

# **Philippines Climate Change Mitigation Program**

## Financial Capability Standards for the Restructured Philippine Electric Power Industry

**Epictetus E. Patalinghug**

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Epictetus E. Patalinghug

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# **Financial Capability Standards for the Restructured Philippine Electric Power Industry**

## **1.0 Rationale**

Republic Act No. 9136, also known as the “Electric Power Industry Reform Act of 2001” (EPIRA), mandated the creation of the Energy Regulatory Commission (ERC). Section 43(b) of the Act also stipulated that the ERC shall promulgate and enforce a National Grid Code and a Distribution Code which shall include but not limited to: (a) Performance Standards for TRANSCO O&M Concessionaire, distribution utilities, and suppliers, and (b) Financial Capability Standards for the generating companies, the TRANSCO, distribution utilities, and suppliers.

To safeguard against the risk of financial non-performance, R.A. 9136 mandated that the electric power industry participants meet the minimum financial standards to protect the public interest.

## **2.0 Appropriateness of Setting Standards of Performance in the Restructured Philippine Electric Power Industry**

The electric industry reform process attempts to ensure the quality, reliability, security, and affordability of the supply of electric power. However, the transition from a highly regulated to a deregulated electric power industry entails the adoption of rules, requirements, procedures, and standards, that may be temporary in nature, to make the transition process less costly and less disruptive.

The ability to meet the technical standards chosen will most likely depend on the financial capability of the market participant. Performance standards are regulatory mechanisms used to protect the consumers in the early phase of the reform process. As the electricity industry market matures, competition can be relied upon to protect consumers’ interest, and the regulatory mechanism will then rely most heavily on the codes of conduct or market rules which require licensees to comply. At best, performance standards should be perceived as ERC’s arsenal of regulatory “bridging mechanisms” or “pain relievers” in the march toward an open, competitive and market-determined electric power industry.

## **3.0 Financial Analysis in the Electric Power Industry**

The information contained in the financial statements is useful to managers, stockholders, customers, investors, and regulators. Relative measures of a company’s operating efficiency and condition are based on the knowledge and use of financial

ratios. But ratio analysis requires the basic inputs of the firm's income statement and balance sheet for the periods to be examined to assess the firm's performance and status.

Although financial ratios are a valuable analytical tool, ratios that spell trouble for a manufacturing firm are considered financially sound for a utility firm. Many balance sheet measures are not as helpful in analyzing utility companies because they don't carry much inventory. Thus, a single ratio does not generally provide sufficient information from which to judge the overall performance of a utility firm. Reasonable judgments can only be made on a utility firm when a group of ratios is used. The design of financial standards for the restructured Philippine electric power industry is based on a strategy of choosing a small number of financial ratios so that data can be condensed into a manageable form in the process of monitoring the progress of a market participant in the industry.

#### 4.0 Types of Financial Ratios

Financial ratios can be divided into five categories: leverage ratios, liquidity ratios, efficiency ratios, profitability ratios, and market value ratios. Leverage, liquidity, and efficiency ratios primarily measure risk; profitability ratios measure return; and market value ratios measure both risk and return. Each category of financial ratio focuses on a specific aspect of the firm:

<u>Category</u>	<u>Concern</u>
Leverage Ratios	How heavily the utility is in debt
Liquidity Ratios	How easily the utility can lay its hands on cash
Efficiency Ratios	How productively the utility is using its assets
Profitability Ratios	How satisfactory a return is the utility earning on its investments
Market Value Ratios	How highly the utility is valued by investors

Leverage ratios are of two types: (1) measures of the degree of indebtedness, and (2) measures of the ability to service debts. Liquidity of a utility firm is measured by its ability to satisfy its short-term obligations as they come due. Efficiency ratios measure the speed with which various accounts are converted into sales or cash. Profitability ratios evaluate the utility's return on its investments. And market value ratios monitor how the utility is graded by the market.

#### 5.0 Financial Standards for the Generation Utilities

The following are the financial standards that shall be imposed on all generation utilities:

- Leverage Ratios
  - Debt Ratio

- Interest Cover
- Liquidity Ratio
  - Quick Ratio
- Efficiency Ratio
  - Sales-to-Assets Ratio
- Profitability Ratio
  - Return on Assets

### **5.1 Characteristics of the Generation Sector**

The generation sector is composed of generation companies, co-generation companies, and independent power producers. The generation market is competitive and open to all generation companies. However, a generation company is required to obtain authorization by the ERC to operate in this sector. Generation is relatively a capital-intensive and energy-intensive activity and the design of financial standards must take this into consideration.

### **5.2 Debt Ratio**

Debt Ratio is a measure of financial leverage for the generation utility, and is usually measured by the ratio of long-term debt to total long-term capital. The value of long-term lease agreements is included with long-term debt because it also commits the generation utility to a series of fixed payments. Debt ratio is a measure of the degree of indebtedness of the generation utility. It measures the amount of debt relative to other significant balance sheet amounts, or the proportion of assets financed by creditors. The risk addressed by the debt ratio is the possibility that the generation company cannot pay off interest and principal. In equation form,

$$\text{Debt Ratio} = \frac{\text{Long Term Debt} + \text{Value of Leases}}{\text{Long Term Debt} + \text{Value of Leases} + \text{Equity}}$$

### **5.3 Interest Cover**

Interest Cover or otherwise called Times Interest Earned Ratio is another measure of financial leverage that focuses on the extent to which contractual interest payments are covered by earnings before interest and taxes (EBIT) plus depreciation. The higher the value of this ratio, the better able the generation utility is to fulfill its interest obligations. The interest cover is calculated as follows:

$$\text{Interest Cover} = \frac{\text{EBIT} + \text{Depreciation}}{\text{Interest}}$$

## **5.4 Quick Ratio**

Liquidity refers to the solvency (the ease with which it can pay its bills) of the generation utility's overall financial position. The liquidity of a generation utility is measured by its ability to satisfy its short-term obligations as they come due. A utility with poor liquidity is more likely to fail and default on its debts. Quick Ratio is a modified version of Current Ratio (the ratio of current assets to current liabilities) except that it excludes inventory because utilities do not carry much inventory. It measures the safety margin for the payment of current debt if there is shrinkage in the value of cash and receivables. A quick ratio of 1.0 or greater is occasionally recommended.

Liquidity ratios have some less desirable characteristics. Measures of liquidity can rapidly become out-of-date if short-term assets and liabilities change easily. Furthermore, if a utility can borrow at short notice, or has a government-guaranteed line of credit, a liquidity measure does not take this into account. The higher the ratio the more liquid the utility will be. Although excessive liquidity reduces a utility's risk of being unable to satisfy its short-term obligations, it may sacrifice profitability if current liabilities are a less expensive source of financing, and current assets are less profitable than fixed assets. The quick ratio is calculated as follows:

$$\text{Quick Ratio} = \frac{\text{Cash} + \text{Marketable Securities} + \text{Receivables}}{\text{Current Liabilities}}$$

## **5.5 Sales-to-Assets Ratio**

The Sales-to-Assets Ratio or otherwise called Asset Turnover Ratio measures the efficiency with which the generation utility uses all its assets to generate sales. A high ratio could indicate that the generation utility is working close to capacity. Generally, the higher this ratio, the more efficiently the generation utility's assets have been used.

Sales-to-Assets Ratio is calculated as follows:

$$\text{Sales-to-Assets Ratio} = \frac{\text{Sales}}{\text{Average Total Assets}}$$

The use of average of the assets at the beginning and end of the year is recommended because a flow figure (sales) is compared with a stock figure (total assets). An analyst can likewise look at the ratios of sales to particular types of capital such as the ratio of sales to fixed assets, the ratio of sales to net working capital, or the ratio of sales to operating and leased assets.

## **5.6 Return on Assets**

The Return on Assets, which is often called the Return on Investment, measures the overall effectiveness of the utility in generating profits with its available assets. Since generating companies are capital-intensive, the Return on Assets is a more appropriate monitoring indicator than Net Profit Margin (net profit after taxes ÷ sales)

The Return on Assets is calculated as follows:

$$\text{Return on Assets} = \frac{\text{EBIT} - \text{Tax}}{\text{Average Total Assets}}$$

The higher the utility's Return on Assets, the better. The use of earnings before interest and taxes (EBIT) in the numerator of the Return on Assets takes into account the profits that are paid out to debtholders as interest. This makes it possible to compare utilities with different capital structures. The average of assets at the start and end of the year is used in the denominator of the Return on Assets because profits are a flow figure and assets are a stock figure. As the generation sector is mandated by R.A. 9136 as a competitive activity, generating firms can expect to earn only their cost of capital. Thus, high Returns on Assets are characteristics only of firms or industries taking advantage of their monopoly positions.

## **5.7 Submission and Evaluation**

1. Generators shall submit to the ERC true copies of audited balance sheet and financial statement for the preceding year on or before May 15 of the current year.
2. Generators shall submit to the ERC a socio-demographic and geographic profile of customers, indicating the average power consumption for each class of customers for the preceding year, on or before MaY 15 of the current year.
3. Failure to submit to the ERC the requirements shall serve as grounds for the imposition of appropriate sanctions, fines, penalties or adverse evaluation.
4. The ERC shall, within 60 days upon receipt of such requirements, analyze and evaluate the same and notify the Generators concerned of its action.

## **6.0 Financial Standards for TRANSCO**

The following are the financial standards that shall be imposed on the National Transmission Company (TRANSCO):

- Leverage Ratios

- Debt Ratio
- Debt-Equity Ratio
- Interest Cover
  
- Liquidity Ratios
  - Current Ratio
  - Quick Ratio
  
- Efficiency Ratios
  - Sales-to-Assets Ratio
  - Days in Inventory
  - Average Collection Period
  
- Profitability Ratio
  - Net Profit Margin
  - Return on Assets

### **6.1 Characteristics of the Transmission Sector**

The transmission sector is a regulated common electricity carrier business and subject to the ratemaking powers of the ERC. The main player in this sector is the National Transmission Company (TRANSCO) which shall be wholly owned by the Power Sector Assets and Liabilities Management Corporation (PSALM). TRANSCO shall assume the electrical transmission function of the National Power Corporation (NPC). This function includes the planning, construction and centralized grid operation and maintenance of high voltage transmission facilities, including grid interconnections, ancillary and other allied facilities. R.A. 9136 mandated the privatization of TRANSCO in open competitive bidding to a party either through an outright sale or a concession contract for a period of twenty-five (25) years, subject to review and renewal for a maximum period of another twenty-five (25) years.

This sector, through TRANSCO or the Buyer/Concessionaire, shall provide open and non-discriminatory access to its transmission system to all electricity users. Technical performance standards are imposed to ensure and maintain the quality, reliability, adequacy, security, stability, and integrity of the Grid. Thus, financial standards are designed in support of attaining these performance standards.

### **6.2 Debt Ratio**

TRANSCO's financial leverage can likewise be measured by the ratio of long-term debt to total long-term capital. The formulation of this ratio is similar to the Debt Ratio equation in Section 5.2. The difference is that the values in both the numerator and denominator now apply to the TRANSCO or its Buyer/Concessionaire.

### **6.3 Debt-Equity Ratio**

Since TRANSCO will eventually be privatized, its buyer or concessionaire will most probably be required to infuse new capital. In this case, the Debt-Equity Ratio becomes a relevant indicator. Debt-Equity Ratio indicates the relationship between the long-term funds provided by creditors and those provided by the owners of TRANSCO (PSALM or Buyer/Concessionaire). The use of long-term debt to finance TRANSCO's requirement is measured by this ratio. In addition, the Debt-Equity Ratio shall also provide the opportunity to compare the financial commitment of creditors relative to the owners of TRANSCO.

Debt-Equity Ratio is calculated as follows:

$$\text{Debt-Equity Ratio} = \frac{\text{Long-Term Debt} + \text{Value of Leases}}{\text{Equity}}$$

### **6.4 Interest Cover**

TRANSCO as a capital-intensive entity would be expected to have a higher debt-equity ratio compared to a less capital-intensive sector such as retail trade. A corporation with greater debt exposure needs to measure its financial risk in terms of its ability to meet or to cover interest payments. The higher this ratio, the better the ability of TRANSCO to fulfill its interest obligations. Both Debt Ratio and Debt-Equity Ratio measure the degree of indebtedness, while Interest Cover measures the ability to service debts for TRANSCO. Interest Cover is calculated as in Section 5.3.

### **6.5 Current Ratio**

TRANSCO is mandated by R.A. 9136 to dispose and sell its sub-transmission assets to qualified Distribution Utilities, not later than two (2) years from the effectivity of this Act or the start of open access, whichever comes earlier. Since TRANSCO will have an inventory of assets to sell, the use of the current ratio as a monitoring indicator of TRANSCO is relevant during this period. Current Ratio is simply the margin of liquidity and measures TRANSCO's ability to meet its short-term obligations. It is expressed as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

A current ratio of 2.0 is occasionally recommended as the acceptable value. Current Ratio can be transformed into a ratio of Net Working Capital to Current Assets to measure the percentage by which TRANSCO's current assets can shrink by their excess over current liabilities without making it impossible for TRANSCO to cover its current liabilities.

## **6.6 Quick Ratio**

Quick Ratio or Acid-Test Ratio is likewise relevant to the transmission sector as it is relevant to the generation sector. The Quick Ratio formula described in Section 5.4 applies to TRANSCO. As TRANSCO completes its disposition of sub-transmission assets and liabilities, its “inventory of goods” disappears, and the Quick Ratio becomes the main indicator of its liquidity. Even if the inventory of sub-transmission assets and liabilities are not yet fully disposed, Quick Ratio is still useful because it measures the safety margin for the payment of current debt under conditions of (1) shrinking value of cash and receivables, and (2) inventory of sub-transmission assets that could not be disposed immediately.

## **6.7 Sales-to-Assets Ratio**

TRANSCO would be selling transmission services to all electricity users. At the early stage of TRANSCO’s existence, it will also have to sell sub-transmission assets to Distribution Utilities. Sales-to-Assets Ratio, as defined in Section 5.5, is equally relevant to TRANSCO because it measures the efficiency with which TRANSCO uses its assets to provide reliable, adequate, stable, and secure transmission services.

## **6.8 Days in Inventory**

The speed with which TRANSCO turns over its inventory of sub-transmission assets during the disposition period is measured by the number of days that it takes for the assets or “goods” to be identified and sold. The Days in Inventory is expressed as follows:

$$\text{Days in Inventory} = \frac{\text{Average Inventory}}{\text{Cost of Goods Sold} \div 365}$$

A low level of inventory is often regarded as a sign of efficiency. An inventory turnover of a grocery firm would probably be a high multiple of the inventory turnover of a transmission firm. Thus, to evaluate how efficient TRANSCO is in using its assets, Days in Inventory of TRANSCO should be compared across time or should be compared with a similar transmission company in countries with restructured electric power industries.

## **6.9 Average Collection Period**

In the privatization of sub-transmission assets, it stipulates that TRANSCO shall grant concessional financing over a period of twenty (20) years to electric cooperatives. Since electric cooperatives will pay installment payments to TRANSCO in exchange for the transfer of sub-transmission facilities to electric cooperatives, the Average Collection Period becomes a crucial monitoring indicator

in terms of how quickly the electric cooperatives pay their bills to TRANSCO. It is calculated by dividing the average daily sales into the accounts receivable balance.

$$\begin{aligned}\text{Average Collection Period} &= \frac{\text{Accounts Receivable}}{\text{Average Sales Per Day}} \\ &= \frac{\text{Average Receivables}}{\text{Sales} \div 365}\end{aligned}$$

The formula assumes that all sales are made on a credit basis. If such assumption is too unrealistic, “average credit sales per day” should be used instead of “average sales per day.” A low ratio is interpreted as an indication of an efficient collection mechanism.

### **6.10 Net Profit Margin**

Profitability for TRANSCO can be gauged by measuring the percentage of each peso of sales that remain after all costs and expenses (including interest and taxes) have been deducted. Net Profit Margin measures TRANSCO’s success with respect to earnings on its (a) transmission services, and (b) disposition of sub-transmission assets. The higher TRANSCO’s Net Profit Margin, the better. The Net Profit Margin is calculated as follows:

$$\text{Net Profit Margin} = \frac{\text{EBIT} - \text{Tax}}{\text{Sales}}$$

Net Profit Margin can likewise be perceived as the productivity of sales effort. Net Profit Margin is influenced by four factors: (1) sales, (2) cost of goods, (3) operating cost, and (4) financing cost. In analyzing TRANSCO’s Net Profit Margin Ratio, ERC can examine whether it is due to poor business control or to high financing costs.

### **6.11 Return on Assets**

TRANSCO’s overall effectiveness in generating profits is measured by Return on Assets. The higher this ratio, the better. The formula for calculating Return on Assets is indicated in Section 5.6. In section 5.6, the numerator of the Return on Assets is net income. Net profit can be defined as: total revenue less total operating expenses plus other income less other charges.

### **6.12 Submission and Evaluation**

1. The Grid Owner and System Operator shall submit to the ERC true copies of audited balance sheet and financial statement for the preceding year due on or before May 15 of the current year.

2. The Grid Owner and System Operator shall submit to the ERC a profile of customers, indicating the average power demand of each class of customers for the preceding year. This requirement is due on or before May 15 of the current year.
3. Failure to submit to the ERC the requirements shall serve as grounds for the imposition of appropriate sanctions, fines, penalties, or adverse evaluation.
4. The ERC shall, within 60 days upon receipt of such requirements, analyze and evaluate the same and notify the Grid Owner and System Operator concerned of its action.

## **7.0 Financial Standards for Distribution Utilities**

The following are the financial standards that shall be imposed on the Distribution Utilities:

- Leverage Ratios
  - Debt Ratio
  - Interest Cover
- Liquidity Ratio
  - Quick Ratio
- Efficiency Ratio
  - Average Collection Period
- Profitability Ratios
  - Net Profit Margin
  - Return on Assets
- Market Value Ratios
  - Price-Earnings Ratio
  - Market-to-Book Ratio

### **7.1 Characteristics of the Distribution Sector**

Distribution of electricity to end-users is a regulated common carrier business, as provided in Section 22 of R.A. 9136. Distribution Utilities must secure a national franchise and are subject to regulation by the ERC. Distribution Utilities are composed of private utilities, electric cooperatives, LGU-operated utilities, and other duly authorized entities. Distribution Utilities can merge, consolidate, integrate, and enter into management contract, bulk procurement and joint ventures, subject to ERC guidelines. Being a regulated sector of the Philippine electric power industry,

Distribution Utilities cannot change the terms and conditions of its services to end-users without approval by the ERC.

## **7.2 Debt Ratio**

Debt Ratio is an indicator to be used to evaluate the degree of indebtedness of Distribution Utilities. Debt Ratio is useful to ERC in gauging the cost of debt (and therefore, the weighted cost of capital) of the Distribution Utilities. Moreover, TRANSCO can use the Debt Ratio as a financial criterion in qualifying Distribution Utilities for the purchase of sub-transmission assets. The calculation of Debt Ratio is indicated in Section 5.2.

## **7.3 Interest Cover**

Interest Cover is a measure of the capacity to service the debt of Distribution Utilities. Interest Cover is calculated as in Section 5.3. This indicator is particularly useful in monitoring the performance of electric cooperatives which are given concessional financing in their acquisition of sub-transmission facilities from TRANSCO.

## **7.4 Quick Ratio**

Quick Ratio measures the ease with which Distribution Utilities can pay its short-term obligations as they come due. Quick Ratio is calculated as in Section 5.4.

## **7.5 Average Collection Period**

Average Collection Period measures the average amount of time it takes Distribution Utilities to collect accounts receivable, or the speed with which the customers of the Distribution Utilities pay their bills. Section 6.9 provides the formula in calculating Average Collection Period.

## **7.6 Net Profit Margin**

Net Profit Margin measures the productivity of the Distribution Utilities' sales effort. It provides the proportion of sales that finds its way into profits for Distribution Utilities. Section 6.10 expresses the formula in calculating Net Profit Margin.

## **7.7 Return on Assets**

Return on Assets measures the efficiency of Distribution Utilities in the employment of assets. As explained in Section 5.6, income before interest expense is divided into total assets to be able to make a comparison between a Distribution Utility's current Return on Assets and its past Return on Assets. This is especially useful if the Distribution Utility is more dependent on creditor financing.

## **7.8 Price-Earnings Ratio**

Section 28 of R.A. 9136 stipulates that the controlling stockholders of small utilities are hereby required to list in the Philippine Stock Exchange (PSE) within five (5) years from the enactment of this Act. Furthermore, Distribution Utilities that are already listed in the PSE are exempted from the maximum twenty-five (25%) percent ownership of the voting shares of stocks. For those Distribution Utilities subject to this provision of the Act, two market-value ratios are recommended as additional financial-capability standards. These two indicators are Price-Earnings Ratio and Market-to-Book Ratio.

Price-Earnings Ratio measures the price that investors are prepared to pay for each peso of earnings in a publicly-listed Distribution Utility. A high Price-Earnings Ratio may indicate that investors perceive that the earnings of a Distribution Utility are relatively safe. Price-Earnings Ratio is calculated as follows:

$$\text{Price-Earnings Ratio} = \frac{\text{Stock Price}}{\text{Earnings Per Share}}$$

## **7.9 Market-to-Book Ratio**

Market-to-Book Ratio is calculated as:

$$\text{Market-to-Book Ratio} = \frac{\text{Stock Price}}{\text{Book Value Per Share}}$$

Book value per share is equal to the sum of common stock and retained earnings divided by the number of shares outstanding. At least, a Distribution Utility's market price must equal its book value to maintain its financial integrity. If a Distribution Utility sells stock for less than book value, the book value of the previously outstanding shares will be diluted, and so will the earnings per share, dividends per share, and earnings growth. Under this condition, the distribution utility cannot raise capital in the equity market.

## **7.10 Submission and Evaluation**

1. The Distribution Utility shall submit to the ERC true copies of audited balance sheet and financial statement for the preceding year due on or before May 15 of the current year.
2. The Distribution Utility shall submit to the ERC a socio-demographic profile of customers indicating the average electricity consumption for each class of customers for the preceding year. This requirement is due on or before May 15 of the current year.

3. Failure to submit the requirements to the ERC shall serve as grounds for the imposition of appropriate sanctions, fines, penalties, or adverse evaluation.
4. The ERC shall, within 60 days upon receipt of such requirements, analyze and evaluate the same and notify the Distribution Utility concerned of its action.

## **8.0 Financial Standards for the Electricity Suppliers**

### **8.1 Prudential Requirements**

The following Prudential Requirements shall be met by Electricity Suppliers, Marketers, Brokers, Aggregators, or Other Third-Party Entities in order to have a license from ERC to sell electricity at retail:

- (a) Financial Requirements
- (b) Credit Standards
- (c) Financial Standards for Customer Protection
- (d) Certification Standards
- (e) Financial Standards for Billing, Collection and Profitability
- (f) Organizational and Managerial Resource Requirements

### **8.2 Characteristics of the Supply Sector**

Supply of electricity to end-users is a competitive and contestable market. An electricity supplier is sometimes called public electricity supplier (PES), electric service provider (ESP) or retail electric provider (REP) in some states that have undertaken electric industry reforms. Under R.A. 9136, an electricity supplier simply has to obtain a license from the ERC to engage in the selling, brokering or marketing of electricity in the competitive or contestable market. Initially, the contestable market refers to electricity end-users with a monthly average peak demand of at least one megawatt (1MW) for the preceding twelve (12) months; and two years after, contestable market refers to electricity end-users with a monthly average demand of at least seven hundred fifty kilowatts (750 KW) over the preceding twelve (12) months.

### **8.3 Financial Requirements**

1. An Applicant for a license to sell electricity at retail must submit to the ERC true copies of audited Balance Sheet, Cash Flow Statement and Income Statement for the two most recent (12) month periods. Balance Sheet, Income Statements and Cash Flow Statements must be for the Applicant, and not for a parent corporation (if one exists).
2. If the Applicant has not been in existence for at least two 12-month periods, it must provide true copies of audited Balance Sheets, Income Statements and Cash flow Statements for the life of the business.

3. If a parent or other company has undertaken to insure the financial integrity of the Applicant, the Applicant must submit the parent's or other company's Balance Sheet, Income Statement, and Cash Flow Statement together with the Applicant's own Income Statement, Balance Sheet and Cash flow Statement.

#### **8.4 Credit Standards**

An Applicant may satisfy any of the four methods to demonstrate that it has the financial standards required for credit quality:

1. Investment Grade Credit Rating by a Reputable Credit Bureau;
2. Assets in Excess of Liabilities (minimum value to be determined by the ERC after public consultation)
3. Unused Cash Resources to Meet the Applicant's Proposed Certification Level (the level of unused cash resources to be determined by the ERC based on the Applicant's expected total monthly billings). For example, the level of unused cash resources must be P200,000 to conduct business of up to P500,000 in total monthly billings. For every P50,000 of incremental business above the P500,000 level, the electricity supplier must demonstrate an additional P20,000 of unused cash resources.
4. The Applicant can provide proof of its creditworthiness through the certification of the Distribution Utility which has imposed credit terms on the Applicant.

#### **8.5 Financial Standards for Customer Protection**

1. If the Applicant plans to collect funds, including deposits or advances, from customers prior to providing services, the Applicant must provide a minimum security deposit in the form of either a cashier's check or a financial guarantee bond to be posted with the ERC to cover the Applicant's minimum exposure (the amount of deposit shall be determined by the ERC after public consultation).
2. The amount of the security deposit shall be based upon sales value that the Applicant will collect by way of deposits or advance payments.
3. The security deposit must be sufficient to cover one-half of the expected sales (price per kilowatt-hour times number of kilowatt-hours) that the Applicant forecasts it will sell to customers over a 12-month period.
4. The amount of the security deposit shall be sufficient to provide adequate recourse for customers in the event of fraud or non-performance by the Applicant.

## **8.6 Certification Standards**

1. Prior to ERC licensing, the Applicant must procure a bond or insurance coverage in an amount sufficient to protect customers in the event of default or non-performance by the Applicant.
2. The amount of the bond or insurance shall be based on the number of customers expected to be served and the number of kilowatt-hours of electricity the Applicant expects to provide.
3. The Applicant must designate its geographic service area (e.g. (a) the geographic area of the entire Philippines, (b) the geographic area of the entire island of Luzon, (c) the service area of specific transmission and distribution utilities/ electric cooperatives).
4. The ERC can adopt an annual fee to be charged to Registered Electricity Suppliers on an annual basis (the amount shall be determined by the ERC and will change from time to time).

## **8.7 Financial Standards for Billing, Collection and Profitability**

The following Financial Ratios shall be used to assess the capability of Electricity Suppliers to bill, collect from its customers and earn a satisfactory rate of return on its investment:

1. Leverage Ratio
2. Liquidity Ratio
3. Efficiency Ratio
4. Profitability Ratio

Leverage Ratio shall include Interest Cover to measure the ability of the Electricity Suppliers to service debts. Liquidity Ratio shall include Cash Ratio to measure the ability of the Electricity Suppliers to lay its hands on cash for a short period. Efficiency Ratio shall include the Average Collection Period to measure the efficiency of Electricity Suppliers in the use of its assets. Cash is computed as the ratio of cash plus short-term securities to current liabilities. Profitability Ratio shall include Net Profit Margin to measure the Electricity Suppliers' return on its investment.

## **8.8 Organizational and Managerial Resource Requirements**

As a requisite for providing retail electric service, an electricity supplier must have technical resources to provide continuous and reliable electric service to customers

in its service area and organizational and managerial ability to supply electric service at retail in accordance with its customer contracts. The Applicant will provide the following information:

1. Capability to comply with all scheduling, operating, planning, reliability, customer registration and settlement policies, rules, guidelines, and procedures established by the Grid Owner, System Operator or its Buyer/ Concessionaire.
2. Capability to comply with 24 hour coordination with control centers for scheduling changes, reserve implementation, curtailment orders, interruption plan and implementation, and telephone number, fax number, and address where its staff can be directly reached at all times.
3. At least one officer or employee experienced in the retail electric industry or a related industry.
4. Adequate staffing and employee training to meet all service level commitments.
5. A customer service plan that describes how the electricity supplier complies with the ERC's customer protection rules.
6. A disclosure of whether the Applicant (officer, director, or principal) has been found liable for fraud, theft or larceny, deceit, or violations of any customer protection or deceptive trade laws in any country.

### ***8.9 Submission and Evaluation***

1. The Electricity Supplier shall submit to the ERC true copies of audited Balance Sheet, Income Statement, and Cash Flow Statement for the two most recent twelve (12) month periods or for the life of the business, whichever is applicable. These requirements must be submitted by the Applicant upon application for licensing; and for the Registered Electricity Supplier, on or before May 15 of the current year.
2. Within 60 days of complying with the Credit Standards, the Applicant (or Registered Electricity Supplier) shall file with the ERC a sworn affidavit that demonstrates compliance with this requirement. Such a demonstration of compliance includes the provision, along with the affidavit, of independent third party documentation verifying the veracity of the information relied upon for compliance.
3. Within 60 days of complying with the Financial Standards for Customer Protection, the Applicant (or Registered Electricity Supplier) shall file with the ERC a sworn affidavit that attests compliance with the minimum security deposit requirement. Such a demonstration of compliance must be accompanied by documentation by the bank, insurance company, or any accredited financial

intermediary verifying the integrity and validity of the financial instruments relied upon for compliance.

4. The Applicant must inform the ERC of its proposed geographic service area.
5. The Applicant must inform the ERC the type of service agreement it entered with a Distribution Utility whose franchise area the Applicant is planning to offer its services. Such an agreement must include a provision of whether electricity consumers will be billed separately by the Electricity Supplier and Distribution Utility, or will instead receive a consolidated bill from either the Electricity Supplier or the Distribution Utility.
6. A Registered Electricity Supplier shall submit to the ERC a socio-demographic and geographic profile of its customers, indicating the average electricity consumption for each type of customers for the preceding twelve months. This requirement is due on or before May 15 of the current year.
7. Failure to submit the requirements to the ERC, shall serve as grounds for the imposition of appropriate sanctions, fines, penalties or adverse evaluation.
8. The ERC shall within 60 days upon receipt of such requirements, analyze and evaluate the same and notify the Electricity Supplier concerned of its action.

## **9.0 Relating Ratios to Financial Risk**

### ***9.1 Establishing a Standard***

The ERC analyst must relate the ratio to the utility's (or electricity supplier's) propensity to pay interest and principal in full and on schedule. The analyst can use ratios to rank all electric industry participants on a relative scale of propensity to default. For instance, a utility with high debt ratio and low interest cover is more likely to default than a company with low debt ratio and high interest cover, all other things being equal.

The context of established standards or the method underlying the construction of standards (or the process of relating financial ratios directly to default risk) is explained in the following discussion.

At the turn of the 20<sup>th</sup> century, the use of ratio analysis in the interpretation of financial statements became a useful tool for decision-making and credit evaluation. Absolute ratio criteria were beginning to emerge as a dominant method of relating financial ratios to credit risk. For instance, the current ratio was then popularly used as a significant determinant of a firm's ability to pay its short-term debt. The absolute ratio criterion for current ratio was set at 2. That means, the firm's current assets must be, at least, twice its current liabilities. However, a pioneering study of Alexander Wall in 1919 ("Study of Credit Barometrics") popularized the use of

relative ratio criteria and the use of many ratios instead of putting too much weight on the current ratio alone.

## **9.2 Comparative Ratio Analysis**

The basic technique or prevailing practice in assessing a firm's financial performance is to compare the firm's ratios with those of a peer group. A peer group can be defined as firms of comparable size. But the most common practice is to define a peer group as those firms belonging to the same line of business with virtually similar product lines because ratio comparisons across industries may not be valid. However, a too rigid effort to create homogeneous peer groups narrows the field to such an extent that insufficient size exists in each group. For instance, comparison with only one other peer company (competitor analysis) may not be too informative. Visayan Electric, for example, can be evaluated vis-à-vis Davao Light and Power. Even if Visayan Electric performs above Davao Light and Power, the analyst does not know whether Davao Light and Power is in a strong or weak financial situation. The other technique is to compare the utility (e.g. Visayan Electric) with the industry's average ratio. In this practice, the ratios are averages computed over several years. The rationale behind the use of averages is to minimize the impact of highly atypical results that a utility may report in a single year. A limited or manageable number of ratios is suggested in order to extract the bulk of the information in this type of analysis. Other pertinent facts outside the financial statements (e.g. quality of management, competitive trend in the industry, strategic direction, etc.) can also be useful to the analyst in assessing the overall performance of the utility.

## **9.3 Ratio Trend Analysis**

Ratio trend analysis can supplement comparative ratio analysis. Suppose Visayan Electric and Davao Light and Power posted an identical interest cover of 4.6 times last year. On a ratio comparison, the two appear to be equally risky. What if, however, Visayan Electric had interest cover of 6.3 times five years ago and has steadily declined to 4.6 times, while Davao Light and Power has improved over the same period from 3.2 times to 4.6 times? If further analysis suggests that the two companies' trends are likely to continue, then the coincidence that they are both currently at 4.6 times should have little bearing on one's financial assessment. The company that will have stronger interest cover in the future is a better risk: In using trend analysis, the analyst must distinguish whether the deteriorating financial ratios signal a permanent decline or merely a standard cyclical slump. The analyst must look beyond financial statements to make an informed judgment on whether a decline is cyclical or permanent. Thus, looking at the business fundamentals, rather than ratios alone, provides a better firm assessment.

#### **9.4 Multivariate Ratio Analysis**

The use of multiple ratios creates a problem of conflicting indicators. How should an analyst evaluate a company that performs well on current ratio and interest cover but poorly on debt ratio? A solution to this problem is to obtain a weighted average of different ratios, the weights being the relative value assigned to each ratio. The weights are statistically determined using a multiple regression analysis or multiple discriminant analysis. However, the accuracy of the multivariate approach is not much greater than the comparative ratio analysis. For instance, firm failure can be predicted more accurately using the cash flow to total debt ratio as with a weighted average of ratios created through a multiple discriminant analysis (MDA).

One example of the multivariate ratio analysis is the Altman Z-Score model:

$$Z = 1.4X_1 + 1.2X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$$

where  $X_1$  = Working Capital/ Total Assets (%)  
 $X_2$  = Retained Earnings/ Total Assets (%)  
 $X_3$  = Earnings Before Interest and Taxes/ Total Assets (%)  
 $X_4$  = Market Value of Equity/ Total Liabilities (%)  
 $X_5$  = Sales/ Total Assets (number of times)

In this model, if a firm scores below a certain value, it is deemed to be at risk. For instance, a score below 1.81 signifies serious financial problem (credit risk), while a score above 3.0 indicates a very healthy performance. The major weakness of the multivariate ratio approach is that the models are derived from statistical relationships which existed between particular companies in the past in particular industry sectors and particular business environments, and there is no guarantee that other companies at different periods and in other circumstances will replicate the same relationships. This method does not take into consideration information about actual economic circumstances facing the firms. Multivariate models do not deal with contingent liabilities. In recent years, several major corporations abroad have filed for bankruptcy despite the absence of clear indications of imminent insolvency. Many corporations filed for bankruptcy when they faced the prospect of paying massive damages in litigation related to defective products that they had manufactured. Multivariate models are based on reported financial data and cannot pick up the effect of solvency-threatening contingent liabilities.

#### **9.5 Choosing a Benchmark**

The financial standard that is recommended for ERC's use is the relative ratio criterion. Particularly, the comparative ratio analysis is an effective technique for assessing the financial performance of the participants in the restructured Philippine electric power industry. A utility's performance can be (1) compared with the performance of major competitor(s), and (2) compared with the industry's average performance. In addition, ratio trend analysis is used to supplement comparative ratio analysis and to capture the underlying dynamics and fundamentals that are not

reflected in the reported financial data. Quantitative financial models (absolute ratios) cannot replace comparative ratio analysis (relative ratios) in evaluating the financial capability of the participants in the electric power industry. The bottomline is that human judgment would still be required in ERC's financial evaluation of the participants in the restructured Philippine electric power industry.

## **10.0 Analysis of Risk Potential of Electric Industry Participants**

### ***10.1 Average Financial Performance of Industry Participants***

The financial performance of market participants in the industry (transmission, distribution, and generation utilities) is shown in Table 1. Each industry participant can be evaluated vis-à-vis the industry average for each financial ratio shown in Table 2. Consider the case of National Power Corporation (NPC). NPC performed below the industry average in all six indicators. On the other hand, Manila Electric Company (Meralco) was doing better relative to industry average in terms of leverage and efficiency ratios, but performed below the industry average in all of the three profitability indicators. Hopewell Power Corporation was doing well in most indicators, except for its debt ratio and sales-to-assets ratio where it performed below the industry average.

### ***10.2 Risk Potential of Industry Participants***

The risk of a utility is related to the potential variability of its return. Measuring risk is equivalent to measuring variability of returns. Rate of return on sales (ROS), rate of return on assets (ROA), and rate of return on stockholders' equity (ROE) are shown in Table 1 for each participant in the electric power industry. Table 3 presents measures of variability of return for industry participants. Two measures of variability are used: (1) standard deviation (SD), and (2) coefficient of variation (CV). The first is considered a measure of absolute risk, while the second is a measure of relative risk.

Table 3 reveals that generation utilities are riskier than most private distribution utilities, and also riskier than NPC in most of the risk measures used (SDROS, SDROA, SDROE, CVROS, CVROA, and CVROE). The prudential requirements for Electricity Suppliers described in Section 14.0 is designed on the assumption that the highly competitive supply sector in the restructured electric industry environment will have a higher risk level than the generation, transmission, and distribution sectors. In short, the sectors that are not required to obtain a franchise to operate have higher risk potential. The financial capability standards proposed in this report are intended to minimize the risk of financial non-performance.

## **11.0 Financial Ratios of Generating Utilities**

### ***11.1 Financial Performance of Generating Utilities***

Five financial ratios are suggested in Section 5.0 to serve as the standards to measure the financial risk of generating utilities. The five ratios suggested are: debt ratio, interest cover, quick ratio, sales-to-assets ratio, and return on assets. Table 4 presents empirical estimates of three of the five ratios. SEC-provided data do not have information needed to compute the remaining two ratios: interest cover and quick ratio.

Table 4 reveals that generating utilities have higher debt ratio, lower sales-to-assets ratio, and higher return on assets compared to the electric power industry average ratios shown in Table 2.

### ***11.2 Risk and Return Indicators for Generating Utilities***

Table 5 indicates that the generation sector is definitely riskier than the electric power industry as a whole. On the other hand, rates of return in the generation sector are higher compared to the industry average. These empirical results are consistent with financial theory. Higher returns are required in the generation sector to compensate for the higher degree of risk.

## **12.0 Financial Standards for Grid Owner/System Operator**

### ***12.1 Financial Standards for Grid Owner/ System Operator***

Financial capability standards for TRANSCO are identified in Section 6.0. Table 6 presents the empirical estimates of the financial ratios identified in monitoring the financial performance of TRANSCO. Table 6 is computed based on NAPOCOR's financial statement and balance sheet for the 1995-2000 period. A comparative ratio analysis of NAPOCOR indicates a deteriorating financial position.

The application of the comparative ratio analysis requires the use of a peer group or a single-firm industry in another country as benchmark against which TRANSCO's performance can be evaluated. Table 7 presents Argentina's debt-equity ratios. It is evident that NAPOCOR's debt-equity ratio is way above the debt-equity ratios of healthy Argentine firms at a time that Argentina was suffering from a debt crisis. NAPOCOR's debt-equity ratios are approximately similar to Argentina's bankrupt companies.

Table 8 complements Table 7 by presenting evidence that Argentina's electric utility privatization has indeed brought benefits in the form of efficiency gains, labor productivity gains, increases in investment, and improvement in service quality.

Table 9 also presents the debt-equity ratios of selected OECD countries. Table 9 may not be appropriate benchmarks for TRANSCO because they are derived from

economies with different or more mature industrial structure. Thus, the ratio debt-equity ratios for Argentina (Table 7) could be considered a more appropriate standard for TRANSCO.

Table 10 presents the financial capability standards suggested by the World Bank for a transmission company. Thus, NAPOCOR's current ratio in Table 6 must reach the hurdle figure of 1.25 identified in Table 10. In the same manner, NAPOCOR's debt ratio, debt-equity ratio, return on assets, and collection rate are way below the World Bank standards.

### ***12.2 Industry Standards for TRANSCO***

NAPOCOR's or TRANSCO's financial performance should also be gauged against the average performance of the industry. Table 2 provides additional benchmarks or hurdle rates against which the TRANSCO's performance can be gauged. Table 2 implies that TRANSCO must perform at least as good if not better than the average industry performance considering that other firms in the industry are performing much better, given the fact that they are facing the same legal, political, institutional, economic, and regulatory environment.

## **13.0 Categorizing Distribution Utilities**

### ***13.1 Grouping Distribution Utilities By Sales***

In order to apply the comparative ratio analysis, distribution utilities are grouped into various peer groups. The rationale of creating peer groups or "strategic groups" within the distribution utility industry is to make a valid comparison among utilities of comparable size. Two strategic dimensions are used to group distribution utilities: (1) sales (in pesos), and (2) electricity consumption (in kilowatt or megawatt). Table 11 presents the average sales of twenty distribution utilities for the period 1995 to 2000. Table 12 shows the average electricity consumption for the same utilities for the same period.

Table 13 presents the result of categorizing utilities into the following peer groups: Category A, utilities whose total sales are less than P500 million; Category B, utilities whose total sales are greater than P500 million but less than P1 billion; Category C, utilities whose total sales are greater than P1 billion but less than P5 billion; and Category D, utilities whose total sales are greater than P5 billion. Twelve distribution utilities are identified under Category A: Bauan Electric, Cabanatuan Electric, Ibaan Electric, La Union Electric, Manaoag Utility, Mansons Corporation, Public Utilities of Olongapo City, Tarlac Electric, Public Utilities of Bohol, Cotabato Light and Power, and Iligan Electric Light and Power; four under Category B: Angeles Electric, Dagupan Electric, San Fernando Electric, and Panay Electric; three under Category C: Visayan Electric, Cagayan Electric, and Davao Light and Power; and one under Category D: Meralco.

Table 14 presents the result of categorizing utilities by electricity consumption instead of by sales. The various categories are the following: Category A, utilities with less than 150 megawatts of consumption; Category B, utilities with more than 150 megawatts but less than 300 megawatts; Category C, utilities with more than 300 megawatts but less than 1,000 megawatts; and Category D, utilities with more than 1,000 megawatts. Approximately the same number of utilities that are identified under each category in Table 13 belong to the respective categories in Table 14. Under either categorization, the mix of utilities in each peer group is not drastically altered. It is appropriate therefore to categorize utilities by total sales. This choice is likewise consistent with the financial standards used to assess utilities. Since the financial ratios are measured in pesos, then categorizing utilities in peso terms (sales) is methodologically consistent.

What is evident in this grouping-simulation exercise is that Meralco is a class of its own in the industry; it has no distribution utility competitor of comparable size (measured either in sales, assets, or electricity consumption). On the other hand, Angeles Electric, San Fernando Electric, and Panay Electric consistently belong to the same peer group either in terms of sales or electricity consumption. In the same manner, it is valid to compare the financial performance of Visayan Electric, Cagayan Electric, and Davao Light and Power because they consistently belong to the same peer group.

### ***13.2 Financial Standards for Distribution Utilities***

Financial information for distribution utilities was provided by the ERC and is summarized in Appendix Tables 1 to 11 for each utility with complete information for the 1996-2000 period. The appendix tables contain financial ratios for each reported year and a summary indicator for the entire period for each utility. The financial ratios monitored include the following: debt ratio, interest cover, quick ratio, average collection period, net profit margin, and return on assets.

Tables 15, 16 and 17 present the comparative ratio analysis for Category A, Category B, and Category C Utilities, respectively. Each table contains the average ratio for each indicator for each utility. The average for each group as well as the industry average for each indicator is likewise indicated in the table.

Table 15 shows that Cotabato Electric's debt ratio is better than the average for Category A utilities, and is also better than industry average. Interest cover for Cotabato Electric, Iligan Light and Power, and La Union Electric is better than the Category A average. Quick ratios for Cotabato Electric and Iligan Light and Power also exceed the Category A average. The average collection period for both La Union Electric and Iligan Light and Power is better than the group average and industry average, respectively. Cotabato Electric's net profit margin and return on assets are better than the group average and industry average, respectively. Overall, Cotabato Electric seems to be the star performer among the Category A utilities.

Table 16 shows that among Category B utilities, only Dagupan Electric's debt ratio is worse than the industry average. The interest cover for all Category B utilities all exceed the industry average. Only Panay Electric's quick ratio is better than the group or industry average. Dagupan Electric has the most efficient collection system within this category. All Category B utilities are doing well both in terms of net profit margin and return on assets.

Among the Category C utilities (see Table 17) Davao Light and Power has the best debt ratio, Visayan Electric has the best interest cover and quick ratio. Davao Light and Power has the most efficient collection system, Cagayan Electric has the highest net profit, margin, and Visayan Electric has the highest return on assets. Overall, Visayan Electric has performed well in this peer group.

Category D's average financial ratios (see Table 18) reflect the average financial ratios of Meralco which is the only utility belonging to this category. Table 18 has likewise shown that all financial ratios for Category B utilities are better than their respective industry averages.

A summary table to evaluate a utility's financial performance is shown in Table 19 using Cabanatuan Electric as the example. Table 19 shows that Cabanatuan Electric's financial performance for the 1996-2000 period falls below the average performance in its peer group. It also performs worse than the industry. On the hand, the summary table for Manila Electric shows that it performs relatively better than the industry average (see Table 20).

### **13.3 Financial Standards for Electric Cooperatives**

The National Electrification Administration (NEA) has classified Electric Cooperatives (ECs) according to the following criteria: (a) number of consumers receiving service, (b) volume of sales in kilowatthour, and (c) length of the distribution system (in kilometers of circuit lines). Based on these criteria, the existing total number of ECs (120) are grouped into four categories: (1) small, (2) medium, (3) large, and (4) extra large.

Table 21 presents the average financial ratios for ECs for the period from 1995 to 2000. Note that the debt ratio of large ECs are higher than small ECs. Small ECs have higher interest cover, but larger ECs have better quick ratios and average collection period.

Profitability ratios of larger ECs are also better than those of smaller ECs. Extra Large ECs have shown better ratios in terms of net profit margin and return on sales compared to those of small, medium, and large ECs, respectively.

Using industry average ratios as benchmarks, small ECs are doing well in terms of debt ratio and interest cover. Large ECs are doing well in terms of quick ratio; extra

large ECs are doing better in terms of average collection period ; net profit margin for medium ECs is better; and extra large ECs are better in return on assets vis-à-vis the industry average.

## **14.0 Summary of Licensing Requirements for the Electricity Suppliers**

### ***14.1 Application Form***

Table 22 presents a sample application form for registration of Electricity Suppliers. This form is not inclusive. Basically, it is intended as an indicative document to guide incoming ERC personnel in designing regulatory documents relevant to a restructured electric power industry.

Section 5 of the form (“Technical Fitness”) and Sections 11-12 (“Financial Integrity”) are based on the technical performance standards as well as the financial capability standards for suppliers which are specified in the Philippine Distribution Code.

### ***14.2 Summary of Financial Requirements for the Electricity Suppliers***

Table 23 provides a detailed checklist of prudential requirements for Electricity Suppliers. The information contained in this table contains the basic information required to evaluate, assess, and monitor the financial capability standards of the Electricity Suppliers.

Section 8 of Table 23 (“Organizational and Managerial Resource Requirements”) provides the administrative requirements for the provision of efficient, safe, and reliable electric services by the Electricity Suppliers.

Table 1

## Selected Financial Ratios for the Philippine Electric Power Industry

Companies	<u>Debt Ratio</u>	<u>Debt-Equity</u>	<u>Sales-Assets</u>	<u>ROS</u>	<u>ROA</u>	<u>ROE</u>
		<u>Ratio</u>	<u>Ratio</u>			
1 National Power Corporation	0.76	3.50	0.16	3.26%	0.67%	1.94%
2 Manila Electric Company	0.37	0.68	0.91	7.03%	6.46%	11.18%
3 Hopewell Power (Phils.) Corp.	0.51	1.18	0.25	50.57%	12.06%	30.83%
4 Visayan Electric Co.	0.49	2.22	1.21	1.90%	2.56%	12.74%
5 Davao Light and Power Co., Inc.	0.26	0.36	0.55	5.50%	3.28%	4.46%
6 Southern Energy Pangasinan, Inc.	0.81	4.30	0.04	49.21%	1.90%	10.08%
7 Bauang Private Power Corp.	0.70	2.35	0.21	50.54%	8.40%	28.67%
8 Cagayan Electric Power & Light Co., Inc.	0.41	0.57	0.64	7.16%	4.58%	6.35%
9 ABB Alstom Power Philippines Inc.	0.80	4.60	1.73	8.31%	11.82%	44.02%
10 Subic Power Corp.	0.68	3.06	0.28	8.57%	2.78%	13.54%
11 East Asia Power Resources Corp.	0.50	1.99	0.16	31.27%	2.20%	5.50%
12 Batangas Power Corp.	0.62	1.53	0.38	30.38%	12.29%	4.15%
13 Cebu Private Power Corp.	0.56	1.30	0.50	15.36%	7.68%	17.62%
14 Panay Electric Co., Inc.	0.21	0.27	0.85	8.27%	6.85%	8.69%
15 Angeles Electric Corp.	0.31	1.27	1.00	3.75%	4.05%	12.60%
16 Northern Mindanao Power Corp.	0.54	1.43	0.19	47.22%	9.18%	19.32%
17 First Private Power Corp.	0.38	1.20	0.23	97.05%	22.17%	32.40%
18 Aboitiz Power Corp.	0.23	0.30	0.20	96.25%	18.94%	24.56%
19 East Asia Utilities Corp.	0.64	1.74	0.18	4.06%	0.72%	1.98%
20 Southern Energy Mobile, Inc.	0.56	1.27	0.75	38.08%	23.81%	29.94%
21 Enron Power Philippines, Inc.	0.06	0.07	0.21	86.48%	17.89%	19.36%
22 Astec Power, Inc.	0.44	0.48	0.67	6.10%	4.45%	9.48%
23 Philippine Electric Corp.	0.38	0.66	1.37	9.48%	12.59%	20.96%
24 Toledo Power Company	0.10	0.12	0.29	4.77%	2.12%	2.33%
25 Dagupan Electric Corp.	0.48	1.53	1.06	3.79%	4.32%	9.01%
26 Magellan Cogenerations, Inc.	0.75	3.75	0.14	-13.87%	-1.93%	-10.18%
27 Edison (Bataan) Cogeneration	0.54	1.22	0.12	-3.13%	0.80%	1.28%
28 Tarlac Electric, Inc.	0.53	1.90	0.88	0.34%	0.30%	0.91%

29 Angeles Power, Inc.	0.69	2.55	0.36	16.71%	6.09%	14.26%
30 Southern Philippines Power Corp.	0.40	1.14	0.20	31.72%	6.54%	11.81%
31 Mactan Electric Company, Inc.	0.57	1.68	1.02	4.40%	4.47%	11.55%
32 Cabanatuan Electric Corp.	0.49	1.06	0.57	1.13%	0.80%	1.66%
33 Cotabato Light and Power Co.	0.35	1.16	0.54	14.23%	8.10%	16.21%
34 Iligan Light and Power, Inc.	0.39	0.87	1.19	-0.82%	-0.98%	-1.48%
35 La Union Electric Co., Inc.	0.51	1.37	1.06	0.39%	0.21%	0.62%
36 San Fernando Electric Light and Power, Inc.	0.34	0.60	1.33	2.47%	2.85%	4.17%
37 Hydro Electric Dev. Corp.	0.40	0.77	1.14	37.05%	6.38%	8.18%
38 Salcon Power Corp.	0.22	0.32	0.35	64.82%	23.43%	30.11%

Source: Mean Ratios for 1993-1999 period; basic data obtained from Top 7000 Corporations.

Table 2

Average Financial Ratios for the Philippine Electric Power Industry: 1993-1997

<u>Ratio</u>	<u>Average</u>
1. Debt Ratio	0.47
2. Debt-Equity Ratio	1.48
3. Sales-To-Asset Ratio	0.60
4. Return on Sales	21.84%
5. Return on Assets	6.86%
6. Return on Equity	12.39%

Source: Computed from SEC, Top 7000 Corporations (1993-1999)

Table 3

## Measures of Risk in the Philippine Electric Power Industry

<b>Companies</b>	<b><u>SDROS</u></b>	<b><u>SDROA</u></b>	<b><u>SDROE</u></b>	<b><u>CVROS</u></b>	<b><u>CVROA</u></b>	<b><u>CVROE</u></b>
1 National Power Corporation	6.49%	1.12%	4.31%	1.9888	1.6675	2.2262
2 Manila Electric Company	2.12%	2.27%	2.89%	0.3017	0.3515	0.2586
3 Hopewell Power (Phils.) Corp.	25.05%	8.43%	19.04%	0.4955	0.6991	1.0795
4 Visayan Electric Co.	2.69%	2.85%	20.19%	1.4178	1.1128	1.5850
5 Davao Light and Power Co., Inc.	2.95%	2.65%	3.75%	0.5355	0.8094	0.8403
6 Southern Energy Pangasinan, Inc.						
7 Bauang Private Power Corp.	24.48%	4.68%	15.56%	0.4844	0.5575	0.5429
8 Cagayan Electric Power & Light Co., Inc.	2.72%	1.81%	1.98%	0.3800	0.3950	0.3120
9 ABB Alstom Power Philippines Inc.	4.97%	7.48%	17.75%	0.5978	0.6332	0.3196
10 Subic Power Corp.	7.80%	3.02%	14.31%	0.9095	1.0877	1.0566
11 East Asia Power Resources Corp.	37.67%	4.24%	10.08%	1.2046	1.9287	1.8334
12 Batangas Power Corp.	8.84%	7.52%	23.61%	0.2912	0.6122	0.5688
13 Cebu Private Power Corp.						
14 Panay Electric Co., Inc.	2.34%	1.50%	1.78%	0.2827	0.2182	0.2045
15 Angeles Electric Corp.	3.36%	3.42%	20.15%	0.8960	0.8435	1.5986
16 Northern Mindanao Power Corp.	19.52%	4.84%	8.89%	0.4134	0.5278	0.4602
17 First Private Power Corp.	2.07%	12.43%	62.42%	0.0214	0.5607	0.9236
18 Aboitiz Power Corp.	2.83%	0.54%	2.01%	0.0294	0.0285	0.0820
19 East Asia Utilities Corp.						
20 Southern Energy Mobile, Inc.	12.12%	20.70%	42.06%	0.3182	0.6751	0.6785
21 Enron Power Philippines, Inc.	12.32%	4.52%	6.20%	0.1425	0.2526	0.3205
22 Astec Power, Inc.	8.20%	6.44%	7.87%	1.3440	1.4466	0.8303
23 Philippine Electric Corp.	2.10%	1.97%	5.53%	0.2219	0.1567	0.2636
24 Toledo Power Company	10.06%	3.08%	3.35%	2.1088	1.4488	1.4380
25 Dagupan Electric Corp.	3.24%	3.71%	10.49%	0.8548	0.8587	1.1643
26 Magellan Cogenerations, Inc.	30.86%	3.66%	18.21%	-2.2250	-1.8954	-1.7877
27 Edison (Bataan) Cogeneration	45.76%	5.80%	14.08%	-14.6110	7.2599	11.0387
28 Tarlac Electric, Inc.	0.28%	0.25%	0.84%	0.3770	0.8264	0.9175
29 Angeles Power, Inc.	5.48%	4.51%	1.24%	0.3280	0.7399	0.0870

30 Southern Philippines Power Corp.	10.17%	3.38%	3.58%	0.3206	0.5166	0.3034
31 Mactan Electric Company, Inc.	0.82%	0.81%	3.98%	0.1866	0.1805	0.3445
32 Cabanatuan Electric Corp.	1.59%	1.37%	2.87%	1.4119	1.7207	1.7302
33 Cotabato Light and Power Co.	7.15%	4.38%	20.06%	0.5027	0.5412	1.2377
34 Iligan Light and Power, Inc.	2.20%	2.55%	3.51%	-2.6777	-2.6152	-2.3633
35 La Union Electric Co., Inc.	1.17%	1.64%	3.91%	2.9840	7.8030	6.3278
36 San Fernando Electric Light and Power, Inc.	3.21%	2.94%	3.59%	1.2987	1.0334	0.8607
37 Hydro Electric Dev. Corp.	4.42%	8.90%	12.12%	1.1937	1.3946	1.4824
38 Salcon Power Corp.	16.71%	11.38%	12.79%	0.2578	0.4858	0.4248
Average	9.54%	4.59%	11.57%	0.1311	0.9961	1.1197

Table 4

## Financial Ratios of Generating Utilities

<u>Utility</u>	<u>Debt Ratio</u>	<u>Sales-Assets Ratio</u>	<u>Return on Assets</u>	<u>SDROA</u>
1. Hopewell Power Corp.	0.51	0.25	12.06%	8.43%
2. Bauang Private Power Corp.	0.70	0.21	8.40%	4.68%
3. East Asia Power Resources Corp.	0.50	0.16	2.20%	4.24%
4. Batangas Power Corp.	0.62	0.38	12.29%	7.52%
5. Cebu Private Power Corp.	0.56	0.50	7.68%	
6. Northern Mindanao Power Corp.	0.54	0.19	9.18%	4.84%
7. First Private Power Corp.	0.38	0.23	22.17%	12.43%
8. Aboitiz Power Corp.	0.23	0.20	18.94%	0.54%
9. East Asia Utilities Corp.	0.64	0.18	0.72%	
10. Enron Power Philippines, Inc.	0.06	0.21	17.89%	4.52%
11. Astec Power, Inc.	0.44	0.67	4.45%	6.44%
12. Magellan Cogeneration, Inc.	0.75	0.14	-1.93%	3.66%
13. Edison (Bataan) Cogeneration	0.54	0.12	0.80%	5.80%
14. Subic Power Corp.	0.68	0.28	2.78%	3.02%
15. Salcon Power Corp.	0.22	0.35	23.43%	11.38%
AVERAGE	0.49	0.27	9.40%	6.46%

Source: Derived from Table 1 and Table 3.

Table 5

Risk and Return Indicators of Generating Utilities

Sector	Return			Risk		
	<u>ROS</u>	<u>ROA</u>	<u>ROE</u>	<u>SDROS</u>	<u>SDROA</u>	<u>SDROE</u>
Generation Sector	38.11%	9.40%	15.24%	18.36%	6.46%	16.54%
Industry	21.84%	6.86%	12.39%	9.54%	4.59%	11.57%

Source: Derived from Tables 1, 2, and 3.

Table 6

Financial Ratios of National Power Corporation: 1995-2000

	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Ave.</u>
1. Debt Ratio	0.69	0.78	0.82	0.80	0.85	0.89	0.81
2. Debt-Equity Ratio	1.44	3.01	1.77	1.66	1.90	2.63	2.07
3. Interest Cover	1.72	2.04	1.60	0.82	(0.14)	0.02	1.01
4. Current Ratio	0.54	0.57	0.52	0.52	0.38	0.42	0.49
5. Quick Ratio	0.32	0.35	0.33	0.35	0.24	0.28	0.31
6. Sales-to-Assets Ratio	0.15	0.14	0.13	0.14	0.11	0.10	0.13
7. Days in Inventory	100.16	88.91	69.58	56.13	56.17	48.90	69.98
8. Average Collection Period	81.59	73.38	62.50	65.38	68.65	71.28	70.46
9. Net Profit Margin	0.07	0.09	0.04	(0.04)	(0.07)	(0.13)	(0.01)
10. Return on Assets	0.01	0.01	0.01	(0.01)	(0.01)	(0.01)	(0.00)

Source: Computed from data provided by ERC staff.

Table 7

Argentina: Debt-Equity Ratios of Industrial Corporations: 1977-1981

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
All Firms	0.85	0.90	0.85	1.20	1.68
Large Firms	0.82	0.90	0.89	1.09	1.35
Medium Firms	0.99	1.01	0.95	1.37	1.99
Small Firms	0.62	0.64	0.62	0.89	1.11
Bankrupt Firms	1.41	1.41	1.78	3.79	3.95

Source: World Bank, Argentina: Economic Memorandum (1983)

Table 8

Changes in Performance During First Year of Utility Privatization

<u>Factor</u>	<u>Generation</u>	<u>Distribution</u>
1. Efficiency Gains (reduction in intermediate inputs as a share of total sales)	19.5%	6.26%
2. Labor Productivity Gains (Gwh/ staff)	23.1%	17.59%
3. Increases in Investment	8.65%	N.A.
4. Improvement in Quality (reduction in losses)	N.A.	10%

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Source: Omar Chisari, Antonio Estache, and Carlos Romero, "Winners and Losers from Utility Privatization in Argentina," World Bank Policy Research Working Paper No. 1824 (September 1997).

Table 9

Debt-Equity Ratios in Selected OECD Countries: 1982-1989

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
U.S.	0.32	0.33	0.36	0.38	0.40	0.42	0.47	0.45
U.K.	0.53	0.52	0.52	0.51	0.51	0.51	0.51	0.53
Germany	0.59	0.58	0.57	0.56	0.51	0.60	0.60	0.60
France	0.72	0.72	0.71	0.70	0.67	0.64	0.63	0.59
Japan	0.77	0.76	0.75	0.74	0.72	0.71	0.70	0.69

Source: OECD, Financial Statistics (1990)

Table 10

Financial Standards for the National Transmission Company

<u>Ratio</u>	<u>Standard</u>
1. Current Ratio	1.25
2. Debt Ratio	.32
3. Debt-Equity Ratio	.20
4. Return on Assets	6.5%
5. Collection Rate (billing)	90%

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World Bank, Nigeria: Transmission Development Project (June 15, 2001).

Table 11

Average Sales By Utility: 1995-2000  
(In Pesos)

<b><u>Utility</u></b>	<b><u>Average Sales</u></b>
1. Angeles Electric Corporation	862,190,399.30
2. Bauan Electric Lights System	45,878,735.50
3. Cabanatuan Electric Corporation	358,740,000.40
4. Dagupan Electric Corporation	500,545,491.80
5. Ibaan Electric and Engineering Corporation	39,255,746.33
6. La Union Electric Company, Inc.	206,790,477.00
7. Manaoag Utility, Inc.	26,407,020.25
8. Manila Electric Company	73,424,329,720.00
9. Mansons Corporation	45,572,341.67
10. Public Utilities Dept. – Olongapo City	305,750,570.80
11. San Fernando Electric Light and Power Co., Inc.	658,736,006.80
12. Tarlac Electric, Inc.	462,885,817.30
13. Mactan Electric Company	379,980,417.00
14. Panay Electric Company	932,279,346.30
15. Provincial Public Utilities Dept. – Bohol	140,741,800.00
16. Visayan Electric Company	3,660,737,529.00
17. Cagayan Electric Power and Light Co., Inc.	1,137,854,716.00
18. Cotabato Light and Power Company	256,708,520.50
19. Davao Light and Power Co., Inc.	2,084,012,740.00
20. Iligan Electric Light and Power Company	310,368,149.20

Table 12

Average Electricity Consumption By Utility: 1995-2000  
(in Kilowatt Hours)

<b><u>Utility</u></b>	<b><u>Average Consumption</u></b>
1. Angeles Electric Corporation	230,955,298.70
2. Bauan Electric Lights System	12,905,245.75
3. Cabanatuan Electric Corporation	98,405,781.17
4. Dagupan Electric Corporation	132,748,831.30
5. Ibaan Electric and Engineering Corporation	9,634,707.83
6. La Union Electric Company, Inc.	58,358,110.25
7. Manaoag Utility, Inc.	7,342,713.75
8. Manila Electric Company	19,247,817,670.00
9. Mansons Corporation	11,049,360.50
10. Public Utilities Dept. – Olongapo City	76,873,984.00
11. San Fernando Electric Light and Power Co., Inc.	175,376,214.20
12. Tarlac Electric, Inc.	125,440,286.70
13. Mactan Electric Company	108,162,815.50
14. Panay Electric Company	240,470,126.80
15. Provincial Public Utilities Dept. – Bohol	35,203,829.33
16. Visayan Electric Company	997,608,834.30
17. Cagayan Electric Power and Light Co., Inc.	441,769,455.20
18. Cotabato Light and Power Company	83,969,330.50
19. Davao Light and Power Co., Inc.	777,079,107.20
20. Iligan Electric Light and Power Company	129,265,829.80

Table 13

Distribution Utilities Classified By Sales

A. Less than P500 Million

1. Bauan Electric Lights System
2. Cabanatuan Electric Corporation
3. Ibaan Electric and Engineering Corporation
4. La Union Electric Company, Inc.
5. Manaoag Utility, Inc.
6. Mansons Corporation
7. Public Utilities Department – Olongapo City
8. Tarlac Electric, Inc.
9. Mactan Electric Company
10. Provincial Public Utilities Department - Bohol
11. Cotabato Light and Power Company
12. Iligan Electric Light and Power Company

B. More than P500 Million but less than P1 Billion

1. Angeles Electric Corporation
2. Dagupan Electric Corporation
3. San Fernando Electric Light and Power Co., Inc.
4. Panay Electric Company

C. More than P1 Billion but less than P5 Billion

1. Visayan Electric Company
2. Cagayan Electric Power and Light Co., Inc.
3. Davao Light and Power Co., Inc.

D. More than P5 Billion

1. Manila Electric Company

Table 14

Distribution Utilities Classified By Electricity Consumption

A. Less than 150 Megawatts

1. Bauan Electric Lights System
2. Cabanatuan Electric Corporation
3. Dagupan Electric Corporation
4. Ibaan Electric and Engineering Corporation
5. La Union Electric Company, Inc.
6. Manaoag Utility
7. Mansons Corporation
8. Public Utilities Department – Olongapo City
9. Tarlac Electric, Inc.
10. Mactan Electric Company
11. Provincial Public Utilities Department – Bohol
12. Cotabato Light and Power Company
13. Iligan Light and Power Company

B. More than 150 but less than 300 Megawatts

1. Angeles Electric Company
2. San Fernando Electric Light and Power Co., Inc.
3. Panay Electric Company

C. More than 300 but less than 1,000 Megawatts

1. Visayan Electric Company
2. Cagayan Electric Power and Light Co., Inc.
3. Davao Light and Power Co., Inc.

D. More than 1,000 Megawatts

1. Manila Electric Company

Table 15

Comparative Ratio Analysis: Category A Utilities

<u>Ratio</u>	<u>Cabanatuan Electric</u>	<u>Cotabato Light and Power</u>	<u>Iligan Light and Power</u>	<u>La Union Electric</u>	<u>Group Average</u>	<u>Industry Average</u>
1. Debt Ratio	0.54	0.13	0.43	0.47	0.39	0.36
2. Interest Cover	1.05	3371.74	4.54	2.92	2.84	8.5
3. Quick Ratio	0.94	2.04	1.30	0.63	1.23	1.35
4. Average Collection Period	85.22 days	72.66 days	48.84 days	47.06 days	63.44 days	56.85 days
5. Net Profit Margin	1.89%	14.82%	-0.12%	0.97%	4.39%	5.15%
6. Return on Assets	1.40%	7.89%	-0.21%	1.34%	2.61%	3.86%

Table 16

Comparative Ratio Analysis: Category B Utilities

<u>Ratio</u>	<u>Angeles Electric</u>	<u>Dagupan Electric</u>	<u>Panay Electric</u>	<u>Group Average</u>	<u>Industry Average</u>
1. Debt Ratio	0.30	0.39	0.19	0.29	0.36
2. Interest Cover	18.64	10.79	170.8	14.72	8.5
3. Quick Ratio	1.16	0.73	2.39	1.43	1.35
4. Average Collection Period	43.68 days	38.90 days	45.88 days	42.82 days	56.85 days
5. Net Profit Margin	4.67%	6.05%	9.26%	6.66%	5.15%
6. Return on Assets	4.86%	6.62%	6.24%	5.91%	3.86%

Table 17

Comparative Ratio Analysis: Category C Utilities

<u>Ratio</u>	<u>Visayan Electric</u>	<u>Cagayan Electric</u>	<u>Davao Light and Power</u>	<u>Group Average</u>	<u>Industry Average</u>
1. Debt Ratio	0.40	0.44	0.29	0.38	0.36
2. Interest Cover	11.01	3.22	6.45	6.89	8.5
3. Quick Ratio	1.95	1.00	1.55	1.50	1.35
4. Average Collection Period	52.92 days	90.11 days	38.91 days	60.65 days	56.85 days
5. Net Profit Margin	3.02%	5.90%	4.17%	4.36%	5.15%
6. Return on Assets	3.54%	3.53%	2.06%	3.04%	3.86%

Table 18

Average Financial Ratios for Distribution Utilities

<u>Ratio</u>	<u>Category A Average</u>	<u>Category B Average</u>	<u>Category C Average</u>	<u>Category D Average</u>	<u>Industry Average</u>
1. Debt Ratio	0.39	0.29	0.38	0.42	0.36
2. Interest Cover	2.84	14.72	6.89	17.91	8.5
3. Quick Ratio	1.23	1.43	1.50	1.16	1.35
4. Average Collection Period	63.44 days	42.82 days	60.65 days	61.19 days	56.85 days
5. Net Profit Margin	4.39%	6.66%	4.36%	6.00%	5.15%
6. Return on Assets	2.61%	5.91%	3.04%	5.16%	3.86%

Note: Extreme values are dropped in computing average ratios.

Table 19

Summary of Cabanatuan Electric Corporation Ratios: 1996-2000

<u>Ratio</u>	<u>1996-2000 Average</u>	<u>Group Average</u>	<u>Evaluation</u>	<u>Industry Average</u>	<u>Evaluation</u>
1. Debt Ratio	0.54	0.39	Poor	0.36	OK
2. Interest Cover	1.05	2.84	Poor	8.5	Poor
3. Quick Ratio	0.94	1.23	Poor	1.35	OK
4. Average Collection Period	85.22 days	63.44 days	Poor	56.85 days	Poor
5. Net Profit Margin	1.89%	4.39%	Poor	5.15%	Poor
6. Return on Assets	1.40%	2.61%	Poor	3.86%	Poor

Table 20

Summary of Manila Electric Company Ratios: 1996-2000

<u>Ratio</u>	<u>1996-2000 Average</u>	<u>Industry Average</u>	<u>Evaluation</u>
1. Debt Ratio	0.2	0.36	Good
2. Interest Cover	17.91	8.5	Good
3. Quick Ratio	1.16	1.35	OK
4. Average Collection Period	61.19 days	56.85 days	Poor
5. Net Profit Margin	6.00%	5.15%	Good
6. Return on Assets	5.16%	3.86%	Good

Table 21

Average Financial Ratios for Electric Cooperatives: 1995-2000

	<u>Small</u>	<u>Medium</u>	<u>Large</u>	<u>Extra Large</u>	<u>Industry Average</u>
1. Debt Ratio	.46	.76	.82	.78	.71
2. Interest Cover	8.38	6.43	6.79	6.07	6.92
3. Quick Ratio	2.01	2.11	3.57	2.78	2.62
4. Average Collection Period	38.83 days	42.33 days	22.00 days	20.83 days	31.00 days
5. Net Profit Margin	3.03%	6.57%	4.06%	4.87%	4.63%
6. Return on Assets	1.03%	2.50%	2.63%	4.65%	2.70%

Source: Computed from data provided by ERC staff

Table 22

ENERGY REGULATORY COMMISSION  
REPUBLIC OF THE PHILIPPINES

APPLICATION FOR REGISTRATION

Application Docket No. \_\_\_\_\_

BUSINESS INFORMATION

1. IDENTITY OF THE APPLICANT:

Legal Name: \_\_\_\_\_

Current Mailing Address: \_\_\_\_\_

\_\_\_\_\_

Website (if available) \_\_\_\_\_

Applicant is applying as (check all that apply):

Supplier/ Marketer

Aggregator or Broker

2. CONTACT PERSON – REGULATORY CONTACT

Name and Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: (     ) \_\_\_\_\_

Fax: (     ) \_\_\_\_\_

E-mail \_\_\_\_\_

3. CONTACT PERSON – CUSTOMER SERVICE

Name and Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. APPLICANT'S BUSINESS FORM (check appropriate box):

Proprietorship

Corporation

Partnership

Limited Partnership

Limited Liability Company

Limited Liability Partnership  
Other: \_\_\_\_\_

#### TECHNICAL FITNESS

5. Provide sufficient information to demonstrate technical fitness to provide the service proposed in this application.

#### SCOPE OF OPERATIONS

6. NATURE OF APPLICANT'S CURRENT OPERATIONS
7. APPLICANT'S PROPOSED OPERATIONS
8. APPLICANT'S PROPOSED AREA OF OPERATION

9. Proposed Customers:
  - Residential Customers
  - Commercial Customers
  - Industrial Customers
  - Other (Describe in Attachment)

10. Start Date \_\_\_\_\_

#### FINANCIAL INTEGRITY

11. REQUIRED DOCUMENTATION OF FINANCIAL INTEGRITY (To the extent available, the applicant shall provide the most recent versions of the following documents. All applicants must comply with any updating or supplemental information requirements established by the commission):

Balance sheet and income statement for the two most recent 12 month periods or which information is available.

Evidence that the Applicant is an organization in good standing

Credit reports or ratings prepared by established credit bureaus or agencies regarding the Applicant's payment and credit history.

Other evidence of financial integrity (Please attach additional information to application).

12. DEPOSIT OR PREPAYMENT BOND (A bond is required to the extent the Applicant requires prepayments and/or deposits from customers).

Applicant will not accept prepayments or deposits from customers.

Applicant intends to accept prepayments and/or deposits from customers.  
Applicant must comply with Prepayment and Deposit Bonding Requirement.

#### OTHER REQUIREMENTS

13. NOTICE OF REQUIRED COMPLIANCE (The Applicant is hereby notified that it is required to comply with the following):
  - a. The Applicant may be required to submit bonds, as applicable.
  - b. Pay all fees imposed by the Commission and any national and local taxes.
14. AFFIDAVITS REQUIRED (The Applicant must supply affidavits of General Compliance to the Commission with the completed application. The affidavits are included with this application packet and must be executed by the Applicant or representative with authority to bind the Applicant in compliance with Philippine law. The affidavits contain the following statements on behalf of the Applicant):
  - a. Agreement to comply with all the terms and conditions of applicable electricity service tariffs and agreements with Distribution Utilities.
  - b. Agreement to comply with all applicable consumer protection and environmental laws and regulations, and ERC regulations and requirements.
  - c. Agreement to comply with all applicable national and local tax and surcharge requirements.
  - d. Statement that the Applicant has obtained all the licenses and permits required to operate the proposed business in the Philippines.
15. FURTHER DEVELOPMENTS: Applicant is under a continuing obligation to amend its application if substantial changes occur in the information within 30 days of a change.
16. FEE: The Applicant has enclosed the required initial licensing fee.

Applicant: \_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_

Table 23

CHECKLIST OF PRUDENTIAL REQUIREMENT FOR ELECTRICITY SUPPLIERS

Application Docket No. \_\_\_\_\_

Name of Applicant: \_\_\_\_\_

Date: \_\_\_\_\_

FINANCIAL REQUIREMENTS

1. Required Documentation of Financial Requirements:

Balance Sheet for the two most recent 12 month periods or which information is available

Income Statement for the two most recent 12 month periods or which information is available

Cash Flow Statement for the two most recent 12 month periods or which information is available.

CREDIT STANDARDS

2. Applicant must check which of the following methods it will use to demonstrate its minimum credit standard:

Investment Grade Credit Rating

Assets in Excess of Liabilities

Unused Cash Resources to Meet the Applicant's Proposed Certification Level.

Certification of the Applicant's Creditworthiness by Companies (including Distribution Utilities) which has Imposed Credit Terms on the Applicant.

FINANCIAL STANDARDS FOR CUSTOMER PROTECTION

3. If the Applicant plans to collect funds, including deposits or advances, from customers prior to providing services, it must provide a minimum security deposit in the form of either a cashier's check or a financial guarantee bond to be posted with the ERC:

Cashier's Check                      Amount:\_\_\_\_\_

Surety Bond                              Amount:\_\_\_\_\_

#### CERTIFICATION STANDARDS

4. Prior to ERC licensing, the Applicant must provide a bond or insurance coverage to protect customers in the event of default or non-performance by the Applicant. Note that this requirement applies only to Applicants which do not plan to collect advanced deposits from customers:

Surety Bond                      Amount:\_\_\_\_\_

Insurance Cover                      Amount:\_\_\_\_\_

5. Geographic Area:\_\_\_\_\_

6. Annual Fee:\_\_\_\_\_

#### FINANCIAL STANDARDS FOR BILLING, COLLECTION, AND PROFITABILITY

7. The following financial ratios shall be used to assess the capability of Electricity Suppliers to bill, collect from its customers, and earn a satisfactory rate of return on investment:

<u>Indicator</u>	<u>2000</u>	<u>2001</u>
a. Interest Cover	_____	_____
b. Cash Ratio	_____	_____
c. Average Collection Period	_____	_____
d. Net Profit Margin	_____	_____

#### ORGANIZATIONAL AND MANAGERIAL RESOURCE REQUIREMENTS

8. As a requisite for providing electricity service, the applicant must have the organizational and managerial ability to supply electric service to customers in its service area:

Capability to comply with all scheduling, operating, planning, reliability, customer registration and settlement policies, rules, guidelines, and procedures established by the Grid Owner or System Operator.

Capability to comply with 24 hour coordination with control centers for scheduling changes, reserve implementation, interruption plan and implementation with telephone number, fax number, and address where its staff can be directly reached at all times.

At least one officer or employee experienced in the electric power industry or a related industry.

Adequate staffing and employee training to meet all service level commitments.

A customer service plan that describes how the Applicant will comply with the ERC's customer protection rules.

A disclosure of whether the Applicant (officer, director, or principal) has been found liable for fraud, theft or larceny, deceit, or violations of any customer protection or deceptive trade laws in the country.

# Annex A

## Financial Ratios for Distribution Utilities



Appendix Table 1

Financial Ratios for Cabanatuan Electric Corporation

<u>Ratio</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Average</u>
1. Debt Ratio	0.48	0.60	0.52	0.54	0.55	0.54
2. Interest Cover	1.72	0.87	0.74	0.84	1.10	1.05
3. Quick Ratio	0.95	0.57	0.67	1.33	1.20	0.94
4. Average Collection Period	104.80 days	89.64 days	84.32 days	75.12 days	72.40 days	85.22 days
5. Net Profit Margin	6.02%	1.49%	0.21%	0.70%	1.04%	1.89%
6. Return on Assets	4.49%	1.03%	0.14%	0.49%	0.83%	1.40%

Appendix Table 2

Financial Ratios for Cotabato Light and Power Co., Inc.

<u>Ratio</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Average</u>
1. Debt Ratio	0.11	0.14	0.10	0.11	0.21	0.13
2. Interest Cover	2621.27	5712.93	3485.42	2638.74	2400.32	3371.74
3. Quick Ratio	3.31	1.66	2.28	1.96	0.97	2.04
4. Average Collection Period	63.87 days	91.35 days	68.61 days	66.77 days	72.68 days	72.66 days
5. Net Profit Margin	17.74%	19.65%	14.56%	13.63%	8.54%	14.82%
6. Return on Assets	10.95%	8.35%	7.51%	7.80%	4.83%	7.89%

Appendix Table 3

Financial Ratios for Iligan Light and Power, Inc.

<u>Ratio</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Average</u>
1. Debt Ratio	0.49	0.39	0.39	0.42	0.45	0.43
2. Interest Cover	5.08	5.27	5.32	3.72	3.32	4.54
3. Quick Ratio	1.51	1.39	1.29	1.14	1.15	1.30
4. Average Collection Period	50.29 days	58.86 days	40.36 days	44.63 days	50.06 days	48.84 days
5. Net Profit Margin	-0.15%	0.81%	0.83%	-0.91%	-1.20%	-0.12%
6. Return on Assets	-0.20%	0.82%	1.00%	-1.04%	-1.65%	-0.21%

Appendix Table 4

Financial Ratios for Dagupan Electric Corporation

<u>Ratio</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Average</u>
1. Debt Ratio	0.47	0.38	0.38	0.38	0.35	0.39
2. Interest Cover	14.45	7.55	10.06	9.57	12.31	10.79
3. Quick Ratio	0.62	0.68	0.61	0.79	0.96	0.73
4. Average Collection Period	34.55 days	36.34 days	38.18 days	42.51 days	42.90 days	38.90 days
5. Net Profit Margin	5.87%	6.90%	6.84%	5.77%	4.89%	6.05%
6. Return on Assets	7.27%	6.96%	7.56%	6.31%	4.98%	6.62%

Appendix Table 5

Financial Ratios for La Union Electric Company, Inc.

<u>Ratio</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Average</u>
1. Debt Ratio	0.52	0.54	0.36	0.43	0.50	0.47
2. Interest Cover	4.40	3.94	2.65	2.26	1.36	2.92
3. Quick Ratio	0.55	0.55	0.56	0.70	0.80	0.63
4. Average Collection Period	30.62 days	27.85 days	42.44 days	62.51 days	71.88 days	47.06 days
5. Net Profit Margin	0.72%	0.94%	1.29%	1.07%	0.85%	0.97%
6. Return on Assets	1.02%	1.90%	1.37%	1.26%	1.13%	1.34%

Appendix Table 6

Financial Ratios for Angeles Electric Corporation

<u>Ratio</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Average</u>
1. Debt Ratio	0.29	0.25	0.32	0.32	0.34	0.30
2. Interest Cover	32.70	38.68	6.28	9.51	6.01	18.64
3. Quick Ratio	1.31	0.88	0.98	1.30	1.35	1.16
4. Average Collection Period	34.43 days	37.41 days	47.60 days	50.38 days	48.66 days	43.68 days
5. Net Profit Margin	7.66%	7.28%	3.90%	3.40%	1.09%	4.67%
6. Return on Assets	8.48%	6.62%	4.09%	3.72%	1.37%	4.86%

Appendix Table 7

Financial Ratios for Panay Electric Company, Inc.

<u>Ratio</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Average</u>
1. Debt Ratio	0.19	0.15	0.15	0.21	0.24	0.19
2. Interest Cover	50.12	46.09	416.29	210,783,235	217,407,237	170.8
3. Quick Ratio	1.96	2.81	2.79	2.29	2.11	2.39
4. Average Collection Period	44.22 days	43.14 days	41.18 days	51.82 days	49.06 days	45.88 days
5. Net Profit Margin	8.83%	10.06%	10.13%	9.70%	7.57%	9.26%
6. Return on Assets	6.33%	5.89%	6.82%	6.22%	5.96%	6.24%

Appendix Table 8

Financial Ratios for Visayan Electric Company, Inc.

<u>Ratio</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Average</u>
1. Debt Ratio	0.33	0.44	0.41	0.42	0.42	0.40
2. Interest Cover	13.47	11.74	10.25	12.31	7.30	11.01
3. Quick Ratio	1.80	1.79	2.05	2.19	1.92	1.95
4. Average Collection Period	46.74 days	48.81 days	50.27 days	60.03 days	58.77 days	52.92 days
5. Net Profit Margin	1.75%	2.73%	2.86%	5.99%	1.75%	3.02%
6. Return on Assets	2.23%	3.25%	3.34%	6.74%	2.14%	3.54%

Appendix Table 9

Financial Ratios for Cagayan Electric Power and Light Co., Inc.

<u>Ratio</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Average</u>
1. Debt Ratio	0.42	0.51	0.41	0.41	0.46	0.44
2. Interest Cover	4.40	3.78	2.16	2.31	3.33	3.20
3. Quick Ratio	0.85	0.78	1.30	1.05	1.01	1.00
4. Average Collection Period	83.77 days	83.64 days	83.77 days	80.11 days	119.28 days	90.11 days
5. Net Profit Margin	12.11%	10.51%	5.13%	-2.00%	3.73%	5.90%
6. Return on Assets	7.69%	5.86%	2.99%	-1.30%	2.43%	3.53%

Appendix Table 10

Financial Ratios for Davao Light and Power Co., Inc.

<u>Ratio</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Average</u>
1. Debt Ratio	0.23	0.32	0.25	0.27	0.37	0.29
2. Interest Cover	7.97	4.63	6.08	5.60	7.98	6.45
3. Quick Ratio	2.44	0.99	1.07	1.16	2.09	1.55
4. Average Collection Period	39.19 days	38.96 days	42.00 days	37.03 days	37.38 days	38.91 days
5. Net Profit Margin	6.61%	4.92%	4.57%	1.93%	2.81%	4.17%
6. Return on Assets	3.20%	2.07%	2.27%	1.03%	1.74%	2.06%

Appendix Table 11

## Financial Ratios for Manila Electric Company

<u>Ratio</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Average</u>
1. Debt Ratio	0.36	0.41	0.43	0.43	0.49	0.42
2. Interest Cover	92.73	-29.74	13.18	10.18	3.22	17.91
3. Quick Ratio	1.46	1.06	1.17	0.96	1.15	1.16
4. Average Collection Period	53.81 days	59.46 days	66.69 days	55.26 days	70.75 days	61.19 days
5. Net Profit Margin	8.87%	8.59%	6.15%	3.92%	2.40%	6.00%
6. Return on Assets	8.16%	7.30%	5.15%	3.24%	1.99%	5.16%

## Annex B

### The DOE-ERB Experience in Designing Financial Standards

The only recorded attempt to establish financial capability standards for the participants in the Philippine electric power industry was made by the Energy Regulatory Board (ERB) in 1991, and the Department of Energy (DOE) in 1997.

ERB Resolution No. 91-22 (dated December 6, 1991) formulated the following financial standards for electric utilities to determine whether they are qualified to service large industrial customers in their franchise area, or whether direct connection by these large industrial customers to the National Power Corporation (NPC) is no longer necessary:

#### Financial Standards for Private Utilities

<u>Indicator</u>	<u>Standard</u>	<u>Weights</u>
1. Outstanding Debt to NPC (ODNPC)	No outstanding debt to NPC	50%
2. Debt Service Capability Ratio (DSCR)	1.25	25%
3. Operating Expense Ratio (OER)	95% or less	10%
4. Average Collection Period (ACP)	45 days or less	15%

However, the ERB has indicated that these standards were never implemented.

Energy Regulations No. 1-97 (dated February 5, 1997) of the Department of Energy (DOE) established the following financial standards for electric distributors who want to replace NPC as the bulk power suppliers to industrial enterprises/ estates within their franchise areas:

<u>Indicator</u>	<u>Standard</u>
1. Outstanding Debt to NPC (ODNPC)	No outstanding debt to NPC
2. Amortization Payment (AP)	One month of delayed payment with NEA
3. Debt Service Capability Ratio (DSCR)	1.25
4. Operating Expense Ratio (OER)	95% or less
5. Average Collection Period (ACP)	45 days or less

AP applies only to electric cooperatives and DSCR applies only to private utilities. Thus, Energy Regulations No. 1-97 assigned the following weights:

#### A. Financial Standards for Private Utilities

<u>Indicator</u>	<u>Weights</u>
1. ODNPC	50%
2. DSCR	20%

3. OER	15%
4. ACP	15%

B. Financial Standards for Electric Cooperatives

<u>Indicator</u>	<u>Weights</u>
1. ODNCP	50%
2. AP	20%
3. OER	15%
4. ACP	15%

It is clear from the above that the financial standards identified by ERB for private utilities are identical to the financial standards identified by DOE for private utilities. They only differ in terms of the weights assigned to DSCR, OER, and ACP. They also differ in the number of technical standards identified. ERB Resolution No. 91-22 identified only one technical standard (percentage system losses), while Energy Regulations No. 1-97 identified the following technical standards: (1) system loss, (2) power factor, (3) voltage variation, and (4) system reliability.

## Annex C

### Criteria for Categorization of Electric Cooperatives

The National Electrification Administration (NEA) issued a memorandum (dated June 15, 1994) which outlined the following criteria to evaluate the operating performance of electric cooperatives: (1) amortization payment, (2) system loss, (3) collection efficiency, (4) payment to power supplier, (5) non-power cost, and (6) demerit points.

Electric cooperatives (ECs) were categorized into three groups:

1. Regular = ECs without restructured account with NEA or those which applied for restructuring only in the year being evaluated.
2. Moratorium = ECs with approved moratorium on their loan repayments to NEA.
3. Restructured = ECs with approved restructured loans prior to they year being evaluated.

NEA assigned arbitrary points to each of the six criteria in evaluating an EC's operating performance. NEA's overall scoring system is as follow:

#### Overall Scoring System

<u>Score</u>	<u>Category</u>	<u>Rating</u>
90 and above	A+	Outstanding
75-89	A	Very Satisfactory
65-74	B	Satisfactory
55-64	C	Fair
30-54	D	Poor
29 below	E	Showing No Improvement

In this NEA system, no weights were indicated for each of the six criteria. Note that NEA's system included only one technical standard (system loss). Same indicator identified in ERB Resolution No. 91-22. On the other hand, Energy Regulations No. 1-97 identified four financial standards and four technical standards. The overall score in DOE's system was arrived at by assigning 60% weight to technical standards and 40% weight to financial standards. Under the DOE system, an electric distributor must obtain at least 80 points to be considered capable to assume the distribution function to supply industrial enterprises/ estates within its franchise area.



