperative leaders in the Philippines, the issue of splitting large cooperatives was raised. Therefore, this study will also consider the possible benefits of splitting certain types of cooperatives into two smaller ECs each.

FINDINGS AND RECOMMENDATIONS

RELATIONSHIPS OF SIZE TO FINANCIAL HEALTH:

Appendix "D" shows for 1991 the categorization of the ECs by size and financial health. This information shows the following in regard to that relationship as graded by NEA:

PERCENT OF COOPERATIVES GRADED "A"				
SIZE	EXTRA LARGE	LARGE	MEDIUM	SMALL
PERCENT	35	41	29	18

PERCENT OF COOPERATIVES GRADED EITHER "A" OR "B"				
SIZE	EXTRA LARGE	LARGE	MEDIUM	SMALL
PERCENT	55	74	51	43

The tables above indicate that in 1991 the medium and small cooperatives demonstrated weaker financial strength than the extra large and large cooperatives. The small cooperatives show even less strength than the medium size ones. It is also interesting to note that the large cooperatives are categorized as being in some respects stronger than the extra large ones.

For 1992 the ECs are graded by NEA as follows:

PERCENT OF COOPERATIVES GRADED "A"				
SIZE	EXTRA LARGE	LARGE	MEDIUM	SMALL
PERCENT	37	48	51	25

PERCENT OF COOPERATIVES GRADED EITHER "A" OR "B"				
SIZE	EXTRA LARGE	LARGE	MEDIUM	SMALL
PERCENT	53	71	67	43

As can be seen from the above tables, the relationships between size and financial health in 1992 showed some similarities to those in 1991. That is, the small ECs do not exhibit as much financial health as the medium, large and extra large cooperatives. The large cooperatives show to be even healthier than the extra large ECs. The medium size cooperatives showed the greatest improvement in the percentages of cooperatives represented in the "A" and the "A" and "B" combined categories.

The most consistent factor during the past two years has been that the small cooperatives have demonstrated the least financial health in regard to the grades given by the NEA categorization. This naturally draws our attention first to the small cooperatives in considering consolidations. It is useful to analyze all the ECs, but with special focus on whether or not some small ECs should be consolidated with each other or with larger cooperatives?

Geography plays an important part in considering consolidations of any ECs. This is particularly true in the case of the small cooperatives. In 1992, 29 of the ECs were designated as small. These small ECs will be discussed in greater detail later in the report.

The ECs as a whole exhibited greater financial health in 1992 than in 1991. The relationships among the four size categories shifted a bit in that the medium sized ECs demonstrated greater financial health in 1992 than they did in 1991. The smallest ECs continued to show weak performance.

Additionally, all the ECs have been analyzed in regard to a number of important operating ratios and how those statistics relate to cooperative size. This ratio analysis indicates that there is a correlation between the number of consumers served by a cooperative and the "non power cost" at that cooperative. Non power cost is the distribution mark up over the cost of wholesale power.

There appears to be an even stronger relationship between kwh sales and non power cost among the cooperatives in the Philippines than among the cooperatives in the U.S. This will be described following the discussion of U.S. cooperatives which is presented immediately below. The non power cost figure at each EC is an excellent way to determine the impact of the distribution organization on the ultimate cost of power. The operating efficiencies appear to be higher at the larger ECs and the fall out of this is lower rates.

Direct comparisons with the rural electric cooperative community in the United States should be made very sparingly. This is, however an instance where such a comparison is enlightening. A review of the 865 rural electrics that were borrowers from the Rural Electrification Administration as of year end 1991 shows some significant relationships between size and key financial statistics.

Appendix "G" shows the 865 U.S. electric cooperatives grouped into various size categories. In each category the average has been determined for certain key ratios. Appendix "H" shows a graphical representation of the key relationship between number of consumers and the non power cost by category in the U.S.

Although the graph in Appendix "H" has been based on the number of consumers being the factor considered, an alternative analysis was also performed using MWh sales as the size determinant. Both number of consumers and MWh sales show a definite relationship to non power cost at the electric cooperatives in the United States. The relationship of size to non power cost is very consistent when the cooperatives are grouped by size into seven sets. As the groups get bigger (either in number of consumers or MWh sales) the average non power cost amount trends down.

This analysis of groups is based on averages for each group of non power cost, MWh sales, number of consumers, etc. An analysis of averages must be approached with caution. Also, this approach of grouping the cooperatives gives only seven observations. Therefore, regression analysis techniques were also employed to review the U.S. data.

Regression analysis shows that when all 885 electric distribution cooperatives in the U.S. are considered as individual observations, it is more difficult to see trends. There is still a general trend that as cooperatives get bigger their non power costs go down. However, there are so many significant exceptions at individual cooperatives that regression analysis demonstrates it is unwise to attempt to predict the situation at a particular EC without a study of that particular cooperative. Appendix "I" summarizes some of the more significant regressions analysis findings.

Based on U.S. data (which has value because it includes so many observations--885) it is possible to come to some conclusions about the potential benefits of consolidations. There is a general trend towards lower costs at ECs when these cooperatives are sorted in size from smaller to larger. There are, however a significant number of exceptions to this trend. Therefore, this leads towards a preliminary conclusion that in the Philippines there should be a nationwide effort to look for potential consolidations among the cooperatives. However, each situation must be analyzed independently. The exceptions do not invalidate the trends, but they must be recognized. Not every combination of ECs that would unite to form a bigger organization would necessarily result in greater efficiencies and/or lower costs. Many combinations will produce those results, and those combinations should be sought out.

An in depth analysis has also been done on the ECs in the Philippines. This is the more important analysis for it addresses the situation more directly than the above analysis of the U.S. cooperatives. However there are less observations available in an analysis of the Philippine ECs. For year end 1992 there is good data available for 117 of the 118 ECs. Thus we have 117 observations for each item of data for the Philippine cooperatives.

In addition, NEA has classified the electric cooperatives based on three size criteria. ECs "are classified into Extra Large (XL).

Large (L), Medium (M) and Small (S). Grouping is done based on the number of service connections, volume of MWh sales and circuit km of lines."

There is a clear trend based on these classifications in regard to the important statistic of non power costs. That is, with each larger classification the non power cost average for the classification is smaller than for the classification(s) below. The cost of the distribution operation in the final cost of electricity trends lower as larger ECs are analyzed.

The NEA rating system in determining classification for the cooperatives is weighed to give more weight to volume of MWh sales than to either number of consumers or circuit km of lines. This is quite appropriate, for the differences among ECs are more influenced by MWh sales than by the other factors. Analysis done for this report shows that there is more correlation between MWh sales and non power cost than between number of consumers and power cost. Appendix "J" includes a description of the classification system, a summary of the classification of the ECs and a presentation of the details of the classification for each cooperative in the country.

In the Philippines there is correlation between number of consumers and non power costs among the ECs. In regard to MWh sales, the correlation is even stronger. In the Philippines, the situation is similar to the situation in the U.S. for both MWh sales and number of consumers. That is, there are definite trends that larger cooperatives on average add less distribution costs to the price of power than do smaller cooperatives. There are, however, so many individual exceptions to the trend that it is not appropriate to assume that bigger is better--that is, cheaper.

The appropriate conclusion is that it is worthwhile to search for suitable consolidation candidates among the ECs. The general trends towards lower costs at the larger ECs support that conclusion. It is also necessary to realize that the many exceptions to the trends point out that each prospective consolidation must be studied on a case by case basis.

There have been two significant consolidations among the ECs in the Philippines. These have been reviewed to determine if they provide information for future consolidations.

ALBAY I, II and III consolidated into ALBAY in 1992. Because this consolidation is so recent, it does not yet provide historical information to provide a guide.

In 1988 ORMECO I and ORMECO II consolidated. The historical statistics for the two cooperatives were reviewed for the three years prior to the consolidation and the five years afterwards.

Several indicators demonstrate that the cooperative after consolidation is stronger financially than the two cooperatives were before that time. For example, the trend of declining revenues has been reversed. Additionally, for three years the rates were lower on a nominal basis at the consolidated EC than at either of the ECs operating separately. In the following two years the rates are still lower on a real basis. These beneficial trends point to a strengthening through consolidation. However, there were several other important happenings during the time period of the consolidation. For example, prior to the consolidation there was an extended period of unreliability in generation. Ownership of the generating facilities changed during that period. A mini-hydro facility has been installed since the consolidation. The electric system was significantly damaged by a typhoon during the period. Additionally, in the early 90s, the rates at the ECs throughout the nation were allowed to increase to more adequately reflect costs. Therefore, without further study, it is not proper to conclude that the improved situation at ORMECO since the consolidation is due entirely to the consolidation.

It would be a useful undertaking for NEA and/or ORMECO to study ORMECO in considerable detail to gain more information on the potential benefits of consolidations.

Some EC managers have put forward the concept that an electric cooperative can get too big to manage effectively, and that some should be considered for splitting into two cooperatives.

As reported elsewhere in this report, a larger percentage of "Large" ECs are graded "A" than "Extra Large" are graded "A". This relationship is also true for the "A" and "B" ratings combined. This could indicate some ECs are too large. However, it must also be noted that the non power cost averages less for the Extra Large cooperatives than it does for the Large ones.

The bottom line test is the same for splitting a cooperative as it is for consolidating cooperatives. That is, what are the results of future projections on rates and operating efficiencies? If lower rates are not predicted for both new cooperatives after the split, the split should not be pursued. The members who would become part of the new cooperative with higher future rates are not likely to vote for the split. The desire to split ECs is not expected to occur often and will not require a program by NEA to get such endeavors started. Each situation will require individual analysis.

The next section of the report will outline ways in which a general search can be conducted for likely cooperatives to consolidate. It will then go on to describe the steps to be followed in investigating any particular consolidation.

PROCEDURES FOR CONSOLIDATION STUDIES

A two step process is recommended for approaching consolidation studies. First, a procedure is needed to determine likely candidates for consolidation. Second, a procedure is needed to analyze the particulars of consolidating two or more specific cooperatives.

Determining Likely Consolidation Candidates:

NEA already has in place excellent classification and categorization criteria for ECs which can be very useful in this undertaking. NEA has classified the ECs as to size, and has categorized them by quality of performance.

This report has analyzed the ECs, seeking predictors of consolidation potential. Information regarding both size and quality of performance will provide useful tools in determining which ECs should be looked to as the most likely candidates for consolidation.

Although there are many exceptions to the rule, the general trend is that the smaller cooperatives, in terms of MWH sales or number of consumers, have higher distribution costs than the larger ones. In particular, the ECs in size classification "Small" add considerably more distribution costs to the final cost of power than do the ECs in the larger classifications. The following table summarizes the situation:

P's/KWh

NON POWER COST/ENERGY SOLD VERSUS SIZE CLASSIFICATION				
CLASS.	EXTRA LARGE	LARGE	MEDIUM	SMALL
NON PR CST	.625	.816	.978	1.591

As can be seen, the average non power cost is considerably higher for the cooperatives classified as small in comparison to the other classes. It is reasonable to conclude that in regard to size, time can most productively be spent by first investigating the small ECs for possible consolidations.

Of the 29 ECs presently classified as small, many are quite isolated geographically. Some are on the smaller islands and are the only electric utility on the island. Some that are on the larger islands are still geographically isolated--by mountains and forests. Certain of these ECs may never be suitable for consolidation because of their isolation.

There may be a few that would be suitable for the merger type of reorganization. That is, they might become, in effect, a satellite

operation of a larger EC. Also, there appear to be a few that can legitimately be considered for normal consolidation. The consolidation might be with another small EC or with a larger EC.

The important finding is, that there are some likely candidates for consolidation in the EC community, and it is worthwhile starting with the Small ECs in the search. The greatest potential benefits of reduced power costs are likely to be found where a Small EC is involved in the consolidation. In progression, the other size cooperatives should also be reviewed for possible consolidations.

It is also useful to look at the cooperatives from the point of view of their respective categorizations. The NEA evaluates yearly the overall performance of the ECs based on certain key factors of their operation. The final output of this review is the annual categorization of the ECs into Categories "A" through "D".

As one might expect, there is a relationship between cooperative categories and non power costs. That relationship is presented in the following table:

P's/KWh

NON POWER COST/ENERGY SOLD VERSUS COOPERATIVE CATEGORIZATION				
CATEGORY	A	B	C	D
NON PR CST	.937	.968	1.040	1.102

The relationship between categories of ECs and their distribution costs gives direction to the search for likely candidates for consolidation. In regard to operating performance, the greatest potential for lowering distribution cost through consolidations is at the lower categorized cooperatives.

In 1993 a study was also performed on "ELECTRIC COOPERATIVE SERVICE AREA INTEGRITY IN THE PHILIPPINES." That study concluded that the ECs have the right to serve the industrial loads located in their respective franchise areas. It further concluded that most ECs have the ability to serve those industrial loads. It also determined that to the extent that the ECs are not permitted to serve industrial loads in their franchise areas, the other members of those ECs are economically disadvantaged. The study done for this report further supports the findings of the Service Area Integrity Report. That is, the more KWh an EC sells the lower its non power cost distribution mark up is likely to be.

This consolidation study and the service area integrity study both demonstrate that there are likely benefits to an EC seeking to take advantage of economies of scale by getting larger--whether by consolidation or by serving an industrial load.

As mentioned above, the major statistical criteria that can be used as guides to finding candidates for consolidation are, therefore, classification by size and categorization by operating efficiency.

In addition, there are many additional factors that must be recognized both in making a general analyses of which ECs might be suitable for consolidation and in making specific studies of a particular consolidation. A discussion of these factors follows.

- o The initiative for a particular consolidation must come from the cooperatives or their members. If there is not sufficient local interest and eventually local support, a successful consolidation is very unlikely to happen.

- o Some ECs may be so isolated geographically that a consolidation or merger is made much harder. However, even isolation does not make central management impossible. For example, in the state of Alaska in the U.S. there are 47 remote Eskimo and Indian villages that all together form one cooperative. The central management for all villages is provided from the cooperative office in the city of Anchorage. Each of the villages is isolated from each other and from Anchorage. They can only be reached by small airplane or by boat. They are spread out over an area approximately 1,000 miles long by 800 miles wide. Yet they successfully form one cooperative.

- o A consolidation is made more difficult if rates at the ECs being considered are very different. Unless the original ECs are remote from each other, the members of the consolidated cooperative will eventually want to have just one rate structure for each class of consumer. If each cooperative's rates can not be lower after the consolidation, it is not likely to take place.

Although this report recites the many efficiencies that can result from consolidations, and these efficiencies are well recognized by professionals in the utility business, the end user is basically interested in the end result of the efficiencies - that is, the electric rates that result.

- o The wages at each EC are important. It is not likely that the wages at the EC with higher wages can be reduced. Rather the wages at the EC with lower rates are likely to go up.

- o It is not reasonable to assume an immediate cost savings from a reduction in employees from a consolidation. If a prospective consolidation is based on firing staff, that consolidation may never happen. It is reasonable to assume that eventually the staff can be reduced through attrition.

It is important that the employees learn early in the consolidation process that layoffs are not the goal of the consolidation. This will help defuse potentially serious opposition to the consolidation.

- o If political subdivision lines are crossed, particularly provincial boundaries, the task of creating a consolidation is made more difficult. For example, if the main office of the consolidated EC is now in another province, the political representatives of the province which has lost a main headquarters may feel disadvantaged. This could have an unfortunate impact on the potential for consolidation and should be addressed through consultation with the appropriate representatives to seek their support.

- o The ability of a larger cooperative to pay a manager more and, therefore, attract better management over the years is a key benefit of larger scale.

- o There are many efficiencies that result from the economies of scale in having a larger electric utility. The system can do a better job of planning for the future, forecast load growth better, do staff training, have staff to inform the membership of efficient use of electricity, perform better O&M, etc. There will be some engineering efficiencies in a larger system. To cite just one example, as systems grow they will need new substations. Two systems might need two new substations even though the stations may not be far from each other. A consolidated system might be able to put in one larger station to serve the purpose of the two stations and save money.

This section presents some general issues and some specific ones that are important to deciding if a potential merger merits more detailed study.

NEA has sharpened the focus of its activities. It now functions more in the role of interested lender rather than acting as the constant advisor to each of the ECs. Consistent with that role, it is appropriate for NEA to work with the ECs to assure that there is an adequate number of consulting firms in the country to assist individual ECs study specific consolidations. The individual ECs will not likely have the resources in their staff to do the detailed studies referred to above. Hopefully, there is a sufficient number of consultants to do the job, for NEA should undertake the individual studies itself only as a last resort.

Another important role for NEA would be to publish and disseminate to the ECs a document outlining the potential benefits of consolidation. This document would put particular emphasis on the potential to lower electric rates. The purpose of the document would be to stimulate consolidation interest at the ECs. Without

interest and support of the boards of directors consolidations are not likely. NEA may even wish to inform selected ECs that they seem to be particularly suited to receive benefits from consolidation. If local interest exists, the next step is to consider the specifics of the local situations.

The following section will discuss aspects of the detailed studies that will be needed to decide on specific consolidations.

Guidelines for Individual Consolidation Studies:

The following steps are appropriate in undertaking a study of the consolidation of specific ECs.

- 1). The entire process should result from local interest and initiative. If the board of one or more cooperatives has an interest in exploring the possible benefits of consolidations, there should be a joint board meeting to discuss the issue.
- 2). If the two or more boards considering consolidation agree to proceed further, a committee should be formed to pursue the matter. Typically, the committee should be made up of representatives of the boards and the staffs of each of the cooperatives.
- 3). The committee should form a subcommittee which would likely be comprised of staff members of the cooperatives. This subcommittee should prepare a preliminary report for the committee. The report should contain information to help the committee decide whether or not to pursue the consolidation further.

The report should list potential savings and improved operations that could result from consolidation.

- 4). The committee should present the preliminary report to the joint boards and be prepared to answer questions from the board members.
- 5). If the joint boards decide to proceed further, they should select a consultant which can prepare a detailed study for the benefit of each of the cooperatives. NEA may be able to provide the boards with a list of consulting firms that would be capable of performing the necessary study.

The results of the study should present the boards with an estimate of the future financial situation at the consolidated cooperative versus the future situation at each of the ECs without consolidation.

The study should also provide information about estimated service reliability with and without consolidation.

- 6). If the study referred to in step 5 persuades the boards to pursue consolidation, they should be prepared to conduct an educational campaign.

Each board should hold meetings to inform its respective membership of the potential benefits of consolidation and of any possible problems.

The boards should contact NEA, not only to inform it of the possibility of the consolidation, but to coordinate with NEA on a continuing basis.

The boards should contact the appropriate elected representatives to inform them of the process and to seek their support. In particular the potential of lower electric rates in the area should be stressed.

- 7). The committee of the boards, probably with the help of a consultant and NEA, should decide on the formal organizational structure of the consolidated EC.
- 8). The cooperatives considering consolidation should each hold membership meetings for the purpose of getting a vote on whether or not to consolidate.
- 9). If the membership of each EC approves the consolidation, the committee of the boards should work with attorneys representing each EC and with NEA representatives to put proper documentation in place to complete the consolidation.

ALTERNATIVE ORGANIZATIONAL STRUCTURE

There is an alternative organizational structure that might allow the ECs to provide even better service to their members. That organizational structure would involve the creation of several cooperatives which are themselves made up of some of the ECs.

In the United States, there are 56 Generation and Transmission Cooperatives (G&Ts) which provide generation and/or transmission service to their members. The membership of each G&T is made up of distribution cooperatives that provide retail electric service in their respective service areas. Approximately 700 of the nearly 900 electric cooperatives in the U.S. have some or all of their wholesale power needs met by G&Ts. Several of the G&Ts do not own any generating facilities. Rather they provide transmission facilities, wholesale power contracting resources, planning and engineering support. This type of organizational structure could be available in the Philippines.

CERTAIN ECs SHOULD
BE CONSOLIDATED

This study on merger/consolidation of ECs demonstrates the potential benefits of such actions. Hopefully there will

CREATE G&Ts FOR
GREATER EC
STRENGTH

be consolidations of ECs in the Philippines. The result will be even stronger ECs. In addition to such EC consolidations, the ECs and the Government of the Philippines should stimulate interest in groups of ECs forming their respective G&Ts.

A G&T can negotiate on behalf of its members to obtain the best plan of power supply for the group. The G&T can assist its members in load forecasting, engineering, system planning, etc. The G&T could own the transmission system so that the ECs. can focus on retail service. A G&T providing transmission service over a large geographical area could provide some comfort to the owners of large industrial loads being served from that system.

The creation of G&Ts should not be considered as an alternative to considering EC consolidations. Rather the utilization of G&Ts should be investigated as an additional area of strength in the EC community. There may well be situations where ECs will decide to consolidate and also become part of a G&T.

The legal foundation for G&Ts already exists in the Philippines. Cooperative Law 6938, Article 23 (2) (a) (ii) provides for "Secondary Cooperatives" which are defined as cooperatives "the members of which are primaries." In the previous section (i), "Primary Cooperatives" are defined as cooperatives "the members of which are natural persons." Thus, the ECs would be the Primary Cooperatives and the G&Ts would be the Secondary Cooperatives.

The G&Ts could provide economies of scale that even very large ECs could not provide on their own. Also, a G&T could provide a unity among several ECs that might not fit well into a consolidation due to geography or other reasons.

The G&T could provide key centralized services for its member ECs. It can coordinate bulk power purchases, and dispatch those purchases. It can have professional staff to assist the ECs in forecasting and planning. It can provide training to EC staff in such matters as safety and equipment maintenance.

A companion study to this one is considering the issue of the ECs serving all the industrial loads in their respective franchise areas. That study concludes that the industrial loads should in general be served by the ECs. If G&T organizations were handling transmission activities for the ECs, the owners of the industrial loads to be transferred to the ECs might be more comfortable with the transfers.

APPENDIX A

NET MARGIN TRENDS 1992
RURAL ELECTRIC COOPS IN THE PHILIPPINES

	IMPROVING	STATIC AT GOOD LEVEL	STATIC AT WEEK LEVEL	DETERIORATING
REGION I	4	4	1	0
REGION II	4	4	1	0
REGION III	3	7	1	2
REGION IV	9	4	1	0
REGION V	3	7	0	0
REGION VI	4	4	2	0
REGION VII	7	1	2	0
REGION VIII	5	2	4	0
REGION IX	4	2	0	2
REGION X	2	5	4	1
REGION XI	1	0	2	4
REGION XII	<u>0</u>	<u>3</u>	<u>0</u>	<u>2</u>
	46	43	18	11

TOTAL COOPERATIVES ANALYSED 118

PERCENT	IMPROVING	STATIC AT GOOD LEVEL	STATIC AT WEEK LEVEL	DETERIORATING
	39%	36%	15%	9%

APP A

APPENDIX B

YEAR REGION	MARGINS BY REGION PESOS (000,000)		
	1990	1991	1992
I	19	73	82
II	6	44	22
III	-16	41	29
IV	-2	41	18
V	19	70	50
VI	-16	63	59
VII	-2	13	18
VIII	-4	20	21
IX	9	3	-17
X	-9	-2	-3
XI	19	19	-9
XII	2	11	-9
TOTAL	25	396	262

TOTAL MARGINS PESOS (000,000)							
1985	1986	1987	1988	1989	1990	1991	1992
(52)	11	(22)	(8)	(35)	25	396	262

APPENDIX C



REPUBLIC OF THE PHILIPPINES

National Electrification Administration

05 April 1993

MEMORANDUM :

TO : ALL ELECTRIC COOPERATIVES

SUBJECT : CATEGORIZATION OF ELECTRIC COOPERATIVES

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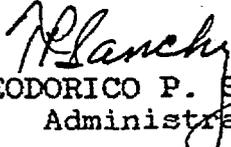
An annual evaluation of electric cooperative performance is undertaken to ensure a continual monitoring of their operations.

Likewise, this aims to give due recognition by way of incentives and benefits, to electric cooperatives which have shown consistent and/or remarkable improvement in operations.

A set of evaluation criteria had been developed, applicable to all electric cooperatives regardless of size.

The ranking of electric cooperatives within a category has been introduced to allow a better appreciation of their overall performance.

It is expected that electric cooperatives will pursue all efforts to maximize the judicious use of resources to ensure viability of operations.


TEODORICO P. SANCHEZ
Administrator



REPUBLIC OF THE PHILIPPINES

National Electrification Administration

05 April 1993

MEMORANDUM TO All Electric Cooperatives

SUBJECT : CRITERIA FOR CATEGORIZATION OF ELECTRIC COOPERATIVES (ECs)

I. Introduction

The NEA evaluates yearly the overall performance of the ECs based on certain key aspects in power utility operations. The end result of this performance review is the annual categorization of the ECs, the objectives of which are to give due recognition, by way of incentives and other benefits, to the ECs that have performed well according to the standard set forth by NEA, and to help identify specific areas in their operations where the relatively less performing ECs can further improve. The same objectives are retained in these revised criteria for categorization which, however, appear more as an upgraded version of the previous gauging system.

II. Purpose

To guide the ECs towards the attainment of a high standard of performance in order to achieve viability in their operations.

III. Policy

The NEA shall continue to pursue an accelerated program for the improvement of coop operation in various aspects. Towards this end, a close monitoring of the performance of ECs is regularly being undertaken so as to update the NEA management on their status.

IV. Criteria: Factors and Scoring System

1. Amortization Payment

This pertains to the ability of ECs to fulfill their loan obligation to NEA in terms of payment of amortizations due. Under this item, ECs with moratorium or whose loans were restructured are treated separately from those with regular loans with the latter given a higher point equivalent.)

	<u>REGULAR</u>	<u>W/MORATORIUM</u>	<u>RESTRUCTURED</u>
Current to date	25 pts.	20 pts.	15 pts.
Up to one quarter overdue	20	15	10
Up to 2 quarters overdue	15	10	5
Up to 3 quarters overdue	8	3	-2
More than 3 quarters overdue	0	-5	-10

"REGULAR" - Coops without restructured account with NEA.

"RESTRUCTURED" - Coops with approved restructured loans.

"MORATORIUM" - Coops with approved moratorium on their loan repayments to NEA.

2. Systems Loss

The maximum tolerable systems loss in typical EC is 12%. Systems loss at this level consists of technical losses inherent in the design of the distribution system. Losses in excess of 12% are normally attributed to non-technical factors, primarily pilferages and poor line maintenance.

$$\text{System Loss} = \frac{\text{Kwh PURCHASED} - (\text{Kwh SOLD} + \text{EC Consumption})}{\text{Kwh PURCHASED}} \times 100\%$$

<u>System Loss</u>	<u>Score</u>	<u>System Loss</u>	<u>Score</u>
12% and below	20 pts.	19%	13 pts.
13%	19	20%	12
14%	18	21%	11
15%	17	22%	10
16%	16	23%	9
17%	15	24%	8
18%	14	25%	7
		26% & above	0

Kwh SOLD shall exclude consumption of Industrial Consumers tapped to 69 KV.

3. Collection Efficiency

This item refers to the capability of ECs to collect consumer accounts receivables. While the EC may be performing well in other aspects of operation, its inability to collect receivables on time will affect its financial position.

$$\text{COLLECTION EFFICIENCY} = \frac{\text{COLLECTIONS FOR THE YEAR}}{\text{A/R Beg + Sales for the Year - Current Mo. Sales}^*} \times 100\%$$

COLLECTION EFFICIENCY	SCORE	COLLECTION EFFICIENCY	SCORE
95% & above	20 pts.	84%	9 pts.
94%	19	83%	8
93%	18	82%	7
92%	17	81%	6
91%	16	80%	5
90%	15	79%	4
89%	14	78%	3
88%	13	77%	2
87%	12	76%	1
86%	11	75%	0
85%	10		

* shall vary depending on the billing cycle of coop

4. Payment to Power Supplier

The ECs buy power from NAPOCOR which they retail, in turn, to their consumers. This is the biggest single expense that the co-op has to promptly settle to assure continuous delivery of service. Inability to settle this on time results to additional surcharges and other penalties, and ultimately disconnection.

	<u>REGULAR</u>		<u>RELENDING</u>	
	WITHOUT Restructure	WITH Restructure	WITHOUT Restructure	WITH Restructure
Current	15 pts.	10 pts.	10 pts.	0
One month overdue	10	5	5	-2
2 months overdue	5	0	0	-4
3 months & more	0	-2	-2	-6

5. Non-Power Cost

In order to encourage the ECs to confine their non-power expenditures within the limits set by the NEA-approved budget in relation to actual collections, appropriate points are added from the over-all ratings of ECs depending on how these expenditures match with the approved budget level.

Within approved budget	-	15 pts.
Above approved budget by 1%	-	14
2%	-	13
3	-	12
4	-	11
5	-	10
6	-	9
7	-	8
8	-	7
9	-	6
10	-	5
11	-	4
12	-	3
13	-	2
14	-	1
15 & above	-	0

6. Bonus Points

6.1 Advance Amortization Payment

As an incentive, ECs which are able to pay advance amortization to NEA are given bonus of one (1) point for every full quarter advance amortization but not to exceed 3 points.

6.2 Significant reduction over past year's systems loss

This is to give recognition to coop efforts in reducing its level of systems loss by a significant percentage. An additional one (1) point is given for every 2% reduction level but not exceeding 2 points.

7. Demerit Points

7.1 Cash Advances to Officers and Employees

As a measure to discourage the ECs from granting excessive cash advances to officers and employees and to encourage them to strictly effect immediate liquidation of the same, an appropriate one (1) point is deducted for every P 50,000 unliquidated cash advances at the end of the year in review.

7.2 Non-submission of Cash Budget and Actual Cash Flow

ECs which do not submit their cash budget for approval and actual cash flow at the end of the year will receive a demerit of 2 points.

B. Over-all Scoring System

<u>Score</u>	<u>Category</u>
75 - Above	A
65 - 74	B
55 - 64	C
54 & below	D

9. Ranking

To encourage continuous improvement of operations of electric cooperatives, ranking based on overall performance within a category is introduced. Thus, each category will have a highest and lowest scoring EC. This will allow ECs to evaluate their own performances and develop constructive competition among them.

V. Implementation

Full implementation of this evaluation system shall cover the operation of ECs beginning Calendar Year 1992.

The Regional Electrification Centers are enjoined to monitor quarterly the categorization of the ECs in their respective regions based on the new criteria. This shall facilitate expeditious action from NEA Management to institute appropriate measures among ECs wanting in good performance.

VI. General

As the Chief Executive Officer, the General Manager should view the coop in its total perspective so as to maintain a clear grasp of the problems besetting its operations. He could then focus his concern and attention on areas where the coop is weak, and give these areas utmost priority in his developmental programs.

In this regard, he would find this evaluation system most useful, being wholistic in approach, applicable to both small and big ECs. Experience-wise, we have seen General Managers who improved one aspect of operations but deplorably failed to develop the other aspects.

This system will help these chief executives maintain a balanced outlook at management performance and further institutionalize within EC management the spirit and commitment to pursue the rural electrification program as a viable entrepreneurship.

T. Sanchez
TEODORICO P. SANCHEZ
Administrator

APPENDIX D

1991 ELECTRIC COOPERATIVES CATEGORIZATION AND CLASSIFICATION
REGION I – XII

	COOP	CATEGORY	SIZE
REGION			
I	ABRA	D	Medium
I	BENQUET	D	Extra Large
I	ILOCOS SUR	C	Extra Large
I	ILOCOS NORTE	A	Extra Large
I	LA UNION	C	Extra Large
I	MOUNTAIN PROVINCE	C	Small
I	PANGASINAN I	B	Medium
I	PANGASINAN III	D	Large
I	CENTRAL PANGASINAN	D	Extra Large
II	BATANES	D	Small
II	CAGAYAN I	B	Large
II	CAGAYAN II	D	Large
II	IFUGAO	B	Small
II	ISABELA I	B	Extra Large
II	ISABELA II	D	Large
II	KALINGA APAYAO	C	Small
II	NUEVA VIZCAYA	C	Large
II	QUIRINO	A	Medium
III	PENELCO	A	Extra Large
III	NUEVA ECIJA I	D	Medium
III	NUEVA ECIJA II	D	Extra Large
III	NUEVA ECIJA III	D	
III	PAMPANGA I	D	Medium
III	PAMPANGA II	D	Extra Large
III	PAMPANGA III	B	Extra Large
III	PRESCO	D	Small
III	TARLAC I	D	Large
III	TARLAC II	C	Large
III	ZAMBALES I	D	Medium
III	ZAMBALES II	B	Medium
III	SAN JOSE	A	Medium
IV	AURORA	B	Small

1991 ELECTRIC COOPERATIVES CATEGORIZATION AND CLASSIFICATION
 REGION I – XII

COOP	CATEGORY	SIZE
REGION		
IV BATANGAS I	A	Extra Large
IV BATANGAS II	B	Extra Large
IV BUSUANGA ISLAND	B	Small
IV FIRST LAGUNA	D	Medium
IV LUBANG ISLAND	D	Small
IV MARINDUQUE	B	Medium
IV MINDORO OCC.	B	Medium
IV MINDORO OR.	A	Large
IV PALAWAN	A	Medium
IV QUEZON I	A	Extra Large
IV QUEZON II	B	Small
IV ROMBLON	B	Small
IV TABLAS ISLAND	A	Small
V ALBAY	D	Extra Large
V CAMARINES NORTE	B	Large
V MASBATE	C	Small
V SORSOGON I	D	Medium
V SORSOGON II	B	Medium
V FICELCO	D	Medium
V CASURECO I	C	Medium
V CASURECO II	B	Large
V CASURECO III	D	Medium
V CASURECO IV	C	Medium
VI AKLAN	B	Medium
VI ANTIQUE	D	Medium
VI CAPIZ	A	Large
VI GUIMARAS	A	Small
VI ILOILO I	A	Large
VI ILOILO II	A	Large
VI ILOILO III	D	Medium
VI NEGROS OCC.	A	Large
VI CENTRAL NEGROS	C	Extra Large
VI VRESCO	B	Extra Large
VII BOHOL I	A	Large
VII BOHOL II	B	Large
VII CEBU I	A	Medium
VII CEBU II	A	Large
VII CEBU III	A	Medium
VII NEGROS OR. I	A	Medium

1991 ELECTRIC COOPERATIVES CATEGORIZATION AND CLASSIFICATION
 REGION I - XII

COOP	CATEGORY	SIZE
REGION		
VII NEGROS OR. II	B	Large
VII BANTAYAN	A	Small
VII CAMOTES	B	Small
VII SIQUIJOR	A	Small
VIII LEYTE I	D	Medium
VIII LEYTE II	D	Large
VIII LEYTE III	D	Medium
VIII LEYTE IV	A	Medium
VIII LEYTE V	B	Large
VIII SOUTHERN LEYTE	D	Medium
VIII SAMAR I	C	Small
VIII SAMAR II	D	Medium
VIII EASTERN SAMAR	C	Small
VIII NORTHERN SAMAR	D	Small
VIII BILIRAN ISLAND	B	Small
IX ZAMBO CITY	D	Extra Large
IX ZAMBO NORTE	B	Medium
IX ZAMBO SUR I	A	Large
IX ZAMBO SUR II	A	Medium
IX BASILAN	D	Small
IX SULU	D	Small
IX TAWI-TAWI	D	Small
IX SIASI ISLAND	-	Small
X AGUSAN NORTE	A	Extra Large
X AGUSAN SUR	A	Large
X FIRST BUKIDNON	B	Large
X BUKIDNON II	B	Large
X CAMIGUIN	D	Small
X MISAMIS OCC. I	D	Medium
X MISAMIS OCC. II	B	Large
X MISAMIS OR. I	A	Large
X MISAMIS OR. II	D	Medium
X SURIGAO NORTE	D	Medium
X SIARGAO ISLAND	C	Small
X DINAGAT ISLAND	D	Small
XI SOCOTECO I	A	Medium
XI SOCOTECO II	A	Extra Large
XI DANECO	A	Extra Large
XI DORECO	B	Medium
XI DASURECO	A	Large
XI SURSECO I	A	Medium
XI SURSECO II	D	Small
XII COTELCO	A	Medium
XII MAGELCO	A	Medium
XII SUKELCO	B	Medium
XII LANECO	D	Medium
XII LASURECO	D	Small

1992
ELECTRIC COOPERATIVES – CLASSIFICATION AND CATEGORIZATION

COOP Name	COOP Code	COOP Acronym	1992 Class	1992 Category
Ilocos Norte	A01	INEC	E	A
Quirino	B09	QUIRELCO	M	A
San Jose City	C06	SAJELCO	M	A
Peninsula(Bataan)	C11	PENELCO	E	A
Aurora	D01	AURELCO	S	A
Batangas I	D03	BATELEC I	E	A
Quezon I	D05	QUEZELCO I	E	A
Quezon II	D06	QUEZELCO II	S	A
Mindoro Occ	D08	OMECCO	M	A
Mindoro Or	D09	ORMECO	L	A
Marinduque	D10	MARELCO	M	A
Tablas Island	D11	TIELCO	S	A
Palawan	D14	PALECO	M	A
Camarines Norte	E01	CANORECO	L	A
Camarines Sur I	E02	CASURECO I	M	A
Capiz	F03	CAPELCO	L	A
Iloilo I	F04	ILECO I	L	A
Iloilo II	F05	ILECO II	L	A
Iloilo III	F06	ILECO III	M	A
Guimaras	F07	GUIMELCO	S	A
North Negros	F08	VRESCO	E	A
Negros Occ	F10	NOCECO	L	A
Negros Or II	G02	NORECO II	L	A
Bantayan	G03	BANELCO	S	A
Cebu I	G04	CEBECO I	M	A
Cebu II	G05	CEBECO II	L	A
Cebu III	G06	CEBECO III	M	A
Siquijor	G07	PROSIELCO	S	A
Bohol I	G09	BOHECO I	L	A
Leyte I(DORELCO)	H01	LEYECO I	M	A
Leyte IV	H04	LEYECO IV	M	A

1992
ELECTRIC COOPERATIVES – CLASSIFICATION AND CATEGORIZATION

COOP Name	COOP Code	COOP Acronym	1992 Class	1992 Category
Leyte V	H05	LEYECO V	L	A
So Leyte	H06	SOLECO	M	A
Samar II	H10	SAMELCO II	M	A
Zamboanga Sur I	I02	ZAMSURECO I	L	A
Zamboanga Sur II	I03	ZAMSURECO II	M	A
Siasi Island	I07	SIASELCO	S	A
Misamis Or I	J03	MORESCO I	L	A
Agusan Sur	J08	ASELCO	L	A
Surigao Sur I	K01	SURSECO I	M	A
Davao Oriental	K03	DORECO	M	A
Davao Norte	K04	DANECO	E	A
Davao Sur	K05	DASURECO	L	A
So Cotabato I	K06	SOCOTECO I	M	A
So Cotabato II	K07	SOCOTECO II	E	A
Lanao Norte	L01	LANECO	L	A
Maguindanao	L03	MAGELCO	M	A
North Cotabato	L04	COTELCO	L	A
Sultan Kudarat	L05	SUKELCO	M	A
Ilocos Sur	A02	ISECO	E	B
Cagayan I	B02	CAGELCO I	L	B
Kalinga Apayao	B04	KAELCO	S	B
Nueva Vizcaya	B08	NUVELCO	L	B
Zambales II	C13	ZAMECO II	M	B
Camarines Sur IV	E05	CASURECO IV	M	B
Sorsogon 1	E09	SORECO I	M	B
Sorsogon II	E10	SORECO II	L	B
Central Negros	F09	CENECO	E	B
Negros Or I	G01	NORECO I	M	B
Bohol II	G10	BOHECO II	L	B
Biliran	H07	BILECO	S	B

1992
ELECTRIC COOPERATIVES – CLASSIFICATION AND CATEGORIZATION

COOP Name	COOP Code	COOP Acronym	1992 Class	1992 Category
Samar I	H09	SAMELCO I	S	B
Zamboanga Norte	I01	ZANECO	M	B
Misamis Occ II	J02	MOELCI II	L	B
Misamis Or II	J04	MORESCO II	M	B
Bukidnon I	J05	FIBECO	L	B
Bukidnon II	J06	BUSECO	L	B
Agusan Norte	J07	ANECO	E	B
Camiguin	J10	CAMELCO	S	B
Surigao Sur II	K02	SURSECO II	S	B
Abra	A03	ABRECO	M	C
La Union	A05	LUELCO	E	C
Benguet	A06	BENECO	E	C
W. Pangasinan	A07	PANELCO I	M	C
Isabela I	B05	ISABELA I	E	C
Ifugao	B07	IFELCO	S	C
Pampanga III	C10	PELCO III	L	C
Camarines Sur II	E03	CASURECO II	L	C
Camotes	G08	CELCO	S	C
Sulu	I06	SULECO	S	C
Dinagat	J12	DIELCO	S	C
Mt. Province	A04	MOPRECO	S	D
C. Pangasinan	A08	PANELCO II	E	D
E. Pangasinan	A09	PANELCO III	L	D
Batanes	B01	BATANELCO	S	D
Cagayan II	B03	CAGELCO II	L	D
Isabela II	B06	ISABELA II	L	D
Tarlac I	C01	TARELCO I	L	D
Tarlac II	C02	TARELCO II	L	D

1992

ELECTRIC COOPERATIVES – CLASSIFICATION AND CATEGORIZATION

COOP Name	COOP Code	COOP Acronym	1992 Class	1992 Category
Nueva Ecija I	C03	NEECO I	M	D
Nueva Ecija II	C04	NEECO II	E	D
Pampanga Rural	C07	PRESCO	S	D
Pampanga I	C08	PELCO I	M	D
Pampanga II	C09	PELCO II	E	D
Zambales I	C12	ZAMECO I	M	D
Laguna	D02	FLECO	M	D
Lubang	D07	LUBELCO	S	D
Romblon	D12	ROMELCO	S	D
Busuanga	D13	BISELCO	S	D
Camarines Sur III	E04	CASURECO III	M	D
Albay	E06	ALECO	E	D
Catanduanes	E11	FICELCO	M	D
Masbate	E12	MASELCO	S	D
Aklan	F01	AKELCO	M	D
Antique	F02	ANTECO	M	D
Leyte II	H02	LEYECO II	L	D
Leyte III	H03	LEYECO III	M	D
No Samar	H08	NORSAMELCO	S	D
Ea Samar	H11	ESAMELCO	S	D
Zamboanga City	I04	ZAMCELCO	E	D
Basilan	I05	BASELCO	S	D
Tawi-Tawi	I08	TAWELCO	S	D
Misamis Occ I	J01	MOELCI I	M	D
Surigao Norte	J09	SURNECO	M	D
Siargao	J11	SIARELCO	S	D
Lanao Sur	L02	LASURECO	L	D
Ticao Is	E13	TISELCO	S	NA

APPENDIX E

COOPERATIVES CATEGORIZED BY SIZE AND FINANCIAL HEALTH

YEAR 1992

SIZE CATEGORIES

EXTRA LARGE, LARGE, MEDIUM, AND SMALL

FINANCIAL HEALTH CATEGORIES A, B, C AND D

EXTRA LARGE FIN. HEALTH	NO. OF CO-OPS
A	7
B	3
C	3
D	5
TOTAL	18

MEDIUM FIN. HEALTH	NO. OF CO-OPS
A	19
B	6
C	0
D	13
TOTAL	38

LARGE FIN. HEALTH	NO. OF CO-OPS
A	16
B	7
C	2
D	7
TOTAL	32

SMALL FIN. HEALTH	NO. OF CO-OPS
A	8
B	5
C	4
D	13
TOTAL	30

COOPERATIVES ANALYZED		118	% OF TOTAL
EXTRA LARGE	18		15%
LARGE	32		27%
MEDIUM	38		32%
SMALL	30		25%

COOPERATIVES ANALYZED		118	% OF TOTAL
A GRADE	50		42%
B	21		18%
C	9		8%
D	38		32%

APPENDIX F

FINANCIAL AND STATISTICAL REPORT
For the Year 1992

	Gross Revenue (P'000)	LINE LOSS (PERCENT)	ADJUSTED LINE LOSS (PERCENT)	(LOSS ADJUSTED) GROSS REVENUE (P'000)	NET MARGIN (P'000)	(LOSS ADJUSTED) NET MARGIN (P'000)	COLL. EFF. (PERCENT)	ROOM FOR IMPROVED COLL. EFF.
REGION I								
1 Ilocos Norte	155598	17%	12%	164576	9074	18052	104%	
2 Ilocos Sur	141016	25%	12%	165514	9435	33933	96%	
3 Abra	32564	27%	12%	39107	4041	10584	92% YES	
4 Mt. Province	9798	8%	6%	9798	1727	1727	90% YES	
5 La Union	112953	28%	12%	138475	9970	35492	105%	
6 Benguet	239739	25%	12%	279937	24375	64573	86% YES	
7 Pangasinan I	47835	23%	12%	54319	3203	9687	94%	
8 Pangasinan II	155339	36%	12%	214649	816	60126	85% YES	
9 Pangasinan III	143601	30%	12%	181482	19688	57589	88% YES	
Sub-total	1038443	26%	12%	1242977	82329	288863	93%	YES
REGION II								
10 Batanes	1444	5%	5%	1444	191	191	94%	YES
11 Cagayan I	82284	24%	12%	94799	4280	16785	84% YES	
12 Cagayan II	63045	29%	12%	77685	3000	17640	94%	
13 Kalinga Apayao	15665	20%	12%	17201	437	1973	98%	
14 Isabela I	182399	24%	12%	209844	8172	35817	103%	
15 Isabela II	94442	27%	12%	113588	275	19421	93%	
16 Ifugao	10230	16%	12%	10675	238	683	92% YES	
17 Nueva Vizcaya	64504	24%	12%	74977	4635	15108	93%	
18 Quirino	21598	15%	12%	22452	373	1227	92% YES	
Sub-total	535621	24%	12%	622711	21601	108691	95%	YES
REGION III								
19 Tarlac I	99698	26%	12%	118782	7400	28486	82% YES	
20 Tarlac II	71718	21%	12%	79463	3390	11137	91% YES	
21 Nueva Ecija I	110587	43%	12%	169947	7265	68625	82% YES	
22 Nueva Ecija II	84488	32%	12%	110058	-640	24930	82% YES	
23 Nueva Ecija III	90281	41%	12%	134087	2901	46707	YES	
24 San Jose City	39442	23%	12%	44965	275	5798	103%	
25 PRESCO	10354	31%	12%	13231	558	3435	83% YES	
26 Pampanga I	77793	36%	12%	106324	4094	32625	74% YES	
27 Pampanga II	193388	37%	12%	271439	-19527	58524	89% YES	
28 Pampanga III	197808	18%	12%	212132	12493	28817	85% YES	
29 Peninsula	188879	28%	12%	230152	11528	52801	93%	
30 Zambales I	54574	28%	12%	66244	-3348	8322	92% YES	
31 Zambales II	72106	33%	12%	94446	2499	24839	101%	
Sub-total	1291112	30%	12%	1630233	28888	368009	88% YES	

FINANCIAL AND STATISTICAL REPORT
For the Year 1992

	Gross Revenue (P'000)	LINE LOSS (PERCENT)	ADJUSTED LINE LOSS (PERCENT)	(LOSS ADJUSTED) GROSS REVENUE (P'000)	NET MARGIN (P'000)	(LOSS ADJUSTED) NET MARGIN (P'000)	COLL. EFF. (PERCENT)	ROOM FOR IMPROVED COLL. EFF.
REGION IV								
32 Aurora	20489	15%	12%	21128	845	1484		YES
33 Laguna	64127	35%	12%	87486	-2259	21100	83%	YES
34 Batangas I	144097	8%	8%	144097	1565	1565	84%	YES
35 Batangas II							101%	YES
36 Quezon I	126023	16%	12%	131909	-39	5847	100%	
37 Quezon II	18078	19%	12%	17370	2476	3768	96%	
38 Lubang	2779	22%	12%	3144	-153	212	90%	YES
39 Mindoro Occ	29843	19%	12%	32256	2409	4822	100%	
40 Mindoro Or	72904	21%	12%	81238	2304	10638	103%	
41 Marinduque	26949	18%	12%	29075	1263	3389	109%	
42 Tablas Island	13700	8%	8%	13700	1877	1877	101%	
43 Romblon	3403	8%	8%	3403	95	95	111%	
44 Busuanga	3940	19%	12%	4294	-36	318	71%	YES
45 Palawan	95913	15%	12%	99048	7719	10854	98%	
Sub-total	620245	17%	12%	660115	18066	57936	98%	YES
REGION V								
46 Camarines Norte	112218	12%	12%	112516	2710	3008	88%	YES
47 Camarines Sur I	62110	15%	12%	64367	3959	6216	95%	
48 Camarines Sur II	179040	23%	12%	203895	17272	42127	92%	YES
49 Camarines Sur III	66638	19%	12%	72433	-85	5710	82%	YES
50 Camarines Sur IV	31092	18%	12%	33245	262	2415	97%	
51 Albay	244532	27%	12%	293011	16529	65008	77%	YES
52 Sorsogon I	32402	23%	12%	37140	3715	8453	88%	YES
53 Sorsogon II	56229	16%	12%	59070	-29	2812	101%	
54 Catanduanes	31064	16%	12%	32409	2127	3472	94%	
55 Masbate	25428	9%	9%	25428	3763	3763	88%	YES
56 Ticao Is	931	9%	9%	931	-153	-153		YES
Sub-total	841684	21%	12%	932441	50070	140827	91%	YES
REGION VI								
57 Aklan	61926	22%	12%	69872	6124	14070	67%	YES
58 Antique	42756	18%	12%	46134	5502	8880	87%	YES
59 Capiz	126896	17%	12%	135290	1440	9834	99%	
60 Iloilo I	116745	15%	12%	120231	3037	6523	99%	
61 Iloilo II	76317	17%	12%	81316	175	5174	98%	
62 Iloilo III	34393	16%	12%	35982	3328	4917	94%	
63 Guimaras	11664	15%	12%	12131	-569	-102	100%	
64 VRESKO	195543	19%	12%	213431	10624	28512	95%	
65 Central Negros	492255	17%	12%	521996	20275	50016	92%	YES
66 Negros Occ	157531	10%	10%	157531	8799	8799	102%	
Sub-total	1316026	17%	12%	1389643	58735	132352	94%	YES

FINANCIAL AND STATISTICAL REPORT
For the Year 1992

	Gross Revenue (P'000)	LINE LOSS (PERCENT)	ADJUSTED LINE LOSS (PERCENT)	(LOSS ADJUSTED) GROSS REVENUE (P'000)	NET MARGIN (P'000)	(LOSS ADJUSTED) NET MARGIN (P'000)	COLL. EFF. (PERCENT)	ROOM FOR IMPROVED COLL. EFF.
REGION VII								
67 Negros Or I	44577	15%	12%	46021	2176	3620		YES
68 Negros Or II	122987	18%	12%	132611	782	10406	88%	YES
69 Bantayan	13315	-6%	-6%	13315	1255	1255	94%	YES
70 Cebu I	71725	10%	10%	71725	4855	4855	100%	YES
71 Cebu II	120985	7%	7%	120985	6856	6856	100%	YES
72 Cebu III	51567	10%	10%	51567	25	25	101%	YES
73 Siquijor	8850	8%	8%	8850	44	44	103%	YES
74 Camotes	4089	12%	12%	4100	482	493	106%	YES
75 Bohol I	53648	17%	12%	56905	1788	5045	99%	YES
76 Bohol II	35625	20%	12%	39032	-22	3385		YES
Sub-total	527368	12%	12%	530296	18241	21169	98%	YES
REGION VIII								
77 Leyte I	33314	24%	12%	38667	-1813	3540	95%	YES
78 Leyte II	125547	31%	12%	159391	6503	40347	92%	YES
79 Leyte III	17851	26%	12%	21154	695	3998	92%	YES
80 Leyte IV	28602	18%	12%	30646	659	2703	100%	YES
81 Leyte V	95395	16%	12%	99463	6388	10454	96%	YES
82 So Leyte	31887	21%	12%	35299	145	3577	97%	YES
83 Biliran	11612	23%	12%	13254	-80	1562	96%	YES
84 No Samar	22837	22%	12%	25817	385	3365	88%	YES
85 Samar I	27255	13%	12%	27463	3729	3937	89%	YES
86 Samar II	38614	22%	12%	43544	5219	10149	97%	YES
87 Ea Samar	18295	18%	12%	19594	-612	687	98%	YES
Sub-total	451189	23%	12%	514569	21216	84596	90%	YES
REGION IX								
88 Zamboanga Norte	44321	19%	12%	47983	-13767	-10105	99%	YES
89 Zamboanga Sur I	77548	16%	12%	80906	5598	8956	96%	YES
90 Zamboanga Sur II	45845	8%	8%	45645	5331	5331	105%	YES
91 Zamboanga City	175134	27%	12%	211282	-20966	15182	96%	YES
92 Basilan	17431	28%	12%	21337	226	4132	89%	YES
93 Sulu	23227	18%	12%	24983	6027	7783	85%	YES
94 Siasi Island	2353	4%	4%	2353	78	78	98%	YES
95 Tawi-Tawi	5858	29%	12%	7243	888	2273	81%	YES
Sub-total	391517	22%	12%	444469	-16585	36367	96%	YES

FINANCIAL AND STATISTICAL REPORT
For the Year 1992

	Gross Revenue (P'000)	LINE LOSS (PERCENT)	ADJUSTED LINE LOSS (PERCENT)	(LOSS ADJUSTED) GROSS REVENUE (P'000)	NET MARGIN (P'000)	(LOSS ADJUSTED) NET MARGIN (P'000)	COLL. EFF. (PERCENT)	ROOM FOR IMPROVED COLL. EFF.
REGION X								
96 Misamis Occ I	19841	21%	12%	22161	-1485	835	84%	YES
97 Misamis Occ II	69995	22%	12%	79075	2778	11858	97%	YES
98 Misamis Or I	116755	3%	3%	116755	1884	1884	107%	YES
99 Misamis Or II	54099	21%	12%	60329	258	6488	84%	YES
100 Bukidnon I	60246	11%	11%	60246	295	295	91%	YES
101 Bukidnon II	36681	14%	12%	37631	1661	2611	91%	YES
102 Agusan Norte	103709	20%	12%	114730	-4407	6614	100%	YES
103 Agusan Sur	44372	22%	12%	49868	-3208	2288	95%	YES
104 Surigao Norte	48129	24%	12%	55487	1501	8859	83%	YES
105 Camiguin	8335	6%	6%	8335	-1452	-1452	93%	YES
106 Siargao	4060	23%	12%	4639	-80	519	94%	YES
107 Dinagat	1215	18%	12%	1302	-384	-297	98%	YES
Sub-total	567437	15%	12%	585888	-2619	15832	94%	YES
REGION XI								
108 Surigao Sur I	44499	9%	9%	44499	-2795	-2795	105%	YES
109 Surigao Sur II	20577	21%	12%	22981	1520	3924	106%	YES
110 Davao Oriental	39862	12%	12%	39862	483	483	96%	YES
111 Davao Norte	126163	12%	12%	126163	915	915	100%	YES
112 Davao Sur	70671	14%	12%	71967	-1374	-78	98%	YES
113 So Cotabato I	50080	13%	12%	50739	-2137	-1478	98%	YES
114 So Cotabato II	205247	14%	12%	208892	-5848	-2203	96%	YES
Sub-total	557099	13%	12%	562804	-9238	-3531	98%	YES
REGION XII								
115 Lanao Norte	40751	18%	12%	43543	1241	4033	103%	YES
116 Lanao Sur	38998	34%	12%	49515	-9487	3032	39%	YES
117 Magulindanao	48135	20%	12%	54158	825	5846	90%	YES
118 North Cotabato	42111	15%	12%	43417	-3947	-2641	94%	YES
119 Sultan Kudarat	46784	14%	12%	48004	2488	3706	92%	YES
Sub-total	216777	21%	12%	239951	-8882	15282	79%	YES
GRAND TOTAL	8353518	21%	12%	9283281	261824	1191587	93%	YES

APPENDIX G

U.S. RURAL ELECTRICS

	CONS/ EMPLOYEE	MARGINS/ AVG CON'S	C. ACT. EX/ AVG CON'S	A&G EX/ AVG CON'S	CUST SERV/ AVG CON'S	O&M&A&G& C.A./CONS
0-3000 AVG	150.22	134.00	37.09	167.97	10.67	340.62
3-5000 AVG	201.73	100.04	32.70	105.80	11.25	241.58
5-8000 AVG	224.15	96.45	32.27	93.20	9.82	219.18
8-12000 AVG	249.67	90.88	31.63	76.19	8.39	194.57
12-18000 AVG	260.98	76.55	31.19	69.43	7.29	188.51
18-30000 AVG	280.53	74.22	31.16	57.78	6.32	164.76
30-125000 AVG	288.81	60.75	31.57	54.77	5.96	159.63
ADDITIONAL TE 50-125000 AVG	304.69	55.86	32.06	59.49	6.78	161.82

KEY RATIOS BY CO-OP SIZE

U.S. RURAL ELECTRICS

	AVG TIER	AVG DSC	EQUITY	MARGINS/ RATE BASE	ROR/ RATE BASE	CON'S SERVED
0-3000 AVG	4.61	2.70	39.73	2.20	5.20	2017.57
3-5000 AVG	2.97	2.50	41.30	2.34	5.47	4018.12
5-8000 AVG	2.87	2.63	42.80	2.59	6.01	6339.19
8-12000 AVG	3.12	2.78	42.97	3.03	6.52	9850.13
12-18000 AVG	3.06	2.78	42.26	2.40	5.96	14588.39
18-30000 AVG	2.60	2.58	41.29	2.79	6.38	23310.58
30-125000 AVG	2.57	2.62	38.35	1.94	5.61	49591.97
ADDITIONAL TEST 50-125000 AVG	2.81	2.74	37.06	1.42	5.16	70996.79

KEY RATIOS BY CO-OP SIZE

U.S. RURAL ELECTRICS

	PR CST+5TX+ DP+INT/A CON	MWH SOLD / 1000	OP. REV. / MWH	OP RV-PR CS / MWH	ANN LOAD FACTOR	SYSTEM LOSS	ARREARAGE OVR 60 DAYS
0-3000 AVG	1451.71	57.10	80.39	34.33	50.57	7.68	0.45
3-5000 AVG	1073.90	83.12	74.93	30.87	51.57	8.29	0.45
5-8000 AVG	967.65	108.01	78.79	30.94	51.01	7.91	0.43
8-12000 AVG	951.10	173.28	74.60	27.53	51.39	7.54	0.51
12-18000 AVG	992.44	280.81	74.57	26.13	50.62	7.21	0.40
18-30000 AVG	942.68	390.49	75.22	25.03	50.22	7.14	0.46
30-125000 AVG	1019.82	842.31	74.70	22.61	48.90	6.59	0.42
ADDITIONAL TE 50-125000 AVG	1084.41	1245.13	75.68	22.42	48.36	5.67	0.47

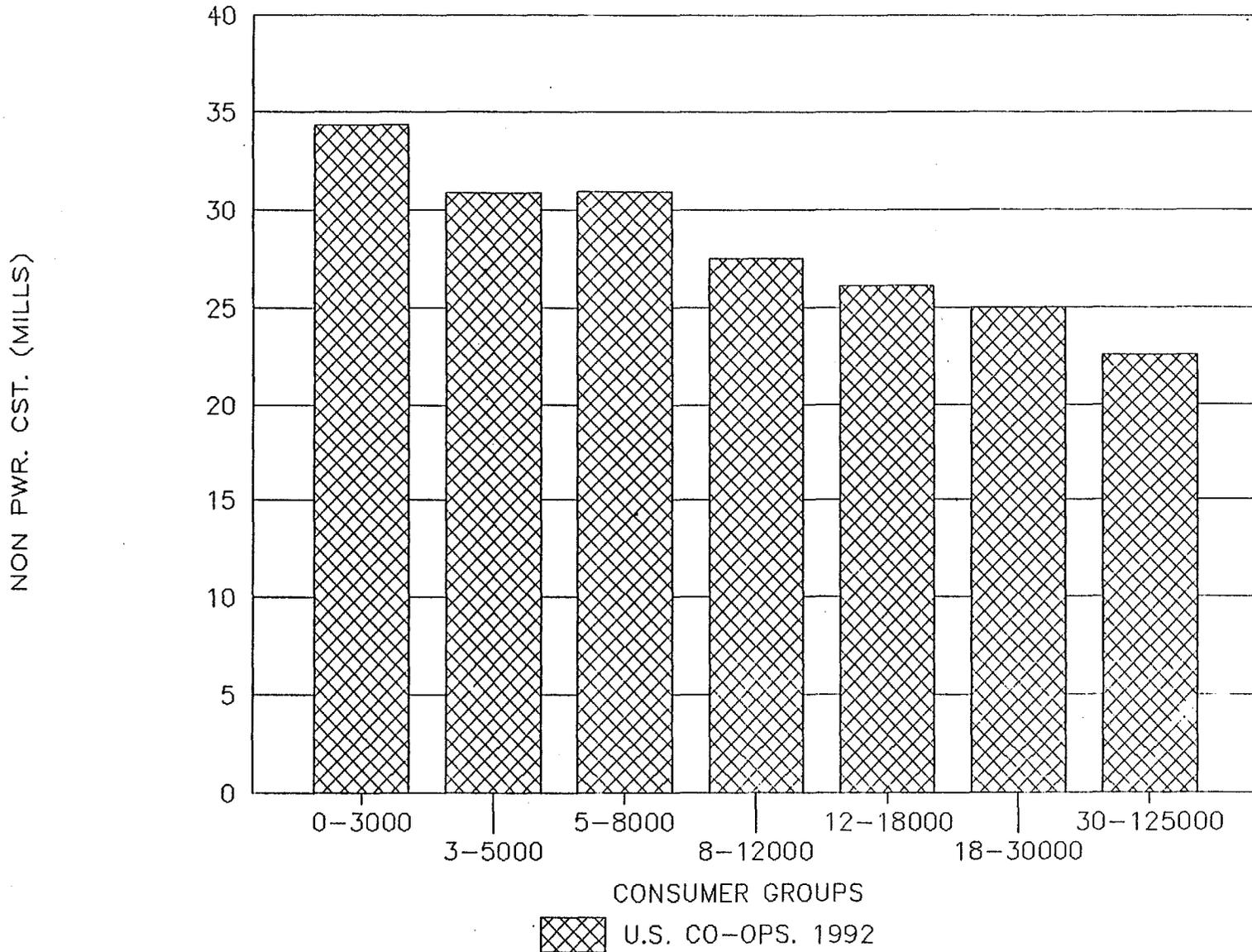
KEY RATIOS BY CO-OP SIZE

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APPENDIX H

NON PWR. COST RELATIONSHIP

GROUPED BY CONSUMERS



APPENDIX I

REGRESSION ANALYSIS HIGHLIGHTS

The techniques of regression analysis have not been used to predict the outcome of particular consolidations. They have been used to test findings regarding historical trends which seemed apparent from other analytical approaches.

The results of the regression analysis did confirm the assumption that non power costs at an electric cooperative will trend down for larger cooperatives. The results also confirmed the finding that it is improper to assume that all bigger cooperatives will have lower non power costs.

There was consistency in the regression analyses for both the ECs in the Philippines and the U.S.

The R squared values demonstrated that 25 to 30 percent of the observations of non power cost were explained by kwh sales and number of consumers when each were tested. This is low enough to indicate there are many exceptions to the rule.

The X coefficient showed the inverse relationship of size to non power cost and further showed it to be a strong consistent trend because the standard error of the coefficient was low. These findings are confirmed by the t-statistic being in the minus six range.

Therefore, regression analysis was not the primary tool used to determine the relationship of EC size to non power cost. Such analysis did, however, provide comforting support to findings made through other analysis.

APPENDIX J



REPUBLIC OF THE PHILIPPINES

National Electrification Administration

10 June 1993

MEMORANDUM TO : ALL ELECTRIC COOPERATIVES

SUBJECT : CLASSIFICATION OF ELECTRIC COOPERATIVES

I. RATIONALE

For purposes of giving recognition to achievers, electric cooperatives are evaluated and categorized yearly. This likewise sets a guide in giving financial benefits/incentives to officers and employees.

While categorization gauges performance on major aspects of operations, grant of benefits/incentives based on it alone proved inequitable. Some electric cooperatives operate exceptionally well but on account of their limited resources may not be financially capable to give similar benefits being extended by other electric cooperatives falling under the same category. Thus, this classification.

II. OBJECTIVE

Consideration is given to the classification of electric cooperatives according to size of operation. This will establish appropriate guidelines for the upgrading of benefits and incentives which may be accorded to officers and employees of electric cooperatives that are reasonably proportionate to the nature and scope of management responsibility and financial capability in granting such.

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CLASSIFICATION DETERMINANTS AND RATING SYSTEM

Electric cooperatives are classified into Extra Large (XL), Large (L), Medium (M) and Small (S). Grouping is done based on the number of service connections, volume of MWH sales and circuit km of lines.

1. Service Connections indicate the number of consumers receiving service which support the electric cooperative's mandate to electrify its coverage area.

<u>NO. OF SERVICE CONNECTION</u>	<u>POINTS</u>
Above 50,000	30
30,001 - 50,000	25
15,001 - 30,000	20
15,000 and below	15

2. Volume of MWH sales indicates the capability to generate revenue and sustain the financial needs of the electric cooperative.

In addition to being the key indicator of financial capability, giving heavier weight to this factor will encourage maximization of sales, thus serving as a motivation to minimize systems loss with emphasis on viability of operations.

<u>VOLUME OF MWH SALES (ANNUAL)</u>	<u>POINTS</u>
Above 60,000	40
30,001 - 60,000	30
10,001 - 30,000	20
10,000 and below	10

3. Circuit KM of lines indicates the length of the electric cooperative's constructed distribution system, its capability to provide service to potential consumers within the area coverage and its ability to maintain the system.

As a determinant in classification, it will give credit for initiative in undertaking expansion and maintenance of distribution systems; thus, improve service reliability.

<u>CIRCUIT KM OF LINES</u>	<u>POINTS</u>
2,501-3,500	30
1,501-2,500	25
701-1,500	20
700 and below	15

OVER-ALL POINT SCORE

81-100	Extra Large
61- 80	Large
41- 60	Medium
40 and below	Small

IMPLEMENTATION

Electric Cooperative classification shall be undertaken annually in support of the regular categorization of electric cooperatives. The lead unit for this purpose is the Coop Development Sector.

For 1992, attached is Classification Profile of Electric Cooperatives.

T. Sanchez
TEODORICO P. SANCHEZ
Administrator

CLASSIFICATION PROFILE OF ELECTRIC COOPERATIVES
Year 1972

	SMALL	MEDIUM	LARGE	EXTRA LARGE			
REGION I : MT. PROVINCE	40	ABRA	50	PANGASINAN III	75	ILOCOS SUP	85
		PANGASINAN I	60			LA UNION	85
						BENSUET	85
						ILOCOS NORTE	90
						CENTRAL PANGASINAN	90
REGION II : IFUGAO	40	QUIRINO	50	CAGAYAN II	65	ISABELA I	85
	40			ISABELA II	70		
	25			CAGAYAN I	65		
				NUEVA VISCAYS	65		
REGION III : PAMPANGA RURAL	40	NUEVA EDIJA I	60	TARLAC I	65	NUEVA EDIJA II	90
		SAN JOSE	50	TARLAC II	65	PENINSULA	90
		IMBOD I	50	PAMPANGA III	75	PAMPANGA II	95
		PAMPANGA I	60				
		IMBALES II	55				
REGION IV : AURORA	40	FIRST LASUNA	55	OR. MINDORO	70	BATANGAS I	85
	40	MARINDUQUE	45			QUEZON I	85
	40	OC. MINDORO	45			BATANGAS II	
	40	PALAWAN	60				
	40						
	40						
REGION V : MASBATE	40	CAMARINES SUP I	60	CAMARINES NORTE	75	ALBA	90
	25	CAMARINES SUP III	50	CAMARINES SUP II	60		
		CAMARINES SUP IV	50	SORSOGON II	60		
		FIRST CATANDUANES	50				
		SORSOGON I	50				
REGION VI : BUENAVISTA	40	ANTIQUE	50	CAPIZ	60	VRESCO	85
		IBILO III	45	IBILO I	75	CENTRAL NEGROS	95
		AKLAN	55	IBILO II	45		
				NEGROS OCC.	60		
REGION VII : SANTAYAN	40	CEBU I	40	CEBU II	60		
	40	CEBU III	40	NEGROS OR. II	60		
	40	NEGROS OR. I	35	BOND I	65		
				BOND II	70		

CLASSIFICATION PROFILE OF ELECTRIC COOPERATIVES
Year 1992

	SMALL	MEDIUM	LARGE	EXTRA LARGE			
REGION VIII:							
: EASTERN SAMAR	40	: SAMAR II	45	: LEYTE II	65		
: NORTHERN SAMAR	40	: LEYTE I	50	: LEYTE V.	70		
: SAMAR I	40	: LEYTE III	45				
: BILIRAN	40	: LEYTE IV	50				
:		: SO. LEYTE	50				
:							
:							
REGION IX :							
: BASILAN	40	: ZAMBO SUR II	60	: ZAMBO SUR I	80	: ZAMBO CITY	85
: SULU	40	: ZAMBO. NORTE	60				
: TAWI-TAWI	40						
: SIASI	25						
:							
:							
REGION X :							
: CAGUIGUAH	40	: MISAMIS OCC. I	50	: MISAMIS OCC. II	70	: AGUSAN NORTE	90
: SIARGAO	40	: MISAMIS OR. II	60	: AGUSAN SUR	65		
: DINASAT	40	: SURIGAO NORTE	55	: FIRST BUKIDNON	65		
:				: BUKIDNON II	70		
:				: MISAMIS OR. I	80		
:							
:							
REGION XI :							
: SURIGAO SUR II	40	: DAVAO ORIENTAL	50	: DAVAO SUR	75	: DAVAO NORTE	90
:		: SO. COTABATO I	60			: SO. COTABATO II	90
:		: SURIGAO SUR I	50				
:							
:							
REGION XII :							
:		: SULTAN KUDARAT	60	: NORTH COTABATO	65		
:		: MAGUINDANAO	60	: LANAO NORTE	65		
:				: LANAO SUR	65		

EC's CLASSIFICATION
For the year 1992

	COOPERATIVE	TOTAL CIRCUIT KM.-OF LINES		MWH SALES		HOUSE CONNECTIONS-ACTUAL		TOTAL	
REGION I									
1 .	ABRA	1,372,846	20	7,602	10	17,556	20	50	H
2 .	MT. PROVINCE	621,259	15	2,228	10	7,679	15	40	S
3 .	PANGASINAN I	1,350,402	20	11,722	20	23,447	20	60	H
4 .	ILOCOS SUR	1,968,070	25	43,267	30	66,752	30	85	XL
5 .	LA UNION	1,538,478	25	33,637	30	56,241	30	85	XL
6 .	BENGUET	1,426,096	20	64,444	40	47,440	25	85	XL
7 .	ILOCOS NORTE	6,708,345	30	49,909	30	74,667	30	90	XL
8 .	CENTRAL PANGASINAN	2,531,378	30	42,806	30	63,211	30	90	XL
9 .	PANGASINAN III	993,467	20	42,979	30	48,817	25	75	L
REGION II									
1 .	CAGAYAN II	2,193,171	25	16,470	20	26,686	20	65	L
2 .	IFUGAO	679,850	15	2,485	10	5,764	15	40	S
3 .	ISABELA II	2,016,999	25	26,981	20	37,894	25	70	L
4 .	KALINGA-APAYAO	558,884	15	3,704	10	7,650	15	40	S
5 .	QUIRINO	623,659	15	5,264	20	9,637	15	50	M
6 .	CAGAYAN I	1,765,882	25	26,949	20	28,869	20	65	L
7 .	NOEVA VISCAYA	1,558,518	25	17,188	20	23,997	20	65	L
8 .	ISABELA I	1,906,824	25	54,821	30	53,031	30	85	XL
9 .	BATANES			437	10	1,267	15	25	S
REGION III									
1 .	NOEVA ECIJA I	602,942	15	28,914	20	33,120	25	60	H
2 .	NOEVA ECIJA II	2,644,608	30	49,736	30	72,996	30	90	XL
3 .	PAMPANGA RURAL	221,120	15	3,097	10	6,831	15	40	S
4 .	SAN JOSE	327,000	15	14,854	20	11,462	15	50	H
5 .	ZAMECO I	1,486,130	20	17,975	20	18,119	20	60	H
6 .	PAMPANGA I	218,000	15	22,752	20	32,223	25	60	H
7 .	PAMPANGA III	736,911	20	43,428	30	34,878	25	75	L
8 .	TARLAC I	739,773	20	28,686	20	44,147	25	65	L
9 .	TARLAC II	1,614,170	25	21,568	20	29,449	20	65	L
10 .	ZAMBALES II	622,504	15	22,538	20	23,359	20	55	H
11 .	PENINSULA	1,049,673	20	63,078	40	55,771	30	90	XL
12 .	PAMPANGA II	2,402,180	25	65,100	40	64,171	30	95	XL
REGION IV									
1 .	AURORA	510,466	15	6,038	10	6,950	15	40	S
2 .	FIRST LAGUNA	617,859	15	20,341	20	23,654	20	55	H
3 .	MARINDUQUE	755,062	20	6,847	10	12,618	15	45	H
4 .	OCC. MINDORO	1,179,292	20	7,011	10	10,951	15	45	H
5 .	OR. MINDORO	3,334,750	30	20,392	20	27,464	20	70	L
6 .	QUEZON II	286,153	15	1,526	10	7,384	15	40	S
7 .	PALAWAN	1,109,126	20	29,666	20	24,050	20	60	H

EC's CLASSIFICATION
For the year 1992

COOPERATIVE	TOTAL CIRCUIT KM. OF LINES		MWH SALES		HOUSE CONNECTIONS-ACTUAL		TOTAL	
8 . BATANGAS I	1,720,842	25	49,976	30	60,332	30	85	XL
9 . QUEZON I	1,677,023	25	44,249	30	57,169	30	85	XL
10 . BUSUANGA	320,256	15	754	10	1,412	15	40	S
11 . LUBANG	160,131	15	500	10	2,033	15	40	S
12 . TABLAS	671,465	15	3,475	10	6,637	15	40	S
13 . ROMBLON	21,801	15	963	10	1,189	15	40	S
14 . BATANGAS II	3,186,752	30					30	S

REGION V

1 . CAMARINES SUR I	1,031,459	20	19,420	20	19,615	20	60	M
2 . CAMARINES SUR III	1,132,362	20	17,703	20	27,211	20	60	M
3 . CAMARINES SUR IV	864,040	20	8,157	10	16,922	20	50	M
4 . FIRST CATANDUANES	968,455	20	6,466	10	16,072	20	50	M
5 . MASBATE	371,658	15	7,386	10	7,275	15	40	S
6 . SORSOGON I	1,028,416	20	8,245	10	18,305	20	50	M
7 . ALBAY	1,616,898	25	74,624	40	84,711	30	95	XL
8 . CAMARINES NORTE	1,372,677	20	41,342	30	30,443	25	75	L
9 . CAMARINES SUR II	1,781,176	25	66,404	30	34,389	25	60	L
10 . SORSOGON II	1,147,446	20	15,711	20	24,903	20	60	L
11 . TICAO			186	10	906	15	25	S

REGION VI

1 . ANTIQUE	1,070,861	20	9,658	10	17,159	20	50	M
2 . ILOILO II	1,641,469	25	19,986	20	22,909	20	65	L
3 . ILOILO III	910,811	20	8,242	10	10,881	15	45	M
4 . AKLAN	1,413,466	20	17,698	10	31,055	25	55	M
5 . CAPIZ	1,613,565	25	37,716	30	35,881	25	80	L
6 . ILOILO I	1,168,661	20	33,768	30	37,662	25	75	L
7 . CENTRAL NEGROS	2,066,817	25	174,998	40	62,697	30	95	XL
8 . NEGROS OCC.	2,161,253	25	52,388	30	42,463	25	60	L
9 . VRESKO	3,622,080	30	63,695	40	30,832	25	95	XL
10 . GUIMARAS	311,624	15	2,729	10	3,780	15	40	S

REGION VII

1 . BOHOL II	1,758,938	25	10,025	20	25,118	20	65	L
2 . CEBU III	773,985	20	18,433	20	20,020	20	60	M
3 . NEGROS OR. I	955,513	20	14,043	20	14,505	15	55	M
4 . BOHOL I	2,441,473	25	15,480	20	37,554	25	70	L
5 . CEBU I	1,446,967	20	25,144	20	26,419	20	60	M
6 . CEBU II	1,691,675	25	47,390	30	31,213	25	80	L
7 . NEGROS OR. II	1,901,049	25	39,476	30	38,187	25	80	L
8 . BANTAYAN	289,001	15	4,097	10	6,356	15	40	S
9 . CANOTES	305,889	15	972	10	3,089	15	40	S
10 . SIQUIJOR	378,681	15	2,244	10	4,286	15	40	S

CO's CLASSIFICATION
For the year 1992

COOPERATIVE	TOTAL CIRCUIT KM. OF LINES		MMH SALES		HOUSE CONNECTIONS-ACTUAL		TOTAL	
REGION VIII								
1 . EASTERN SAMAR	623.345	15	4,564	10	9,292	15	40	S
2 . NORTHERN SAMAR	225.381	15	6,240	10	10,928	15	40	S
3 . SAMAR I	591.857	15	7,240	10	14,748	15	40	S
4 . SAMAR II	758.783	20	9,636	10	14,606	15	45	H
5 . LEYTE I	1,047.764	20	9,084	10	18,993	20	50	H
6 . LEYTE III	707.343	20	4,402	10	11,487	15	45	H
7 . LEYTE IV	728.830	20	8,075	10	15,412	20	50	H
8 . SO. LEYTE	1,197.410	20	8,815	10	20,432	20	50	H
9 . LEYTE II	514.294	15	38,818	30	22,117	20	65	L
10 . LEYTE V	1,302.208	30	31,342	30	25,202	20	70	L
11 . BILIRAN	403.623	15	3,088	10	7,125	15	40	S
REGION IX								
1 . BASILAN	355.000	15	5,407	10	7,855	15	40	S
2 . SULU	104.268	15	5,577	10	5,623	15	40	S
3 . ZAMBO. NORTE	1,463.390	20	21,753	20	26,102	20	60	H
4 . ZAMBO SUR I	2,288.000	25	34,228	30	33,785	25	80	L
5 . ZAMBO SUR II	1,209.900	20	18,570	20	24,627	20	60	H
6 . ZAMBO CITY	774.724	20	105,448	40	40,480	25	85	XL
7 . TAWI-TAWI	71.368	15	1,365	10	1,778	15	40	S
8 . SIASI			556	10	673	15	25	S
REGION X								
1 . AGUSAN SUR	1,578.076	25	16,892	20	20,834	20	65	L
2 . FIRST BUKIDNON	2,079.000	25	26,358	20	27,705	20	65	L
3 . BUKIDNON II	4,383.000	30	15,147	20	16,377	20	70	L
4 . MISAMIS OCC. I	766.000	20	8,691	10	15,496	20	50	H
5 . MISAMIS OCC. II	1,220.000	20	33,736	30	27,810	20	70	L
6 . MISAMIS OR. II	1,053.000	20	25,046	20	20,726	20	60	H
7 . SURIGAO NORTE	562.000	15	23,444	20	23,916	20	55	H
8 . MISAMIS OR. I	1,195.000	20	107,233	40	17,016	20	80	L
9 . AGUSAN NORTE	1,836.382	25	63,004	40	42,756	25	90	XL
10 . CAMIGUIN	294,191	15	2,488	10	4,159	15	40	S
11 . SIARGAO	292,000	15	870	10	2,001	15	40	S
12 . DINAGAT	24,400	15	316	10	989	15	40	S
REGION XI								
1 . SURIGAO SUR II	691.000	15	6,342	10	12,880	15	40	S
2 . DAVAO ORIENTAL	1,188.700	20	19,286	20	17,180	20	60	H
3 . DAVAO SUR	1,316.000	20	33,878	30	32,376	25	75	L
4 . SO. COTABATO I	1,161,000	20	23,648	20	25,364	20	60	H
5 . SURIGAO SUR I	750.000	20	20,979	20	21,474	20	60	H
6 . DAVAO NORTE	1,601.400	25	66,218	40	40,006	25	90	XL

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CLASSIFICATION
for the year 1992

COOPERATIVE	TOTAL CIRCUIT KM. OF LINES		MMH SALES		HOUSE CONNECTIONS-ACTUAL		TOTAL	
7 . SO. COTABATO II	2,426.980	25	139,814	40	46,816	25	90	XL
REGION XII								
1 . LANAQ SUR	3,736.000	30	19,140	20	13,891	15	65	I.
2 . MAGUINDANAO	992.000	20	22,032	20	18,397	20	60	II
3 . NORTH COTABATO	1,826.512	25	18,500	20	24,939	20	65	I.
4 . LANAQ NORTE	1,630.803	25	18,999	20	26,055	20	65	I.
5 . SULTAN KUDARAT	1,277.724	20	21,681	20	20,015	20	60	II

PERSONS CONTACTED IN PREPARATION OF REPORT

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