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PRIVATE POWER LAWS AND REGULATIONS ON RENEWABLE ENERGY TECHNOLOGIES

Prepared for:

The Indian Minister for Non-Conventional Energy Resources (MNES)

Prepared by:

The Private Sector Energy Development (PSED) Program Under The India Private Power Initiative (IPPI) of the United States Agency for International Development (USAID)

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DISCLAIMER

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TAB 8

Peru:

- **Law on Electrical Concessions – Executive Order No. 25844**
- **Law Regulations for Electrical Franchises**

LAW ON ELECTRICAL CONCESSIONS

EXECUTIVE ORDER NO. 25844

OF THE PRESIDENT OF THE REPUBLIC

Whereas: The Emergency Government of National Reconstruction,

With the assenting vote of the Cabinet,

Has issued the following Executive Order:

LAW ON ELECTRICAL CONCESSIONS

TITLE I

GENERAL PROVISIONS

Article 1: The provisions of the present Law govern matters involving activities relating to the generation, transmission, distribution and commercialization of electric power.

The Ministry of Energy and Mines, representing the State, is in charge of supervising compliance with the present Law, and may in part delegate the authorities conferred on it.

The activities for generation, transmission and distribution may be carried out by natural or juridical persons, nationals or foreign. Juridical persons must be duly constituted in accordance with Peruvian law.

Article 2: A Public Electric Utility is defined as the regular supplying of electric power for collective use within the power limits set in accordance with the terms of the Regulations.

The Public Electric Utility is for the public benefit (obligation to serve).

Article 3: A concession is required for the conduct of any of the following activities:

a) Generation of electrical power using hydraulic and geothermal resources, when the installed power is greater than 10 MW;
b) Transmission of electric power when the installations involve property of the State and/or require the imposition of an easement by the State;
c) Distribution of electric power with the character of a Public Electric Utility, when demand is greater than 500kW.

Article 4: Authorization is required to conduct activities for those activities of thermoelectric, hydroelectric and geothermal generation that require no concession, if the installed power is greater than 500 kW.

Article 5: The generation of electric power of nuclear origin shall be governed by a separate Law.

Article 6: The concessions and authorizations shall be granted by the Ministry of Energy and Mines, which shall establish a Register of Electrical Concessions for this purpose.

Article 7: Those activities of generation, transmission and distribution that do not require either a concession or an authorization may be conducted freely, in compliance with technical standards and the provisions for protection of the environment and of the Cultural Heritage of the Nation.

The holders must mandatorily inform the Ministry of Energy and Mines of the start of operation and the technical characteristics of the facilities and installations.

Article 8: The Law establishes a *system of free pricing* for those deliveries that may be carried out under competitive conditions, and a system of regulated pricing for those deliveries which by their nature so require, acknowledging costs of efficiency in accordance with the criteria under Title V of the present Law.

Article 9: The State shall provide for preservation of the environment and of the Cultural Heritage of the Nation, as well as the rational use of natural resources, in the conduct of activities relating to the generation, transmission and distribution of electric power.

TITLE II

ELECTRIC TARIFFS COMMISSION

Article 10: The Electric Tariffs Commission is a technical and decentralized body of the Energy and Mines Sector, with functional, economic, technical and administrative autonomy, responsible for setting electric power tariffs in accordance with the criteria established in the present Law.

Article 11: The Electric Tariffs Commission shall have a Board of Directors consisting of five members, appointed by Supreme Order countersigned by the Minister of Energy and Mines, and shall consist of:

a) One proposed by the Minister of Energy and Mines, who shall preside over the board;
b) One selected from a group of three candidates proposed by the Ministry of the Economy and Finance;
c) One selected from a group of three candidates proposed by the Ministry of Industry, Tourism, Integration and International Trade Negotiations;
d) One selected from a group of three candidates proposed by the Holders of Concessions for Generation and
e) One selected from a group of three candidates proposed by the Holder of Concessions for Distribution.

The members of the Board of Directors shall be appointed for a period of five years.

Article 12: The following are required for eligibility as a Director of the Electric Tariffs Commission:

a) A profession with degree, with not less than 15 years of experience;
b) Recognized solvency and professional suitability; and
c) Other qualifications specified under the Regulations for the present Law.

Article 13: The office of Director of the Electric Tariffs Commission shall be vacated by:

a) Death;
b) Permanent incapacity;
c) Accepted resignation;
d) Arising legal incompatibility, and
e) Unjustified absence from two successive meetings of the Board of Directors, unless with authorized leave.

Article 14: The following may not be Directors:

a) Public officials and employees;
b) Shareholders, directors, officers and employees of the companies that supply energy at a regulated price, or of consulting companies that provide services to the Electric Tariffs Commission;
c) Directors and officers of companies that have been penalized for acts of speculation or monopoly and who (personally) have been penalized for the same infractions;
d) Two or more persons related within the fourth degree by blood or the second degree by marriage; and
e) Those with legal cases pending with the State.

Article 15: The following are duties of the Board of Directors of the Electric Tariffs Commission:

a) To set, review and modify tariffs for the sale of electric power, strictly subject to the procedures established in the present Law;
b) To decide as the highest body of administrative appeal on all matters having to do with the setting of tariffs, presented by interested parties;
c) To work out its own Internal Rules;
d) To elect the Vice-President;
e) To appoint the Executive Secretary, defining his obligations and remuneration;
f) To approve the annual budget of the Electric Tariffs Commission and submit it for the consideration of the Ministry of Energy and Mines;
g) To impose sanctions for noncompliance with its decisions as indicated under the Regulations;
h) To approve and determine the pre-qualification of consulting firms proposed by the Executive Secretariat;
i) To evaluate studies and reports ordered from the Executive Secretariat;
j) Other duties as indicated by the Regulations.

Article 16: The Board of Directors of the Electric Tariffs Commission may assign one or more of its members to conduct specific activities that contribute toward the fulfillment of the responsibilities assigned to it under the present Law. In these cases the appointed directors shall be obligated to perform the corresponding duty.

Article 17: The Electric Tariffs Commission shall have an Executive Secretariat. The personnel of said Secretariat shall consist of highly qualified professionals and efficient support personnel. Labor relations for said personnel shall be subject to Law No. 4916.

Article 18: The Executive Secretariat, in support of the findings which must be rendered by the Board of Directors of the Electric Tariffs Commission, shall perform the following functions:

a) *Carry out pre-qualification of consulting firms for the development of tariff studies and special studies as required;*
b) Work out the annual budget of the Electric Tariffs Commission;
c) Review and evaluate the studies presented by the concession holders;
d) Work out the Terms of Reference and supervise execution of the studies which by order of law must be commissioned from specialized consulting firms;
e) Draw up the studies for the determination of Time Blocks to be used in the calculation of the Tariffs at Bus; substations—interconnection points of the generating plants
f) Draw up the studies to determine the power and energy loss factors used in calculating the Tariffs at Bus;
g) Draw up the studies to define the Main and Secondary Transmission Systems of the Interconnected System;
h) Draw up the studies to determine the Typical Distribution Sectors;
i) Draw up the comparative studies referred to in Art. 53 of the present Law;
j) Draw up the studies to set and implement the New Replacement Values for transmission and distribution installations; and
k) Others as indicated by the regulations.

Article 19: The (implementing Regulations for the present Law shall establish the criteria to set the remuneration to be collected by the Directors and Employees of the Electric Tariffs Commission.

Likewise it shall determine the number of employees of the Executive Secretariat.

Article 10: The budget of the Electric Tariffs Commission shall be covered by annual contributions to be made by the concession holders and the electricity companies subject to price regulation.

Article 21: The Internal Rules of the Electric Tariffs Commission shall be approved by Supreme Order countersigned by the Minister of Energy and Mines.

TITLE III

CONCESSIONS AND AUTHORIZATIONS

Article 22: A concession shall be granted for an indeterminate period. A time-limited concession may be granted for the performance of studies.

Article 23: A time-limited concession authorizes the use of public property and provides the right to obtain imposition of easements for the performance of the studies for power plants, substations and transmission lines.

The maximum term for a time-limited concession shall be 2 years, and it may be renewed once on request from the petitioner, for up to the same period.

The request for a time-limited concession, as well as its renewal, shall be made out in accordance with the requirements, conditions and guarantees established in the Regulations.

Time-limited concessions shall be granted by Ministerial Order.

Article 24: A final concession authorizes the use of public property and provides the right to obtain the imposition of easements for the construction and generation of generating

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plants and associated facilities, substations and transmission lines as well as networks and substations for distribution for a Public Electric Utility.

Article 25: The application to obtain a final concession must be presented to the Ministry of Energy and Mines with the following information and requirements:

a) Identification of applicant;
b) Authorization for use of natural resources owned by the State, where applicable;
c) Descriptive memorandum and complete plans of the project;
d) Schedule for execution of work;
e) Budget for the project;
f) Specification of required easements;
g) Delimitation of the concession zone and formal contract for energy supply in the case of distribution concessions;
h) Environmental impact study; and
i) Guarantees as established in the Regulations.

The applicant shall be published on two consecutive days at the applicant's expense in the Official Gazette "El Peruano," and in one of the major circulating daily newspapers of the place where the concession is located.

The final concession shall be granted by a Supreme Order countersigned by the Minister of Energy and Mines.

Article 26: When a number of applications are in competition for the same final concession, within 15 days from the final publication of the first application, a reference shall be given to the applicant presenting the best terms from both the technical and the economic point of view. In the event of equivalent terms, preference shall be given to the applicant who previously held a time-limited concession.

Article 27: The procedures and conditions applicable t the administrative formalities for oppositions shall be established in the Regulations.

Article 28: The application for a concession, complying with the requirements set forth in Art. 25 of the present Law, must be decided upon within a maximum of 90 calendar days from the date of its submission. If no decision is issued within that term the application shall be considered approved.

Article 29: The concession acquires a contractual nature when the applicant accepts in writing the issued Decision and signs the corresponding contract, which must be drawn up in notarized form within a maximum of 60 calendar days from the date of receipt of the transcript of the Decision.

The contract must include the name of the concession holder, rights and obligations, conditions, starting and ending dates for work, easements, concession zones where applicable, causes for termination and other provisions of the present Law as applicable.

Article 30: The concession for distribution for Public Electric Utility service in a given zone shall be exclusive for a single holder and cannot be limited without authorization from the Ministry of Energy and Mines.

The holder of a concession for distribution may perform expansions of his concession zone upon prior notification of the Ministry of Energy and Mines as to the new boundaries.

Expansions of the concession zone shall be regularized every two years by a procedure similar to that of a final concession.

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Article 31: Holders of a concession for generation, transmission and distribution must do the following:

a) Perform studies and/or construction of the facilities within the periods stated in the respective concession contract;
b) Preserve and maintain their facilities and installations in proper condition for efficient operation, in accordance with the terms of the concession contract;
c) Apply the regulated prices set in conformity with the provisions of the present Law;
d) Present the technical and economic information to the standardization and regulatory bodies in the form and within the deadlines established in the Regulations;
e) Comply with the terms of the National Electricity Code and other applicable technical standards;
f) Facilitate technical inspections of its installations as ordered by the standardization and regulatory bodies;
g) Contribute toward the support of the standardization and regulatory bodies through contributions set by the Ministry of Energy and Mines, which in no case may be more than 1% of the holder's annual sales; and
h) Comply with the standards for protection of the environment and of the Cultural Heritage of the Nation.

Article 32: Holders of concessions for generation and transmission, if they belong to a Committee for Economic Operation of the System, must operate their installations in accordance with the terms issues by said committee.

Article 33: Holders of concessions for transmission must permit the use of their systems by third parties, who must pay the costs of expansion as necessary and compensation for the use thereof.

Article 34: Holders of concessions for distribution must do the following:

a) Provide service to anyone requesting it within their concession zone, or to those who arrive in said zone with their own lines within a term of no more than one years and who have the character of a Public Electric Utility;
b) Maintain contracts in effect with power generating companies who will guarantee provision of the holder's full power and energy requirements for the next 24 months at a minimum;
c) Guarantee quality of service as established in their concession contract; and
d) Permit their systems to be used by third parties to supply energy to users not having the character of Public Electric Utilities, located within or outside the holder's concession zone, under the terms established in the present Law and its Regulations.

Article 35: The concession shall terminate by declaration of cancellation or withdrawal; in both cases transfer of the rights of the concession and of the property required in order to continue its operations shall be carried out in accordance with the terms of the present Law and its Regulations.

Can not declare cancelled

Article 36: The concession shall be canceled if:

a) The holder does not draw up the concession contract in notarized form within the indicated period;
b) The holder does not produce the studies and/or does not establish the facilities and installations within the deadlines set in the concession contract, except in duly documented cases of Acts of God or force majeure;
c) The holder ceases to operate its installations, without justified cause, for a cumulative total of 876 hours in a single calendar year;
d) The holder of a concession for generation or transmission, after appropriate penalties have been applied, does not operate its installations in accordance with the coordination

standards of the Committee for Economic Operation of the System, except by express authorization of the Ministry of Energy and Mines for duly justified cause;

e) The holder of a concession for distribution, after the appropriate fines have been applied, does not comply with its obligations to provide service within the prescribed times and in accordance with the quality standards established in its Concession Contract; and

f) The holder of a concession for distribution does not provide documentation of a guarantee of supply for the period established under paragraph b) of Art. 34 of the present Law.

Article 37: Cancellation shall be sanctioned by Supreme Order countersigned by the Minister of Energy and Mines. In this case arrangements shall be made for administrative intervention in provisional form, in order to ensure continuity of its operations.

The rights and property of the concession shall be sold at public auction. From the amount obtained by the auction, the incurred expenses shall be deducted and the remainder shall be delivered to the former holder of the concession.

The creditors of the canceled concession may not oppose the aforementioned auction for any reason.

Article 38: Authorizations shall be granted by Ministerial decision for an indefinite term, within 30 calendar days from the presentation of the application, upon expiration of which they shall be considered authorized.

The application must contain identification of the owner, a sworn declaration of compliance with technical standards and standards for preservation of the environment and the Cultural Heritage of the Nation, technical data, the location of installations and other information for statistical purposes. The Regulations shall establish the supervisory mechanisms to verify compliance.

TITLE IV

COMMITTEE FOR ECONOMIC OPERATION OF THE SYSTEM

Article 39: The owners of generating plants and transmitting systems whose installations are interconnected shall form a technical body called a Committee for Economic Operation of the System (CEOS), for the purpose of coordinating their operation at minimum cost, ensuring reliability of the supply of electric power and better utilization of energy resources.

To this end, operation of generating plants and transmitting systems shall be subject to the decisions of this Committee.

Article 40: The operations of the Committee for Economic Operation of the System shall be governed by the terms stated in the Regulations, with provision for the following:

a) Requirements for membership in the Committee;
b) Decision-making mechanism;
c) Procedures for optimization of operation;
d) Procedures for evaluation of transfers of power and energy;
e) Mechanisms to resolve differences of opinion and/or controversies; and
f) Information to be provided to the standardization and regulatory bodies.

Article 41: The basic functions of the Committee for Economic Operation of the System (COES) are as follows:

a) To plan the operation of the interconnected system, notifying its members so that they can operate their installations in accordance with the resulting programs;
b) To supervise execution of the operating programs and coordinate greater maintenance of the installations;
c) To calculate the short-term marginal costs of the electric power system in accordance with the procedures established in the Regulations;
d) To calculate the firm capacity power and energy of each generating unit in accordance with the procedure established in the present Law and the Regulations;
e) To guarantee to its members the purchase or sale of energy when, if necessitated by the economic operation of the system, the unscheduled shutdown or operation of their units is required. These transactions shall be carried out at the short-term marginal cost of the system.
f) To guarantee to all members the sale of their contracted power, up to the limit of their firm power, at a regulated price;
No member may contract with its users for more firm power than its own power or the power it has contracted with third parties; and
g) Other matters as expressly stated in the Regulations.

TITLE V

ELECTRICITY PRICE SYSTEM

Article 42: The regulated prices shall reflect the marginal costs of supply and shall be structured in such a way as to promote the efficiency of the sector.

Article 43: The following shall be subject to price regulation:

a) The transfer of power and energy between generators, which shall be determined by the COES in accordance with the terms established in Art. 41 of the present Law.
This regulation shall not govern the case of contracts between generators for the part in excess of the firm power and energy of the purchaser;
b) The compensation to be paid to owners of transmission systems;
c) Sales of generator energy to holders of concessions for distribution intended for the Public Electric Utility; and
d) Sales to users of the Public Electric Utility.

Article 44: Sales of electric energy not explicitly mentioned in the preceding article are not subject to price regulation

MAXIMUM PRICES FROM GENERATOR TO UTILITY DISTRIBUTOR

Article 45: Sales of electric energy to a holder of a concession for distribution, intended for the Public Electric Utility, shall be carried out at the Tariffs at Bus.

Article 46: The Tariffs at Bus and their respective adjustment formulas shall be set every six months by the Electric Tariffs Commission and shall go into effect in the months of May and November of each year.

The rate can only be applied after being published in the Official Gazette "El Peruano," and in one major circulating daily newspaper.

Article 47: To set the Rates at Bus (Burra-major generator line and transmission system or between distribution and transmission system) each COES shall perform the corresponding calculations as follows:

a) Project the demand for the next forty-eight months and determine a schedule for generation and transmission facilities capable of going into operation during that period, considering those currently under construction and those contemplated in the Reference Plan drawn up by the Ministry of Energy and Mines;
b) Determine the operating plan that will minimize the total incurred operating costs and cost of rationing for the period under study, taking the following into account among other factors: Hydrology, dams, fuel costs, as well as the Inflation-Adjustment Rate referred to in Art. 79 of the present Law;
c) Calculate the Short-Term Marginal Costs expected for energy in the system, for the Time Blocks established by the Electric Tariffs Commission, corresponding to the operating plan referred to in the preceding paragraph;
d) Determine the Base Price of Energy per Time Block for the period of the study, as a weighted mean of the marginal costs calculated above and the projected demand, duly adjusted for inflation;
e) Determine the most economical type of generator unit for additional power supply during annual peak demand hours for the electric power system, and calculate the annual charge for investment at the corresponding Inflation-Adjustment Rate as set in Art. 79 of the present Law;
f) Determine the Base Price of Peak Power considering the annual charge obtained in the preceding paragraph, increased by a percentage that results by considering the theoretical unavailability of the electric power system;
g) Calculate a power loss factor and energy loss factor in transmission for each of the system buses.
These factors shall be equal to 1.00 at the bus at which the base prices are set;
h) Determine the price of peak power at the bus for each of the buses of the system, multiplying the *Base Price of Peak Power* by the respective power loss factor, adding to this product the Toll per Connection referred to in Art. 60 of the present Law; and
i) Determine the Energy Price at Bus for each of the buses of the system, multiplying the Base Price of Energy corresponding to each Time Block by the respective energy loss factor.

Article 48: The power and energy loss factors shall be calculated considering the Marginal Peak Power and Energy Losses in Transmission, respectively, and assuming an *Economically Adjusted System.*

Article 49: On the buses of the Secondary Transmission System the price shall include the Mean Cost of said Economically Adjusted System.

Article 50: All costs used in the calculations indicated in Art. 47 must be expressed at the prices in effect in the months of March or September, depending on whether one is dealing with the price determinations for May of November, respectively.

Article 51: Before March 15 and September 15 of each year, each COES must present the Electric Tariffs Commission with the corresponding technical-economic study which shall explain and justify the following, among other aspects:

a) Projected demand for power and energy from the electric power system;
b) Program for generation and transmission facilities;
c) Cost of fuel, Costs of Rationing, and other pertinent variable operating cost;
d) Inflation-Adjustment Rate used in the calculations;
e) Marginal costs;

f) Base Prices of Peak Power and Energy;
g) Power and energy loss factors;
h) Total cost of transmission used in considerations;
i) Resulting values for Prices at Bus; and
j) Proposed readjustment formula.

Article 52: The Electric Tariffs Commission shall notify the COES of its observations, duly explained, regarding the technical-economic study.

The COES must respond to the observations and/or present a new study if necessary.

The Electric Tariffs Commission shall evaluate the new calculations and at after its analysis shall proceed to set and publish the tariffs and their monthly readjustment formulas, before April 30 and October 31 of each year.

Article 53: The tariffs set by the Electric Tariffs Commission must not differ by more than ten percent from the free prices in effect. The Regulations shall establish the procedure for comparison.

Article 54: If the effective period for the tariffs has expired and the tariffs for the following period have not yet been set owing to causes that are the responsibility of the Electric Tariffs Commission, these tariffs may be readjusted monthly by the generators in accordance with the readjustment formulas in effect, after publication in the Official Gazette "El Peruano."

Article 55: Each COES must mandatorily deliver to the Electric Tariffs Commission the technical information, mathematical models, source programs and other elements required in order to verify the calculation of the proposed prices.

Article 56: For Isolated Systems, the Electric Tariffs Commission shall set the Tariffs at Bus in accordance with the criteria established in the present Law and Regulations.

Article 57: If energy rationing occurs due to a deficit in electric generation, the generators shall compensate their users subject to price regulation for the undelivered energy, in the cases, manner and conditions established in the regulations.

MAXIMUM PRICES FOR TRANSMISSION

Article 58: For each Interconnected System the Ministry of Energy and Mines, on proposal from the Electric Tariffs Commission, shall define the Main Transmission System and Secondary Transmission Systems in accordance with the characteristics established in the Regulations.

The Main System shall permit generators to commercialized power and energy at any bus of said system.

The Secondary Systems permit generators to connect up with the main system or to commercialize power and energy at any bus of these systems.

Article 59: The generators connected to the Main System shall pay its proprietor a monthly compensation to cover the Total Cost of Transmission.

The Total Cost of Transmission includes the annual charge for investment and the standard costs of operation and maintenance of the Economically Adjusted System.

The annual charge for investment shall be calculated considering the New Replacement Value, its service life and the corresponding Inflation-Adjustment Rate set in Art. 79 of the present Law.

Article 60: The compensation referred to in the preceding Article shall be paid separately under two headings, defined as "Rate Income" and "Connection Toll."

The Tariff Income shall be calculated as a function of the power and energy delivered to and drawn from the buses, valued at their respective Tariffs at Bus.

The Connection Toll is the difference between the Total Cost of Transmission and the Tariff Income, and shall be paid by generators in proportion to their firm power.

Article 61: The Electric Tariffs Commission shall annually set the Connection Toll and its respective monthly readjustment formula, calculating the Total Transmission Cost, and taking account of the anticipated Tariff Income, which must be supplied to it by the respective COES.

The Connection Toll and its respective readjustment formula shall be set and published in the Official Gazette "El Peruano," going into effect on May 1 of each year.

Article 62: If a generator supplies electric power at buses located in the Secondary Transmission System or using installations from the holder of a concession for distribution, it must agree with the owners thereof as to the compensation for the use of said installations.

These compensations shall cover the Mean Cost of Efficiency of said systems and shall not be paid if the use is carried out in a direction contrary to the preponderant flow of energy.

In the event of a discrepancy and on petition from one of the parties, the Electric Tariffs Commission shall act as judge and shall decide within a maximum term of 30 days from presentation.

MAXIMUM PRICES FOR DISTRIBUTION

Article 63: The tariffs to the end users of the Public Electric Utility consist of the Tariffs at Bus and the Added Distribution Value.

Article 64: The Added Distribution Value shall be based on an efficient model enterprise and take the following components into account:

a) Costs associated with the user, regardless of the user's power and energy demand:
b) Standard power and energy losses in distribution; and
c) Standard costs of investment, maintenance and operation associated with distribution, per unit of power supplied.

Article 65: The cost of investment shall be the annual charge of the New Replacement Value of the Economically Adjusted System, considering its service life and the Inflation-Adjustment Rate established in Art. 79 of the present Law.

Article 66: The Added Distribution Value shall be calculated for each holder of a concession by considering given Typical Distribution Sectors that shall be established by the Ministry of Energy and Mines, on proposal from the Electric Tariffs Commission, in accordance with the procedure established in the Regulations.

Article 67: The components stated in Art. 64 shall be calculated for each Typical Distribution Sector by cost studies commission by the holders of distribution concessions from consulting firms previously qualified by the Electric Tariffs Commission, which shall draw up the corresponding Terms of Reference and supervise the progress of the studies.

The cost studies shall give consideration to criteria of efficiency for investments and management at a concession holder operating in this country.

Article 68: The Electric Tariffs Commission, having received the studies, shall notify the concession holders of its observations if any; the latter must respond to them within a maximum term of 10 days.

Once the observations have been answered or the term within which they are to be stated has expired, the Electric Tariffs Commission shall establish the Added Distribution Values for each concession, using Weighting Factors in accordance with the characteristics of each system.

Article 69: Using the Added Distribution Values obtained in accordance with the preceding articles, and the corresponding Tariffs at Bus, the Electric Tariffs Commission shall structure a set of Base Prices for each concession.

Article 70: The Electric Tariffs Commission shall calculate the Internal Rate of Return for groups of concession holders, considering an analysis period of 25 years, and evaluating:

a) The income they would have collected if the Base Prices had been applied to all deliveries in the immediately preceding fiscal year;
b) The costs of operation and maintenance not including the distribution system, for the immediately preceding fiscal year, including losses; and
c) The New Replacement Cost of installations for each enterprise, with a remainder value equal to zero.

Article 71: If the rates calculated per the above do not differ by more than four percent from the Inflation-Adjustment Rate stated in Art. 79 of the present Law, the Added Distribution Values from which they originate shall be considered definitive. Otherwise these values must be adjusted proportionally in such a way as to conform to the nearest upper or lower limit.

Article 72: Considering the Added Distribution Values as definitive for each holder of a concession, the Electric Tariffs Commission shall set and publish the corresponding final distribution tariffs and their monthly readjustment formulas, which shall go into effect on November 1.

Article 73: The tariffs and their readjustment formulas shall be in effect for four years, and may only be recalculated if their readjustments duplicate the initial value of the tariffs during the period while they are in effect.

MISCELLANEOUS TERMS GOVERNING TARIFFS

Article 74: Interested parties may appeal for reconsideration of the decisions of the Electric Tariffs Commission within ten calendar days after the date of their publication.

The appeal for reconsideration must be decided upon within ten calendar days of its filing, after which time administrative recourse will be exhausted.

Article 75: Once the effective period of the tariffs has expired and so long as those of the subsequent period have not been set for reasons that are the responsibility of the Electric Tariffs Commission, these tariffs may be readjusted monthly by the concession holders in accordance with the readjustment formulas in effect, after publication in the Official Gazette "El Peruano."

Article 76: The New Replacement Value for purposes of the present Law is defined as the cost of producing new facilities and physical assets intended to provide the same service with the technology and prices in effect, furthermore considering:

a) The finance charges during the construction period, calculated at a rate of interest that must not be greater than the Inflation-Adjustment Rate set in Art. 79 of the present Law;
b) Expenses and compensations paid to establish the employed easements; and
c) Expenses for studies and supervision.

To set the New Replacement Value, concession holders shall present the supporting information, and the Electric Tariffs Commission may reject the inclusion of unnecessary property, stating grounds.

Article 77: Every four years, the Electric Tariffs Commission shall proceed to update the New Replacement Value of the installations for transmission and distribution, using the information presented by the concession holders.

In the case of new or retired facilities, the Electric Tariffs Commission shall include or subtract their respective Replacement Value.

Article 78: The New Replacement Value, income and costs intended exclusively for the calculation of tariffs shall not for any reason be considered for purposes of taxation of the enterprises.

Article 79: The Inflation-Adjustment Rate to be used under the present Law shall be 12% real per annum.

This rate may only be modified by the Ministry of Energy and Mines, after a study commissioned by the Electric Tariffs Commission from specialized consultants, establishing that the set rate differs from the Risk-Free Rate plus the risk premium in this country.

In any case the New Inflation-Adjustment Rate set by the Ministry of Energy and Mines must not differ by more than two percentage points from the rate in effect.

Article 80: For Isolated Systems, the holders of concessions for distribution who have their own generation and transmission facilities to cover their demand in part or in full are required to maintain separate accounting for the costs of generation, transmission and distribution activities.

Article 81: It shall be the obligation of the Electric Tariffs Commission to prepare periodically information that makes it possible for the sector to know the procedures used in determining tariffs, historic values and anticipated values. In particular, the reports regarding the calculation of both the Tariffs at Bar and of the Added Distribution Values shall be public knowledge, as well as indicators referring to the prices in effect on the unregulated market.

TITLE VI

PERFORMANCES OF THE PUBLIC ELECTRIC UTILITY

Article 82: Any applicant located within a zone of a holder of a concession for distribution shall have the right to be supplied with electric power by the respective concession holder, subject to compliance with the requirements and payments established in this regard by the present Law and Regulations, in conformity with the technical conditions in effect in the area.

Payments made shall constitute a non-transferable right in the favor of the real estate for which application is made.

Article 83: For the provision of new deliveries or an expansion of a contracted power, the concession holder may require a refundable contribution to finance the extension of the installations to the delivery point and/or the necessary expansion of distribution capacity.

These contributions shall be performed in the following manner, at the user's discretion:

a) Contributions per kW, previously established by the concession holder for various cases;
b) Construction of the extension facilities by the applicant, subject to approval of the design by the concession holder, with the value of said installations being set on the occasion of the approval of the design; and
c) Financing by the applicant to perform the required work, at a value determined by the concession holder, with the latter being obligated to carry out said work within a specified term.

Article 84: The user shall have the right for the contributions it performs to be acknowledged through a delivery of shares in the Enterprise, bonds or other procedures that shall ensure its real recovery under the terms established in the Regulations.

The selection of the form of repayment shall be up to the user. The enterprise holding the concession may not for any reason collect expenses and/or commissions under the heading of this repayment.

Article 85: In the case of new urban developments, or the new supplying of electric power to inhabited urban zones or groups of dwellings located within the zone of the concession, the interested parties must execute the electric installations relating to the secondary power network and street lighting, in conformity with the previously approved plan and under the supervision of the enterprise holding the concession serving the area.

In this case the installations shall undergo acceptance by the concession holder, at that time setting their New Replacement Value for purposes of reimbursing the interested party in accordance with the terms of Art. 84 of the present Law.

Article 86: If the energy supply suffers a total or partial interruption for a consecutive period of more than four hours, the concession holder must compensate the users for the cost of the power and energy not delivered, under the terms established in the Regulations, except on those occasions in which the interruptions occurred for causes that were the responsibility of the user in question.

In the event of scheduled rationing due to an energy shortage at the generating level, compensation shall be paid in a manner similar to that specified in Art. 57 of the present Law.

Article 87: Holders of concessions may temporarily vary the terms of delivery for reasons of force majeure, with the obligation of giving notice thereof to the users and supervisory agency within forty-eight hours of the onset of the change.

Article 88: The special internal installations for each delivery must start from the delivery point, with the planning, execution, operation and maintenance thereof being the user's responsibility, as well as any expansions, renovations, repairs and/or relocations.

Article 89: The user may not draw a consumption greater than has been contracted. If the user overruns its limits it shall be subject to suspension of service and to payment of the fines as established in the Regulations.

In the event of a recurrence, the user must pay the refundable contributions for the respective power increase.

Article 90: Holders of concessions may execute immediate cutoff of service, without need for prior notice to the user or intervention of the cognizant authorities, in the following cases:

a) When invoices and/or fees remain pending, after due notice, for two or more months after the provision of services of the Public Electric Utility, with respective interest and delinquency penalties;
b) When electric power is drawn without obtaining the prior authorization of the company, or when the terms of supply are violated; and
c) When the safety of persons or property is put in jeopardy through defects in the involved installations, whether these are under the company's administration, or are internal installations owned by the user.

Holders of concessions must send the respective collection notices to the users who have been cut off, on the same occasions as for the other users, being empowered to collect a minimum monthly charge.

Holders of concessions shall periodically set the amounts for cutoff and reconnection in accordance with the terms of the regulations.

Article 91: In cases of illicit use, in addition to charging the cutoff charges, payment for consumed energy and other charges, the involved persons may be reported to the pensal jurisdiction.

Article 92: When for lack of appropriate metering or errors in the invoicing process, amounts other than the actually applicable amounts are under consideration, holders of concessions shall proceed with recovery or reimbursement as applicable.

The amount to be recovered by the concession holder shall be calculated at the tariff in effect on the date of detection, and for a maximum period of 12 months prior to that date. Recovery shall be obtained in 10 equal monthly installments, without interest or delinquency penalties.

Reimbursement to the user shall be, at the user's discretion, by a discount of units of energy in future invoices, or in cash on a single occasion, using the same rates of interest and delinquency penalties that the concession holder is authorized to collect in the case of a debt owed for power consumed.

Article 93: Complaints by users regarding provision of Public Electric Utility services shall be decided, as the last administrative appeal, by the Ministry of Energy and Mines, in conformity with the terms of the regulations.

Article 94: Provision of street lighting service is the responsibility of the distribution concession holders, insofar as this refers to the general street lighting on avenues, streets and plazas.

The corresponding energy shall be billed to the municipality. If two consecutive months go unpaid, collection shall be made directly from the users, in accordance with the procedures established in the Regulations. In this latter case the Municipality shall cease to collect the corresponding tax.

Municipalities may, at their own expense, construct special lighting installations in excess of the standards stated in the respective concession contract. In that case they must likewise assume the expenses for power consumption, operation and maintenance.

Article 95: In any plan for land development or in the construction of buildings, sufficient areas must be set aside for the installation of the respective distribution substations.

Article 96: Urban developers are required to install the road crossing structures for the laying of distribution networks, where applicable, in order to prevent breakage of the latter.

Article 97: Concession holders may open pavements, carriageways and sidewalks of public roads and streets within their concession zone, notifying the respective municipalities and being obligated to perform the requisite repairs in an adequate and immediate manner.

Article 98: Expenses incurred in the removal, relocation and reinstallation of electric installations which must be executed as a result of works for beautification, paving and, in general, for reasons of any kind must be borne by those involved and/or who give rise thereto.

Article 99: The studies, plans and work for the installations necessary for the provision of Public Electric Utility services must be carried out in compliance with the requirements stated in the National Electricity Code and other Technical Standards.

Article 100: Once a year, in a manner and on an occasion as specified in the Regulations, a representative survey of users for a concession will be performed in order to assess the quality of the received service.

TITLE VII

SUPERVISION

Article 101: The following is subject to supervision by the Ministry of Energy and Mines:

a) Compliance with all obligations of concession holders as established in the present Law, the Regulations and the respective concession contract;
b) Other aspects relating to the provision of Public Electric Utility service;
c) Compliance with the terms of the present Law.

The regulations shall establish the procedures and standards for supervision.

Article 102: The Regulations shall state the penalties and/or fines for noncompliance with and violations of the present Law.

The income obtained therefrom shall constitute resources owned by the Ministry of Energy and Mines.

Article 103: The municipalities shall notify the Ministry of Energy and Mines of interruptions or alterations occurring in service, as well as defects observed in the preservation and operation of installations.

TITLE VIII

GUARANTEES AND MEASURES TO PROMOTE INVESTMENT

Article 104: Once recorded in the Public Registries, the concession contracts constitute law between the parties.

Article 105: Cancellation of a concession for reasons other than those stated in the present law must be compensated in cash on the basis of the Current Value of Net Flow of Future Funds which the concession generates for its proprietor, using the Inflation-Adjustment Rate established in Art. 79 of the present law.

Article 106: Concession holders, as well as the companies dedicated exclusively to the activities of generating, transmitting and distributing electric power, shall have the following rights:

a) Division into up to 36 monthly installments of the Ad Valorem CIF fees on the importing of capital goods for new projects, expressed in foreign currency.
By Supreme Order as drawn up by the Ministry of the Economy and Finance in association with the Ministry of Energy and Mines, the interest rate applicable to this division shall be established, along with the term for payment of the first installment from the numbering of the respective Import Declaration, as well as the other terms for its application; and
b) All guarantees of the Rules and Standards governing Juridical Stability, Tax Stability and free availability of currency to domestic and foreign investors as referred to in the Legislative Orders Nos. 662, 668 and 757.

Article 107: The holders of concessions and companies dedicated to the activities of generating (power), in accordance with the present law, which use energy and natural resources obtainable from hydraulic and geothermal sources in this country, shall be required to pay the state a single remuneration for said use, including the payments established under Executive Order No. 177752 and its regulatory and supplementary provisions.

The tariffs for this remuneration shall not be greater than 1% of the mean energy price at the generation level, calculated in accordance with the procedure stated in the Regulations for the present Law.

TITLE IX

USE OF PUBLIC PROPERTY AND PROPERTY OF THIRD PARTIES

Article 108: When a hydraulic resources assigned for a given purpose must be used for electric power generation, or vice versa, the rights of the first must not be affected. In such cases, the administration of the hydraulic resource shall be conducted jointly by all those who use it for different purposes.

Article 109: Holders of concessions, subject to the provisions established in the Regulations, are authorized:

a) To use, gratis, the soil, subsoil and areas of public roads, streets, plazas and other State or Municipal property, as well as to cross rivers, bridges, railways, electric lines and communications lines;

b) To cut trees or their branches close to the overhead power lines and that may cause damage to the installations, subject to prior permission from the cognizant authority; and
c) To place supports or anchorages in the facades of buildings, and poles in front of them.

In these cases the concession holder must redress the expense of restoring the affected areas.

Article 110: Easements for the occupation of public and private property shall be constituted solely in accordance with the terms of the present law.

The easements may be:

a) For aqueducts, dams and hydroelectric facilities;
b) For power lines to establish transformer substations, transmission lines and distribution lines;
c) For occupation of private property indispensable for the installation of distribution substations for the Electric Power Utility;
d) For telecommunications systems;
e) Right of way to construct access ways, and
f) Right of way for maintenance, preservation and repair of facilities and installations.

Article 111: It is up to the Ministry of Energy and Mines to impose, on a compulsory basis, the establishment of easements indicated by this law, as well as to modify those already in existence. To this end the Ministry must give a hearing to the owner of the servient estate, in accordance with the administrative procedure established in the Regulations.

If the easement is imposed or modified, the means to be adopted in order to avoid the dangers and inconveniences of the installations associated therewith must be specified.

Article 112: The right to establish an easement under the present law entails an obligation to pay indemnification for the loss or damage it causes, and to pay for the use of the encumbered property. This indemnification shall be set by agreement of the parties; otherwise it shall be set by the Ministry of Energy and Mines.

The holder of the easement shall be obligated to build and maintain all necessary appurtenances in order that the servient estate shall not suffer damage or loss because of the easement. In addition, it shall have the right of access to the necessary area of said estate for purposes of guarding and preserving the installations for which the easements were established, and must proceed with due caution so as to prevent damage and loss, remaining subject to the applicable civil liability.

Article 113: If the easement is established for the purposes of the generation of electric power, facilities and installations required for the water supply may be affected by easements for activities other than those for which they were intended only if it is fully proven that the new easement will not cause prejudice t to the purposes of service. In this case, it shall be the duty of the holder of the new easement to pay the expenses necessary in order to make this possible, and the corresponding compensations to the owner of the aqueduct, for the use of same.

Article 114: The easement for a power line and telecommunications installations confers on the concession holder the right to lay lines by way of posts, towers or by underground conduit across the properties, and to occupy the land of same as necessary for transformer substations and for personnel housing.

In urban areas, the power line easement cannot be imposed on buildings, patios and gardens.

Article 115: The establishment of a power line easement does not prevent the proprietor of the servient estate from enclosing it or building on it, providing that the construction is not performed under the high-voltage line and within its zone of influence, and that means are left free for the maintenance and repair of the power line, observing the minimum safety distances established in the National Electricity Code in this regard.

Article 116: The Ministry of Energy and Mines may impose, in favor of holders of concessions and on petition from them, a temporary occupancy easement on State lands, lands of municipalities, or of entities under State or private ownership, intended for warehouses, material storage, positioning of a pole line or any other service that may be necessary for construction of the facilities.

The temporary occupancy easements give the proprietor of the servient estate the right to collect payment of indemnifications and compensations as established in the present Law and its Regulations, during the time necessary for execution of the work.

Article 117: The easements for cableways, access paths and telecommunications installations for purposes of the service shall be established subject to the terms of the present Title insofar as they are applicable.

Article 118: Once the administrative decision establishing or modifying the easement has been granted or put into execution, the concession holder must pay directly, or place in judicial deposit in favor of the proprietor of the servient estate, the amount of the respective valuation, before initiating the facilities and installations.

The judicial appeal against the administrative valuation must be filed within thirty (30) days after payment or depositing, and shall only give the right to collect a readjustment of the indicated amount.

Once payment has been made, the Ministry of Energy and Mines shall give possession of the required part of the servient estate to the applying concession holder in order that it may carry out the purpose for which the easement was established.

In the event of opposition by the proprietor, governor or manager of the servient estate, the concession holder may exercise the granted right with the assistance of police power, without prejudice to the right to initiate any legal proceedings that may have been occasioned.

Article 119: The Ministry of Energy and Mines, at the request of a party or ex officio, shall declare extinction of the established easements when:

a) Whoever requested the easement does not carry out the respective installations or works within the period indicated when same was imposed;
b) The owner/governor/manager of the servient estate demonstrates that the easement has gone unused for more than twelve consecutive months;
c) Without prior authorization, the easement is used for a purpose other than that for which it was requested; and
d) Upon termination of the purpose for which the easement was established.

TITLE X

SUPPLEMENTARY PROVISIONS

Article 120: In cases of public calamity, civil unrest and/or disturbance, the State may grant both concession holders and the companies dedicated to the activities of generating,

transmitting and distributing electric power the necessary assistance to ensure protection of the facilities and installations in order to guarantee continuity of their operation.

Article 121: The supplying of electric power having the character of a Public Electric Utility that does not require a concession may be carried out by natural or juridical persons under a permit granted by the Municipal Councils in each case, who shall set the conditions of supply by joint agreement with the users.

Notwithstanding the above, owners may request the Minister of Energy and Mines to grant a concession for the conduct of these activities within the terms of the present Law and Regulations.

Article 122: The activities of generating, transmitting over the Main System and distribution of electric power may not be carried out simultaneously by the same owner except in those cases as provided under the present Law.

Article 123: The appended definitions corresponding to terms of the present Law constitute an integral part of same.

TITLE XI

TRANSITIONAL PROVISIONS

ONE Within ninety (90) days after the effective date of the present Law, the COES in the North Central (Sign) and Southwestern (SISO) Systems shall be established and take up their functions.

TWO The supply contracts which cease to be regulated by virtue of the present Law, as well as inter-company energy purchase and sale contracts, must be brought into compliance with the terms of the present Law in accordance with the procedure established for this purpose by the Ministry of Energy and Mines, within no less than one hundred twenty (120) calendar days from its effective date.

THREE The Electric Tariffs Commission shall continue to set electric power tariffs in accordance with the current mechanisms and methods, until such time as the tariffs must be brought into conformity with the criteria established under the present Law.

FOUR All companies currently performing distribution of Public Electric Utility service shall have provisional concessions for distribution which shall cover their existing distribution installations and a strip one hundred (100) meters wide around them. The maximum period to arrange for a final concession and the determination of its respective New Replacement Values shall be three hundred sixty (360) calendar days, counting from the effective date of the present Law.

FIVE Public Electric Utility enterprises including the North Central (SIGN), Southwest (SISO) and Southeast Systems must take the legal, administrative and economic steps to divide up the activities of generation, transmission and distribution into independent enterprises, observing the terms dictated to this effect by the Ministry of Energy and Mines. These steps shall be taken within a maximum term of one hundred eighty (180) calendar days from the effective date of the present Law, exempt from any tax or fee that might be applicable.

SIX All companies performing activities of generation, transmission and distribution, including self-producers, who require a concession or authorization in accordance with the

terms of the present Law, must come into compliance therewith within a term of three hundred sixty (360) calendar days from its effective date.

SEVEN In emergency situations or during severe deficiencies of service, the Ministry of Energy and Mines, by a Ministerial Decision, may empower the Directors of the companies in which the State may hold a majority interest, to take corrective actions to overcome such situations.

EIGHT The Electric Tariffs Commission must be restructured in accordance with the terms of the present Law, within a maximum term of sixty days from the effective date of the present Law.

The members of the Board of Directors of the Electric Tariffs Commission, who must be appointed on proposal by the holders of concessions, shall be provisionally designated on proposal from the current Public Electric Utility companies, for a term of not more than three hundred sixty (360) days.

NINE The Regulations and Technical Standards in effect on the date of promulgation of the present Law shall continue in effect unless they are in conflict herewith.

TEN The Ministry of Energy and Mines is empowered to dictate the supplementary legal terms to standardize compliance with the terms of the present Law by natural and juridical persons who currently perform activities of generating, transmitting and distributing electric power.

ELEVEN The compensations for energy rationing specified under Art. 57 of the present Law shall take effective as of July 1, 1994.

TWELVE The Executive Branch shall issue the Regulations for the present Law within ninety (90) calendar days after the date of its promulgation.

THIRTEEN The State-owned companies holding concessions for distribution of Public Electric Utility service shall continue to be covered by the terms of Article 1 of the Executive Order No. 25546 until the transfer to the private sector of all or part of their shares or assets.

FINAL PROVISION

The following are repealed: Executive Order No. 009-92-EM, Consolidated Text of the General Law on Electricity, Law No. 23406, its supplements and amendments, Legislative Order No. 597, Law No. 25304, Legislative Order No. 649, Legislative Order No. 693, Executive Order No. 25651 and other terms of law in opposition to the present Law.

Done at the President's House in Lima, on the sixth day of the month of November, one thousand nine hundred ninety-two.

ALBERTO FUJIMORI FUJIMORI, Constitutional President of the Republic

OSCAR DE LA PUENTE RAYGADA, President of the Cabinet, Minister of Foreign Affairs

VICTOR MALCA VILLANUEVA, Minister of Defense

CARLOS BOLONA BEHR, Minister of the Economy and Finance

JUAN BRIONES DAVILLA, Minister of the Interior

FERNANDO VEGA SANTA GADEA, Minister of Justice

VICTOR PAREDES GUERRA, Minister of Health

ABSALON VASQUEZ VILLANUEVA, Minister of Agriculture

JORGE CAMET DICKMANN, Minister of Industry, Domestic Commerce, Tourism and Integration

DANIEL HOMAKA TOKASHIKI, Minister of Energy and Mines

AUGUSTO ANTONIOLI VASQUEZ, Ministry of Labor and Social Promotion

ALFREDO ROSS ANTEZANA, Minister of Transport, Communications, Housing and Construction

JAIME SOBERO TAIRA, Minister of Fisheries

ALBERTO VARILLAS MONTENEGRO, Minister of Education

MAXIMO MANUAL VARA OCHOA, Minister of the Presidency

THEREFORE:

I order that this shall be published and obeyed.

Lima, November 6, 1992

ALBERTO FUJIMORI FUJIMOR, Constitutional President of the Republic

OSCAR DE LA PUENTE RAYGADA, President of the Cabinet, Minister of Foreign Affairs

CARLOS BOLONA BEHR, Minister of the Economy and Finance

APPENDIX TO THE LAW ON ELECTRIC CONCESSIONS

1. **Bus:** The point of the electric power system prepared to deliver and/or draw electric power.

2. **Time Blocks:** Periods of hours in which the costs of generation are similar, determined as a function of the technical and economic characteristics of the systems.

3. **Cost of Rationing:** The mean cost incurred by users when energy is not available and must be obtained from alternative sources. This cost shall be calculated as a single value and shall be representative of the most frequent deficits that may occur in the electric power system.

4. **Mean Cost:** The total cost corresponding to the investment in, operation and maintenance of an electric power system under efficient conditions.

5. **Short-Term Marginal Costs:** The cost incurred to produce one additional unit of energy, or alternatively, the saving obtained by ceasing to produce one unit, considering the demand and the available fleet of generating equipment.

6. **Firm Energy:** The maximum anticipated production of electric power under dry hydrology conditions for hydroelectric generating units, and anticipated conditions of unavailability for thermal generation units. Dry hydrology corresponds to a season whose probability of being exceeded shall be set in the Regulations.

7. **Weighting Factors:** The values representing the proportion of each Typical Distribution Sector in a distribution concession. The sum of the weighting factors for a concession is equal to one.

8. **Unregulated Market:** Corresponds to the electricity transactions for non-Public Electric Utility clients under competitive conditions, in which the setting of prices is not regulated or settle by Law.

9. **Marginal Energy Losses in Transmission:** The energy losses that occur in the transmission system by the drawing of one additional unit of energy at a given Bus of the Main Transmission System.

10. **Marginal Peak Power Losses in Transmission:** the power losses that occur in the Transmission System by the drawing of one additional unit of power at a given Bus of the Main Transmission System.

11. **Reference Plan:** The tentative program of studies and minimum-cost generation and transmission facilities to cover the growth in energy demand over the medium term.

12. **Firm Power:** The power that each generator unit can deliver at peak hours with high reliability, with a probability greater than or equal to that defined in the Regulations. For each COES the sum of the firm power of its members must not exceed the maximum demand of the interconnected system.

13. **Typical Distribution Sector:** These are distribution installations with similar technical characteristics as to the geographic distribution of load, technical characteristics, as well as costs of investment, operation and maintenance. A concession may consist of one or more Typical Distribution Sectors.

14. **Economically Adjusted System:** An electric power system in which a balanced relationship exists between energy supply and demand, achieving the lowest cost and maintaining quality of service.

15. **Interconnected System:** Set of transmission lines and electric substations connected together, as well as their respective load distribution centers, which permits transfer of electric power between two or more generating systems.

16. **Main Transmission System:** The part of the transmission system shared by the set of generators of an Interconnected System, permitting the exchange of electricity and free commercialization of electric power.

17. **Secondary Transmission System:** The part of the transmission system intended to transfer electricity to a distributor or end consumer from a Main System Bus. Also part of this system are the installations necessary to deliver electricity from a generating plant to a Bus of the Main Transmission System.

18. **RISK-FREE RATE:** Rate of yield on capital for operations in financial brokerage systems for low capital-risk conditions.

LAW REGULATIONS FOR ELECTRICAL FRANCHISES

TITLE I

GENERAL PROVISIONS

Article 1: Use of the terms "Law," "Regulations," "Department," "Management," and "Committee", will refer to the Law for Electrical Franchises, Law Regulations for Electrical Franchises, Department of Energy and Mines, General Management of Electricity, and Committee of Electrical Fares, respectively.

Article 2: "Power limits," mentioned in Article 2 of the Law, will be determined to be a value equivalent to 20% of the maximum demand of the distribution franchise, up to 1,000 KW.

Power limits for each franchise will be determined in the respective franchise contract.

The Department will update power limits for each franchise and the maximum amount indicated in the first paragraph of this article every four years by departmental decision. The Department will make such updates at the same time it determines distribution rates.

Article 3: No generation or distribution entity will be entitled to keep the property of a Secondary Transmission System if this system were part of the Main System in the quadrennium revision specified in the last paragraph of Article 132 of these Regulations.

Article 4: The demand referred to in clause (c) of Article 3 of the Law is the added demand of all connected services which will be operated by one distribution enterprise.

Article 5: If a service demand exceeds the limit established under clause (c) of Article 3 of the Law, the holder will incorporate the franchise ratio within 180 calendar days from the demand registration date and under the procedures established in the Law and Regulations.

Article 6: Entities which exclusively develop the generation activities with authorization will have the same rights and benefits as the concessionaires and the obligations determined by clauses (c), (d), (e), (f), (g) and (h) of Articles 31 and 32 of the Law.

Article 7: The Department will establish a public Electrical Franchises Record which will contain all data related to franchise application forms, approvals, resignation, and expiration as well as the encumbrances, acts, and contracts which might affect them.

Standards in registrations under Law, Regulations, or Record must meet rigorous compliance order of presentation and occurrence.

The Management will be in charge of the Record and will determine the number of books, mode, requirements, and content of the recorded entries. Management will also dictate the respective internal operational regulations.

Article 8: Activity holders mentioned in Article 7 of the law will inform Management regarding the following items:

a) Installed power, generation tension, and equipment site for installation of electrical energy generator groups.
For hydroelectric generation, activity holders will submit a general site plan in a 1/5,000 scale.
b) The nominal tension, transportation capacity, line length, unifilar diagram, general site plans in a 1/10,000 scale, and the substations' characteristics for transmission systems; and,
c) Number of users and network and substations' general plans in a 1/2,000 scale, indicating the principal technical characteristics for distribution systems.

Article 9: Judges of the Republic's Capital City are the only competent authority to address all national legal matters and franchises approvals.

Article 10: The President or Vice-President of the Republic, State Departments, the Legislature, State Governors, Mayors, Department and Committee officers and employees are prohibited from applying for and acquiring franchises or authorizations, directly or indirectly, through a partnership or as an individual. This article applies to family members up to second degree generation.

Article 11: The prohibition mentioned above does not include rights obtained through inheritance or legacy or those brought to the marriage by the non-disqualified spouse.

TITLE II

ELECTRICAL TARIFFS COMMISSION

Article 12: The Committee, according to Article 10 of the Law, is an independent technical organization, from the operational point of view as well as the economic and administrative aspects. Thus, it is not subject to Public Sector norms, except for the ones related to National Control System.

Article 13: Committee members should develop their obligations with independent and technical judgment, by strict observance of the Law and Regulations.

Article 14: The Committee consists of a Board of Directors, which is in charge of Management operations, and an Executive Secretary, who is in charge of support, technical, and administrative operations.

The Committee is represented by a President who should be present on full-time basis.

Article 15: The entities mentioned in Article 11 of the Law will each propose three candidates for the Committee's Board of Directors. The Energy and Mines Minister will select the Director from this list of candidates. The Director will be assigned by Supreme Resolution and approved by the Board of Ministers.

Article 16: In addition to the requirements mentioned in Article 12, members of the Committee's Board of Directors must have management experience of no less than five (5) years in well-known national or international organizations or must possess an accredited degree in Economics or Administration.

Article 17: The Board of Directors may terminate a Director for cause. The Board will announce the vacancy to the Department and the proposing entities of the Committee. The Board will assign the person who will complete the period pursuant to the procedures provided in the Law and Regulations.

Article 18: Regular compensation of the members of the Committee's Board of Directors will be determined by Supreme Resolution and countersigned by the Energy and Mines Minister, taking into account the following considerations:

a) High professional qualification and enterprise experience which are demanded by the Law and Regulations;
b) The importance of technical and economic decisions adopted by the Committee; and
c) The resources provided by the Law and Regulations.

Article 19: All members of the Board of Directors will receive a regular monthly payment. Due to the nature of the job and its exclusive dedication, the President will receive an extra monthly payment equivalent to three regular monthly payments.

Members of the Board of Directors who have been assigned specific activities which require full-time dedication will receive, pursuant to Article 16 of the Law, an additional bonus during the period of time they are in charge. This bonus in any month should not exceed the equivalent of a regular monthly salary.

Article 20: The Committee's Executive Secretary will have a maximum of ten (10) employees, and five (5) of them should be highly qualified professionals. Work regulations for the personnel will be generated by Law 4916, its amendments, and modifications, such as all legal dispositions related to workers in private entities; this prevision does not apply to pay levels, raises, and/or bonuses established by the Executive Power for all Public Sector entities.

Article 21: Personnel remunerative levels of the Committee's Executive Secretary will be established in relation to those governing in the distribution concessionaire enterprise of the Republic's Capital City. The Executive Secretary will have a General Manager level.

Article 22: In addition to the obligations mentioned in Article 15 of the Law, the Board of Directors will:

a) Adjust the discrepancies about the compensation determination for the Secondary Transmission System and distribution installations;
b) Approve the new replacement value for distribution and transmission installations;
c) Request studies to determine the discount rate mentioned in Article 79 of the Law;
d) Approve the Committee's Final Report and General Balance;
e) Approve the personnel pay levels of the Committee's Executive Secretary;
f) Determine the rationing cost mentioned in definition 3 of the Law appendix;
g) Establish the theoretic factor of unavailability of the electrical system generating units mentioned in clause (f) of Article 47 of the Law; and
h) Issue complementary general instructions for rate applicability.

Article 23: In addition to the obligations mentioned in Article 18 of the Law, the Executive Secretary will:

a) Calculate the rationing cost mentioned in clause (f) from the previous article;
b) Evaluate the theoretic factor of unavailability of the electrical system generating units mentioned in clause (g) of the previous article;
c) Develop a summary as mentioned in Article 81 of the Law; and

d) Develop the Committee's Annual Final Report and provide it to the Board of Directors for its consideration.

Article 24: The Board of Directors will hold at least two monthly sessions. The sessions require a quorum of three directors, except for sessions whose main subject is rate determination, revision, and modification; a quarum at such sessions will be four directors.

Decisions will be made by majority vote. Ties will be broken by President's vote.

Deliberations and agreements from the Board of Directors will be recorded in a notarized minute book and will be signed by all directors present in that session.

Article 25: Committee's resolutions which determine, revise, or modify rates will be published once in the official newspaper "El Peruano" within the period of time stated by the Law and the Regulations.

Article 26: All enterprises involved in electrical activities; users; and regional, local, and federal authorities will comply with Committee resolutions when applicable.

Article 27: The Committee's budget will be sufficient to fully accomplish the obligations mentioned by the Law; subject to the procedures and general dispositions regarding Public Sector independence in Article 10 of the Law.

When the Committee's budget is not completely used, the remaining amount will be kept as reserve for the next period.

Article 28: Before October 15th of every year, the Committee will present its annual budget to the Department for the next period. The annual budget must be passed before November 30th. The budget will be automatically renewed, if the term mentioned above expires.

TITLE III

FRANCHISES AND AUTHORIZATIONS

Article 29: Applications for temporary or permanent franchises, authorization forms, and other applications will be presented to Management according to the administrative procedures established by the Department and pursuant to the Law and Regulations.

TEMPORARY FRANCHISE

Article 30: Applications for a temporary franchise must be presented with the following data and requirements:

a) Petitioner's identification and legal address;
b) Final descriptive record of preliminary design and general plan;
c) Copy of the authorization for the use of Nation's natural resources, if applicable;
d) Specific requirement of easement under third party assets;
e) Study's description and completion schedule;
f) Study's estimated cost; and

g) Current guarantee during the requested franchise term in an the amount equivalent to 1% of the study's estimated cost, up to 25 ITU.

Article 31: Within five (5) calendar days of the application's presentation and verification that the form complies with the requirements established under the previous article, Management will admit it and publish it in the official newspaper "El Peruano" on two (2) consecutive calendar days. Publication costs will be paid by the interested party.

Article 32: When several applicants present applications for the same temporary franchise to Management within ten (10) calendar days from the first applicant's last publication, Management will give priority to the one who offers the best technical and economic conditions. If generation applicants offer equal conditions, priority will be granted to the applicant who had previously presented the request for using the Nation's natural resources.

Article 33: The temporary franchise file will be evaluated by Management in order to determine its feasibility. The application form must be analyzed through Ministerial Resolution within a maximum of thirty (30) calendar days after submission.

Management may request completion and/or clarification of the presented information to issue an opinion. To comply with this request, applicant will have ten (10) calendar days from receipt of the notification. If the applicant does not comply, the application will be considered void. Management will rescind the given guarantee.

Article 34: Possible oppositions to the temporary franchise applications must be presented within five (5) calendar days from the application's last publication. Oppositions must be presented along with supportive documents and the guarantee requested in clause (g) of Article 30 of the Regulations.

Management must resolve the dispute through Directional Resolution within five (5) calendar days from the day the dispute was presented.

Any party may appeal the Directorial Resolution before the Department within five (5) calendar days from receiving the notification.

As the final administrative step, the Department has a maximum term of five (5) calendar days from the presentation date to make its decision about the appeal. The Department will issue the Ministerial Resolution.

If opposition is declared futile, Management will discharge the guarantee given by the opponent.

Article 35: A temporary franchise may be renewed for a new period, but only if the applicant could not have finished the studies on time due to unforeseen circumstances.

To renew, the applicant must give to Management a supporting declaration as well as a new guarantee thirty (30) calendar days before the expiration date.

The renewal will be determined by Ministerial Resolution within a maximum term of thirty (30) calendar days from the presentation date. If during that period of time there is no pronouncement, the renewal will be automatically approved.

Article 36: Management will rescind the given guarantee if the term for a temporary franchise or its renewal expires and the concessionaire failed to comply with the obligations contracted in his/her application form in reference to the development of studies and the compliance schedule.

Ministerial Resolutions related to temporary franchises' issuance and renewal will be published only once in the official newspaper "El Peruano."

PERMANENT FRANCHISE APPLICATION FORM

Article 37: Applicant for a Permanent franchise will comply with Article 25 of the Law by providing legal address and a supporting declaration for the guarantee mentioned in clause (i) of Article 25. The guarantee's amount will be equivalent to 0.2% of the project's budget, up to 50 ITU.

The expiration date of this guarantee will be extended until the subscription of the corresponding permanent franchise.

Article 38: Management will study the present application form and will issue a report within the next five (5) calendar days.

Article 39: After evaluating the application form, Management will notify the applicant within seven (7) calendar days if the applicant needs to provide more information or correct a defect and/or omission. This notice will be recorded in the Electrical Franchises Record.

Article 40: If the applicant does not provide that information required by Management or if the presented information is not enough, Management will deny the application form, notify the applicant in writing, and note the disposition in the Record. After denying the application, Management will discharge the applicant's guarantee.

Article 41: If the application form is accepted, Management will notify the applicant and register the notice in the Record, which will be published according to Article 25 of the Law within three (3) calendar days from the acceptance date.

COMPETITION PROCEDURES FOR APPLICATION FORMS

Article 42: If new application forms were presented for the same franchise within the period of time indicated under Article 26 of the Law, Management will proceed as follows once the period of time expires:

a) Notify all applicants within the following five (5) calendar days and
b) Determine which competing application forms are valid for admission according to Articles 37 to 41 of the Regulations, except for the publication provisions in Article 41.

Article 43: After evaluating the competing application forms, Management will select the best one, taking into consideration the following judgments:

a) The best use of natural resources;
b) The greatest efficiency in the investment; and
c) The shortest term for finishing the construction.

If the conditions are the same and the applications are otherwise equal, Management will give priority to the applicant who has previously been a temporary franchise holder and was in good standing with his/her obligations.

OPPOSITION PROCEDURES

Article 44: Oppositions to the requested franchise may be presented within fifteen (15) calendar days from the last publication date. Presentation time and date will be written in the Record.

Article 45: Oppositions must be presented along with valid documents and a guarantee equivalent to the same amount mentioned in Article 37 of the Regulations; the guarantee must be valid until the opposition's definitive resolution.

Article 46: Once the term established under Article 44 of the Regulations expires, the opposition must present documentation supporting his/her rights within ten (10) calendar days.

Article 47: If the applicant agrees with the opposition within the period of time indicated in the previous article, Management will reresolve the opposition on the merits of the performed studies within five (5) calendar days. Management will discharge the guarantee of the applicant if the opposition is declared admissible.

Article 48: Management will commence a trial regarding the opposition within eight (8) calendar days. This period could be prolonged to eight (8) additional calendar days; if necessary, a further extension no longer than eight (8) calendar days would be possible.

Evidence must be submitted within the first four (4) calendar days and processed within the next four (4) calendar days remaining in the probation period or its extensions. If during the first four (4) calendar days of the probation period, one of the parties offers evidence, which has to be refuted by the other party, evidence could be presented within the next four (4) calendar days.

Costs involved in processing the evidence will be paid by the offering party.

Article 49: Management's resolutions, communications, and determination regarding opposition procedures are unappealable, except those denying evidence which could be appealed before the Department within five (5) calendar days from notification.

Ministerial Resolutions are unappealable in the administrative proceedings. An appeal does not interrupt proceedings regarding other evidence.

Article 50: When evidence presented by the parties is evaluated, Management will resolve the opposition within five (5) calendar days through Directorial Resolution. This Resolution could be appealed before the Department within five (5) calendar days from notification.

As a last resort, the Department will resolve the appeal within five (5) calendar days from presentation and will issue the respective Ministerial Resolution.

If the opposition is declared inadmissible, Management will discharge the guarantee given by the opponent.

Article 51: Time involved in proceedings and processing the applicant's and oppositions' competing application forms will not be taken into consideration for the purposes mentioned in Article 28 of the Law.

AWARDING OF PERMANENT FRANCHISE AND CONTRACT

Article 52: If there was no opposition or if the opposition was resolved in favor of the applicant in the administrative proceedings, Management will evaluate the application form to determine its legal basis.

Article 53: The Supreme Resolution awarding the franchise must be issued within the period of time mentioned in Article 38 of the Law. The Resolution will assign the official who would have to be present while entering into a contract in the name of the Nation and will indicate the period of time for acceptance of it by the applicant. The period of time could not be longer than ten (10) calendar days from notification.

The resolution must be transmitted to the applicant within five (5) calendar days following its issuance, and it will only go into effect if the applicant accepts it with a written note within the period of time herein indicated.

Article 54: The Department will publish the Resolution of franchise award only once in the Official newspaper "El Peruano" within five (5) calendar days from award.

Article 55: In addition to the requirements of Article 29 of the Law, the successful applicant must deposit in trust the following:

a) A description of the method of fulfilling technical conditions;
b) Acknowledgment of "power limit" as provider of Public Electrical Service for distribution franchises in accordance with Article 2 of the Regulations;
c) A guarantee for an amount equivalent to 0.1% of the construction budget valid until construction is finished and accepted.

Whenever applicable, the established guarantee will be reduced in accordance with Article 37 of the Regulations.

The applicant must deposit the guarantee in the Department along with the written notice of the Resolution awarding the franchise.

Article 56: The franchise's holder will pay the expenses involved in the respective public document and will provide to the Department a witness of this public document. The corresponding resolution's text will be included in the public document.

Article 57: Guarantees mentioned in clause (g) of Article 30, Article 37, and clause (c) of Article 55 of the Regulations will be given through a letter of guarantee issued by a financing or ensuring entity that operates in the country.

The concessionaire may request partial release for the given guarantee as the construction progresses, i.e., when 25%, 50%, and 75% of construction is completed. Management must evaluate and approve the construction's progress before releasing the guarantees.

FRANCHISES AND AUTHORIZATIONS OF HOLDERS' OBLIGATIONS

Article 58: Authorization concessionaires and holders must present monthly to Management the following:

a) Production information;
b) Commercial information; and
c) Power and energy losses.

Management will establish the formats and technological means which should be used by the enterprises to submit that information according to the activity involved.

If other entities require that information, they must request it only from Management; only the juridical, financial, and taxation authorities are relieved of this requirement.

Article 59: The authorization holders and concessionaires which have regulated prices must present to the Committee, within thirty (30) calendar days from the trimester closure, the following information:

a) General balance;
b) Inflow and Outflow money listed by category;
c) Flow of funds; and
d) Other appropriate information.

In addition, authorization holders and concessionaires must also give to the Committee, within the first twenty (20) calendar days of the month of April of every year, the financial status of the previous year's activity which will be properly prepared by a legal adviser.

The Committee will determine the format and technological way which should be used by the enterprises to submit that information.

Article 60: Pursuant to the applicant's proposal, the Department will establish the franchise zone limits for distribution concessionaires of Public Electrical Service at the moment of giving the permanent franchise.

Franchise zones will be determined by the geographic area occupied by the entitlements or urban centers where networks exist or could be established, plus a strip of a minimum width of 100 meters around them.

Article 61: If a distribution concessionaire has completed the amendments mentioned in Article 30 of the Law, the agreement will be modified through the following procedure:

a) The concessionaire will present the respective application form to Management along with plans, final descriptive report, technical specifications, measurements, and the cost of the finished amendments;
b) Management may request to the concessionaire, within five (5) calendar days from the date the application form was presented, more information which should be submitted within the next five (5) calendar days;
c) Management will determine the modifications to be incorporated into the franchise contract. These modifications will be included in the Supreme Resolution which should be issued within thirty (30) calendar days from the application form presentation date. The concessionaire will receive notice of that resolution and Management will publish only once in the Official newspaper "El Peruano" within five (5) calendar days from issuing; and
d) Approved modifications will be formalized in an addendum to the contract, which becomes a public document according to Article 56 of the Regulations.

Article 62: If there were discrepancies regarding transmission capacity or required amendments among the users and the transmission concessionaires for utilizing the transmission systems mentioned in Article 33 of the Law, this discrepancy will be resolve by arbitration.

Investments made by users will be refundable according to Article 84 of the Law.

Article 63: Every year in the month of June, Management will verify the term of contracts mentioned in clause (b) of Article 34 of the Law. To enable Management to comply with this provision, the distribution concessionaires must present to Management copies of supporting documents before June 30th of each year.

Article 64: In order to comply with clause (c) of Article 34 of the Law, the distribution concessionaire must guarantee a regular, timely, competent energy supply and must fulfill the following technical conditions:

a) 3.5% maximum tension fall and 5% fall at the ends of the primary and secondary network, respectively and
b) A nominal frequency of 60 Hz with an instant maximum variation of 1% which must be recovered within a maximum of 24 hours.

Management could change the values mentioned in clause (a) of this article for rural zones.

Article 65: If there are discrepancies regarding the transmission capacity or the required amendments among the users and the distribution concessionaires for utilizing the distribution concessionaires' systems mentioned in clause (d) of Article 33 of the Law, these discrepancies will be resolved by arbitration.

The user must be responsible for the investment cost of the required amendments as well as the compensation for the use of the systems according to Article 140 of the Regulations.

Investments made by users will be refundable according to Article 84 of the Law.

AUTHORIZATIONS

Article 66: A permit will be required if the authorization application form, mentioned in Article 38 of the Law, involves the use of the Nation's natural resources.

Article 67: Management will evaluate the authorization application form and its supporting documents. If it is feasible, authorization will be given through Ministerial Resolution within the period of time established under Article 38 of the Law. The resolution must be published only once, within the next five (5) calendar days from issuance, in the Official newspaper "El Peruano."

When the total installed power is less than 10 MW, the authorizations could be given by the authorities appointed by the Department in the cities located outside the Republic's Capital City.

Article 68: Management must verify the given information as applicant's sworn declaration within the next three (3) months from the authorization's award.

Article 69: Authorizations will be canceled by the Department, by a previous communication to Management, in the following circumstances:

a) If the sworn declarations were found inaccurate after being verified according to the previous article;
b) If a pattern existed of continuous infringements on the Nation's cultural patrimony and/or the observation of the environment at construction time; or
c) If the holder of an interconnected system's central station, after receiving sanctions, fails to operate the facility according to the coordination norms of the respective System Economic Operation Committee (COES).

FRANCHISES DISCLAIMER AND TERMINATION

Article 70: The temporary franchise holder could disclaim it by notifying the Department within thirty (30) calendar days of the anticipated termination. The Department must issue the corresponding Ministerial Resolution within the indicated period of time.

In this case, Management will discharge the guarantee mentioned in clause (g) of Article 30 of the Regulations.

Article 71: The concessionaire could disclaim his/her permanent franchise by notifying the Department within one year of the anticipated termination.

Management will evaluate the disclaimer, and the respective Supreme Resolution will be issued which will accept the disclaimer and determine the effective date. In this case, Management will discharge the guarantees given by the concessionaire.

Article 72: Once the disclaimer is accepted, a Controller for the concessionaire operations will be appointed until the completion of the respective period of time; then the franchise property and rights will be auctioned according to the procedures mentioned in Article 79 of the Regulations.

Article 73: Procedures for terminating the franchise due to the reasons mentioned in Article 36 of the Law will proceed as follows:

a) Management will prepare a file which will state the termination reasons and notify the concessionaire of this fact by notarized letter;
b) Upon the concessionaire's receipt of the notification, the concessionaire may present the information and evidence that he/she consider appropriate within fifteen (15) calendar days from receiving the notarized letter;
c) After Management evaluates the evidence, the termination declaration, if it is justified, will be resolved by Supreme Resolution within forty-five (45) calendar days from the date the concessionaire has been notified; and
d) The termination Supreme Resolution must appoint the respective civil or juridical persons who will be in charge of carrying out the intervention and the public auction mentioned in Article 37 of the Law.

Article 74: The Supreme Resolution regarding termination will be notarized and delivered to the concessionaire or his/her legal representative at the address indicated in the file within forty-eight (48) hours from issuance; at the same time, it will have to be published for two consecutive days in the official newspaper "El Peruano."

Article 75: The declared termination immediately determines that the concessionaire's rights which were established by the Law and in the franchise contract have ceased. Management will discharge the valid guarantees.

Article 76: The controller in charge of the intervention mentioned in clause (d) of Article 73 of the Regulations will determine:

a) The administrative character actions that allow the regular franchise's operation and
b) The technical character actions that allow a timely and effective rendering of services.

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The measures dictated by the Controller for all the estates of the intervened entity must be obeyed. The legal representative of this entity may request a reconsideration before Management. Management has five (5) calendar days to resolve this issue.

The entity subject to this intervention will bear the intervention's total expenses.

During intervention period, if the intervened entity becomes insolvent and is unable to comply with the obligations imposed by the Controller, the Nation may take full and direct administration of the franchise's properties while it is transferred to a third party.

Article 77: The franchise holder may contradict the termination declaration before the Judiciary in any appropriate manner. The demand must be filed within thirty (30) calendar days which will be counted from the termination resolution's notification date.

As a last resort, the intervention will continue until the cause is definitively resolved through judicial resolution.

Article 78: The Department will publicly auction the franchise's properties and rights after the franchise's termination is definitively sanctioned in accordance with the previous articles.

Article 79: In order to carry out the auction of the franchise's properties and rights, the Department must comply with the following procedure:

a) The Department will appoint an adviser entity from its list of prequalified adviser entities, which will value the franchise's properties and rights and will determine the respective basic amount. The adviser entity must be appointed within ten (10) calendar days following the termination's sanction or disclaimer. The valuation must be completed within forty-five (45) calendar days;
b) The Department will issue, directly or indirectly, the principles that will rule the auction. These principles will have the reference terms for the technical and economic proposals and the required guarantees for intervening in the process. This procedure and the franchise's valuation procedure will be done concurrently;
c) Once it has complied with the previous clauses of this Article, the Department will order publication of an auction notice in the official newspaper "El Peruano" and other national newspaper during five (5) consecutive days;
d) The interested parties will present publicly their technical proposals which must be evaluated by the Department within thirty (30) calendar days from the time of the last publication mentioned in the previous clause; and
e) Among the interested parties who have obtained technical prequalification, the Department will make a public award to the bidder that presents the best economic proposal.

TITLE IV

SYSTEM'S ECONOMIC OPERATION COMMITTEE

GENERAL ASPECTS

Article 80: The following conditions are required simultaneously in order to constitute a COES in an interconnected system:

a) The system must have more than one generating entity with the characteristics mentioned in clause (a) of the following article and

b) The system's total installed power must be at least 100 MW.

If two electrical systems with COES were interconnected, the COES of the bigger installed power system would continue functioning. The other system would be incorporated into this one.

Article 81: Entities forming a COES must be:

a) Generating entities whose installed power is more than 2% of the interconnected system's real installed power and whose generating entities commercialized more than 50% of their energy and
b) Holders whose entities participate in the Principal Transmission System.

The generating entities that do not individually comply with the condition mentioned in clause (a) of the previous article may participate in COES by creating a partnership as long as their combined trans reach the required limit. Such an entity will appoint only one representative for all of them.

Article 82: Subject to the previous article, central stations' owners whose annual commercialized production of electrical energy is under contract with other COES generating enterprises could be exempt from participating in COES. In this case, the COES, through the generator's constituent party, will coordinate such generating units.

Article 83: The coordination dispositions emitted by the COES, in accordance with the Law and the Regulations, will be obligatory for all the constituent parties for their own units as well as for those units under contract with third parties.

ORGANIZATION

Article 84: The COES is composed of a Directory and Operation Management.

Internal operations of COES will be ruled through an ordinance which will be notified to Management and Committee.

Article 85: The Directory is the highest body of COES decision making, and it is responsible for watching over the fulfillment of the disposition mentioned in the Law, the Regulations, and the Ordinance.

The Directory will consist of a representative of each constituent party.

The Directory's Presidency will rotate among its constituent parties according to the conditions established by the Ordinance.

Article 86: The Directory will have the following responsibilities:

a) Name the Operation Management or put a juridical person in charge ;
b) Approve the reports and studies established in the Law;
c) Approve the COES Ordinance and its modifications;
d) Resolve the conflicts which were brought under its consideration by the Operation Mansgement;
e) Approve the COES annual budget; and
f) Perform other duties as directed by the Ordinance and in accordance with the Law and the Regulations.

Responsibilities indicated under clauses (a), (c), and (d) must be approved unanimously.

Even when a juridical person heads the Operation Management, the constituent parties of COES are not exempt from their responsibilities.

Article 87: The COES budget will be covered by the constituent entities: contributions from each will be proportional to the incomes, derived from previous energy and power sales, income rate, and connection tolls.

Article 88: The disagreements and conflicts resulting from the application of the Law, the Regulations, or the Ordinance which cannot be resolved by the Directory will be taken to arbitration.

Article 89: In resolving disagreements mentioned in Article 88 of the Law, the Directory will decide by majority vote. The President will break any ties.

Article 90: The Directory will hold regular monthly sessions and extraordinary sessions upon the request of two or more directors.

Article 91: Operation Management, the COES executive body, will have the following responsibilities:

a) Develop short-term, medium-term, and long-term operation programs for the interconnected system and communicate them to its constituent parties in order to fulfill them;
b) Ensure the short-term operation programs' fulfillment and enforce compliance with the corrective measures;
c) Coordinate general maintenance installation and enforce compliance with the necessary measures by the constituent parties;
d) Estimate marginal costs for short-term electrical energy systems;
e) Determine and value the energy transfers resulting from operation of the system at a minimum cost among the constituent parties of COES. These transfers will be made with the system's short-term marginal costs;
f) Calculate the power and energy of each system's generating units;
g) Determine and value the power transfers among the constituent parties at peak power prices;
h) Propose to the Directory the modifications to the Ordinance;
i) Develop and propose to the Directory the COES budget;
j) Develop studies for securing rates and distributing them to the Directory;
k) Develop the regular reports established by the Law and Regulations;
l) Appoint members of the Technical Committee as needed; and
m) Perform other responsibilities ordered by the Directory.

PROCEDURES FOR OPERATION'S OPTIMIZATION

Article 92: Operation of the generating units and transmission systems by the entities that form a COES will be performed directly by its holders. The constituent parties must act in accordance with the programs established by Operation Management.

Deviation from Operation Management's schedule is prohibited unless disconnection from the system occurs without due warning because of accidental or unforeseen circumstances. In this case, the system's operation will be directly coordinated by constituent parties of COES in accordance with the Ordinance.

Article 93: Operation Management will develop short-term scheduling of operations on a daily and weekly basis. It will indicate the energy block for regular days of consumption and the average generation by hour of the different central stations for each of the 24 hours of the next day.

Article 94: Medium- and long-term scheduling will take into consideration the central stations' monthly production for the next 12 and 48 months, respectively. The production will be expressed in energy blocks for regular days of consumption.

The medium- and long-term scheduling must be updated by Operation Management each month and every six months, respectively.

If flow forecast systems are used, the estimation manner will be established in the Ordinance. This estimation will depend on measurable variables which will be verified by the Committee.

Article 95: The scheduling mentioned in Articles 93 and 94 of the Regulations will be originated from planning studies of the operation. Such studies would help to minimize the operation's cost of generation and transmission installations and would also serve to preserve the system's security and quality.

Article 96: The information utilized to develop the operation's scheduling mentioned in the previous article will be updated as often as it is established under the Ordinance.

Article 97: COES constituent enterprises will, in accordance with the terms indicated under the Ordinance, give the following information:

a) Dams' water levels;
b) Present and past critical flows at the hydroelectric central stations;
c) Stored fuel at the central stations;
d) Generating unit's performance;
e) Transmission system's topology and characteristics; and
f) Other information of a similar nature which is part of the constituent parties' agreement.

Article 98: The Operation Management will determine the short-, medium-, and long-term demand for power and energy by taking into consideration its geographic, seasonal, daily, and hourly distribution.

The construction scheduling to be utilized will be in accordance with the one specified under the Department's Reference Plan as established under Article 47 of the Law.

Rationing cost will be determined by the Committee, and the discount rate will be the one established under Article 79 of the Law.

Article 99: The information related to fuel prices and quality at thermoelectric central stations for the first twelve month of planning will be given to the Operation Management by the generating entities' holders along with a supporting declaration of the given values.

Operation Management will utilize the information as is for a minimum of two months. Any modification requested by a constituent party must have the approval of all the constituent parties.

Operation Management will develop the information for the rest of the planning period.

POWER AND ENERGY TRANSFERS

Article 100: Peak power transfers, active energy, and reactive energy among constituent parties of COES will be expressed in kilowatts, reactive kilovolt-amperes, and kilowatt-hours, respectively.

Article 101: No constituent party of COES may contract with its users for more energy and power than its own and the amount it controls under contract with third parties, whether it is a COES member or not.

Article 102: Whether it is a COES member or not, each constituent party of COES should be able to provide during each calendar year from its own energy or from energy obtained by third party contract the energy demand he/she has under contract with the users.

The annual demand of each constituent party of COES is determined by adding the energy of its own users and other constituent parties of COES. This demand will consider the transmission losses percentage established by the Ordinance.

When consumers are supplied simultaneously by two or more generators, COES should verify the total supplied energy by keeping the same monthly average for each of the providers. If someone has a different contract, it must be adjusted in accordance with this article.

Each constituent party must communicate to COES his/her compromise demand for the next calendar year before October 31st of the previous year and must also provide the documentation indicated in the Ordinance.

Article 103: The Energy of one constituent party of COES will be calculated by taking into consideration the following:

a) Energy supplies from the hydroelectric central stations, taking into consideration the 95% maximum excess of a hydrologic year. The Committee will determine the amount for that year; and
b) Energy supplies from the thermoelectric central stations, taking into consideration the average unavailability set by the Committee in accordance with clause (g) of Article 22 of the Regulations.

The Committee will set the average unavailability factors for each type of central station by taking into consideration the failure and maintenance periods as well as national statistics; if national statistics are not available, the international ones will be used. The Committee will also establish the minimum and maximum values of the unavailability factors for each type of central station.

Article 104: COES will verify, for each generator, that the adding of the constituent entities and third party contract energy covers the annual minimum energy demand contracted by the users.

This verification will be done before November 30th of each year, and it will be communicated to all constituent parties. Those that do not fulfill the mentioned conditions must correct such situations before December 31st.

Article 105: COES will calculate for each hour or group of hours the short-term marginal cost of the system's energy in the substations' bars where energy deliveries and withdrawals take place.

The energy short-term marginal cost will be calculated, in accordance with definition 5 of the Law's Appendix, by taking into consideration the average cost of the electric system during an hour while supplying an additional energy unit in the respective bar, considering the optimum operation determined by COES.

Article 106: The required energy short-term marginal costs will be calculated with the same information and mathematics models used in operation's planning and scheduling, and they will be communicated to constituent parties of COES along with the planning.

The marginal costs considered in placing a value on the transfers among constituent parties of COES will be the ones corresponding to the system's actual operation in the time period.

When a thermal central station is marginal, the short-term marginal cost may not be lesser than the variable cost of that central station under any circumstances.

In every circumstance where rationing is required, the energy short-term marginal cost will be equal to the rationing cost.

If a flowing condition reached any system, the marginal cost would be determined by only taking into consideration the compensation mentioned in Article 213 of the Regulations and the variable cost incurred by the presence of solid in suspension in the turbine water.

A "flowing condition" occurs when water collected behind a certain dam flows because of lack of enough storage room available and when the associated central stations have unused generating capacity and do not have in the system any efficient thermoelectric unit.

Article 107: The valuation of the energy transfers among the constituent parties which is produced by the system's economic operation does not include the contracts previously established; such valuations will be established and checked by COES every month, in accordance with the following procedure:

a) Measurement and/or estimations will be done in order to determine the energy deliveries and withdrawals of each constituent party;
b) The energy delivery and withdrawal by every constituent party will be valued by multiplying it by the respective short-term marginal cost; and
c) All the valued deliveries and withdrawals that have occurred in the system during the month will be added for each constituent party. The deliveries are expressed with a positive sign and the withdrawals with a negative sign.

The resulting value, either positive or negative, will be the creditor or debtor net balance for each constituent party.

Article 108: Within seven calendar days of the next month each constituent party who gets a negative monthly net balance will pay that amount to all constituent parties who have a positive balance in the proportion in which each one of the constituent parties participate in the positive balance of each month.

COES will also determine the positive energy transfers and the respective payments among the constituent parties according to the procedures established under the Ordinance, considering the equity judgments for investment in reactive compensation equipment.

Article 109: The peak power total transfer among one constituent party of COES and the rest will be equal to the difference between its peak power demand and its firm power.

The peak power demand of a constituent party will be calculated by COES, considering the net hourly medium demand in use by its clients in the electrical system's annual rush hours, the transmission losses, and an estimation of the diversity factor.

"Rush hour" refers to that hour of the year in which the electrical system's maximum power demand takes place. The electrical system's hourly maximum demand of power, as well as the probable period of time of rush hour, will be estimated by COES before January 1st of each year.

The firm power of a constituent party will be calculated as the addition of the firm power of their own generating units and units of third party contracts.

Article 110: The firm power of each system's hydroelectric central stations will be calculated in accordance with the following procedure:

a) The system's charge duration curve during the six months of the year of less flowing to the hydroelectric central stations will be determined for a hydrologic year with a 95% of excess probability. It will be assumed that the system's rush hour takes place in that six (6) month period;
b) The system's thermoelectric central stations are located in the charge duration curve from the bottom to the end. They are ordered according to their growing variable costs, taking into consideration their firm powers, which are calculated in accordance with Article 111 of the Regulations. The part of the curve that is not covered will be called the "residual charge duration curve";
c) The residual charge duration curve will then be represented by three power horizontal blocks with the following characteristics:

i) The first block, from the bottom to the end, is called "bottom block"; its duration is six (6) months with 24 hours daily;
ii) The second block, from the bottom to the end, is called "end block"; its duration is two (2) months with 8 hours daily;
iii) The third block is called "instant end block"; it has a null duration and its power is determined by the difference between the peak power of the residual charge duration curve and the addition of the bottom and end blocks' power.

The power of bottom and end blocks is calculated in such a way that the energy of these blocks will be the same as the residual charge duration curve's total;

d) The generation of each hydroelectric central station in passing, or the one that is not regulated at the dam central stations, which is defined for the hydrological year with a 95% probable excess, will be exclusively located in the bottom blocks;
e) The generation of each hydroelectric central station which has daily regulation ability to bring power during eight hours to the end block, determined for the hydrological year with a 95% probable excess, will be placed tentatively at the end block.
After this placement, the part exceeding the block's total power will be cut of each central station in proportion to its tentative supplies to that block. The exceeding part will be relocated to the bottom block;
f) If there were a total general energy cut, the estimation would be done by varying the excess probability until it reached the equilibrium with the system's energy demand. The firm power's estimation for the thermoelectric central stations would also be adjusted to the new excess probability;

g) If there were energy excesses, the estimate would also be done by varying the excess probability until the system's energy excesses were neutralized without surpassing a level of 98%.
Even if the level were reached and there were still energy excesses, the supplies of each hydroelectric central station would be proportionally reduced. Likewise, the firm power's estimation of the thermoelectric central stations would be adjusted to the new excess probability;
h) Hydroelectric central stations' power that is not placed in the bottom and end blocks will be proportionally placed in the instant end block; and
i) The firm power of each hydroelectric central station will be equal to the sum of the power placed in the bottom, end, and instant end blocks.

Article 111: The firm power of each one of the system's thermoelectric central stations will be calculated according to the following procedure:

a) The probability of the total power that all the thermoelectric generating units are able to guarantee in rush hour oscillates between 90% and 98%;
b) The same calculation is repeated, subtracting the thermoelectric generating unit whose power is being evaluated;
c) The difference between the total power obtained in clause (a) and the power obtained in clause (b) is calculated; the difference is called evaluated unit's preliminary firm power;
d) The difference between the sum of the preliminary firm potencies of all system's thermoelectric generating units and the total power calculated in accordance with clause (a) is calculated; the difference is called total residue; and
e) The firm power of each generating unit is calculated by subtracting a part of the total residue from its preliminary firm power. Such part will be applied proportionally to the difference between the installed power and the preliminary firm power of each unit.

COES will define the mathematics models to be utilized for calculating the firm power and the procedures to obtain the availability values during rush hours. In doing so, it may use national or international statistics and/or the characteristics of each generating unit by having operation evidence of such units.

Article 112: The peak power transfers among constituent parties will be valued by taking into consideration the buses' peak power prices that correspond to the substations' buses where those transfers are originated.

Article 113: The calculations for the peak power transfers for each year will be performed in the month of December of the previous year, considering the maximum demands foreseen for each constituent party.

COES will communicate before December 31st the payments for power that must be paid monthly among the constituent parties in the next year. These payments will be made within the first seven (7) days of each month of the present year.

Once the electrical system's actual maximum demands are complete, COES will recalculate the peak power transfers. The Ordinance will establish the procedures for canceling these differences for the constituent parties.

Article 114: Energy's short-term marginal costs and prices used to value the electricity transfers among constituent parties for peak power in buses will be the ones corresponding to the buses with the highest tension at the substation where the transfers occurred.

Article 115: The general maintenance of the generating units and the electrical system s transmission equipment will be coordinated by COES pursuant to Article 116.

"General maintenance" refers to situations where the generating unit or main transmission equipment must be removed for more than 24 hours. The main transmission equipment will be qualified by COES.

Article 116: COES will coordinate the general maintenance according to the following procedure:

a) COES will develop for each calendar year, with the help of the information given by the constituent parties, a preliminary general maintenance program that minimizes the annual cost of the electric system's operations and rationing. This program will be communicated to the constituent parties no later than October 31st of the previous year;
b) Each constituent party will deliver his/her comments to COES about the preliminary program no later than November 15th, indicating the alternative period for the general maintenance of the units and transmission equipment;
c) Upon evaluation of the alternative periods proposed by the constituent parties, COES will establish a permanent program with the same minimization conditions indicated in clause (a) of this article. The program will be communicated to the constituent parties no later than November 30th; and
d) The constituent parties must perform the general maintenance strictly in accordance with the permanent program. The constituent parties will notify COES within seven (7) calendar days in advance of the removal of the generating unit or the transmission equipment and the ending of the maintenance.

The permanent program may be modified by COES only when special circumstances require it.

INFORMATION PREPARED BY COES

Article 117: COES must keep a file with all the electrical system's daily operation programs mentioned in Article 93 of the Regulations and with the actual operation performed every day. COES will also keep for each generating unit hourly power statistics for unavailability considering the preventive maintenance and the failures.

Article 118: COES must send monthly to the Committee a report of the previous month's activities with the following information:

a) Short-term marginal costs as well as the values of its maximum incidence variables;
b) Peak power and energy transfers in each bus among its constituent parties as well as the respective payments;
c) The most important deviation synthesis among the scheduling and the actual operation of the generating units;
d) Important facts that have taken place in operating the system, such as flow at hydroelectric central stations; failures in generating units and transmission systems; and
e) Operation program for the next twelve months detailing the operation strategy of the dams and the estimated monthly generation of each central station.

The report must be sent within seven (7) calendar days of the next month.

Article 119: Before March 15th and before September 15th of each year, each COES must provide to the Committee a technological-economic study to determine the power and energy

prices in bars. The report must be in accordance with Articles 47 to 50 of the Law, and it must be written in detail to be able to justify, among other aspects, the following:

a) The extension of the power and energy demand of the electric system;
b) Construction scheduling for generation and transmission;
c) Fuel, rationing, and other variable costs;
d) The discount rate used for calculations;
e) Short-term marginal costs of planned energy need and production;
f) Peak power and basic energy prices;
g) Marginal loss factors of power and energy;
h) The total transmission cost separate from the investment, operation, and maintenance costs for the Main System as well as for the Secondary Transmission Systems;
i) Resulting values for prices in buses;
j) The proposed readjustment formula; and
k) The estimated income rate for the Primary and Secondary Transmission Systems to determine the connection and secondary tolls.

Article 120: COES must send annually to the Committee before December 31st a report for the next year with the following information:

a) The energy balance for each constituent party mentioned in Article 102 of the Regulations and
b) The firm power and power payments of each constituent party.

Article 121: COES must notify the Committee about the modifications done to the Ordinance and changes introduced in the mathematics models and programs oriented to the operation planning and marginal costs calculations, in accordance with Article 55 of the Law.

The models to be used for calculating the rate will be those handed to the Committee sixty (60) calendar days in advance of the dates indicated in Article 119 of the Regulations.

TITLE V

ELECTRICITY'S PRICE SYSTEM

Article 122: In those cases where the Committee has made comments to the cost studies presented by COES or the concessionaires for rate fixing and those comments have not been resolved by the Committee, the Committee will establish the final values and fix the rates within the margins indicated in Articles 53 and 71 of the Law.

GENERATOR MAXIMUM PRICES TO A PUBLIC SERVICE DISTRIBUTOR

Article 123: The projection of the demand mentioned in clause (a) of Article 47 of the Law will take into consideration the relationship between the electrical demand and economic and demographic factors.

The annual growth rate of the demand projection must keep a relationship with the rate the previous 48 months and consider the relevant factors that could affect them.

Article 124: The operation program mentioned in clause (b) of Article 47 of the Law will be determined according to the following aspects:

a) The hydrologic behavior for the analysis period will be estimated through mathematics models based in probabilities taking into consideration the available statistics;
b) Stored water and free availability in the dams with hourly, daily, monthly, annual, and plurianual capacity will be recognized; and
c) The fuel cost will be taken from the projections published by a specialized entity with a top international reputation.

Article 125: The energy's basic price mentioned in clause (d) of Article 47 of the Law will be calculated through the following procedure:

a) Calculate the actual value of the demand product by the marginal cost of each projected period;
b) Calculate the demand's actual value of each projected period; and
c) Calculate the quotient of (a) and (b).

The actual value mentioned in clauses (a) and (b) will be calculated by using the discount rate mentioned in Article 79 of the Law and a number of periods of 48 months.

Article 126: The investment annuity mentioned in clause (e) of Article 47 of the Law will be calculated by multiplying the investment amount by the capital recovery factor which was obtained with the discount rate mentioned in Article 79 of the Law and by a useful life of 20 years for the generation equipment and 30 years for the connection equipment.

The investment amount will be determined by considering:

a) Equipment cost, freight, insurance, and all applicable import taxes (equivalent to DDP value of INCOTERMS);
b) System's installation and connection cost; and
c) Personnel cost, including benefits packages.

To calculate this investment amount, consider all applicable taxes that do not produce fiscal credit.

Article 127: Calculation of the power and energy loss factors mentioned in Article 48 of the Law will include consideration of the following aspects:

a) Determine the factors for peak power and for energy's hourly block, and
b) Consider the system's actual capacity to calculate the power flow; consideration of the reference buses will be included to determine the power and basic energy prices.

In the cases where transmission systems exist and where they are not adapted economically to the demand, they will produce discontinuance in an interconnected system; so the loss factor will be calculated by utilizing the actual characteristics of that transmission system.

Article 128: To determine the prices in the bars joined to the Main Transmission System through a secondary system as mentioned in Article 49 of the Law, the Committee will comply with the following procedure:

a) The Committee will determine the energy and marginal power losses for the section of the transmission system that joins the buses to the Main System;
b) The Committee will determine the energy price in buses by applying to the price of the Main System's buses a factor which includes the marginal energy losses; and

c) The Committee will determine the price of peak power in buses by applying to the price of the respective business the Main Transmission System a factor which includes the marginal power losses. To the resulting value a toll will be added covering the economically adapted Secondary Transmission System s medium cost.

The toll will be calculated as mentioned in Article 139 of the Regulations.

Article 129: In order to be able to do the comparison mentioned in Article 53 of the Law, the enterprises must present to the Committee the supporting information in accordance with the form and period of time indicated by the Committee. Such a comparison will be performed by taking into consideration the tension level and complying with the following procedure:

a) For each user that is not subject to price regulations, a median energy price will be determined by taking into consideration its consumption and the last six months' total invoices;
b) A prudent average price will be determined with the resulting average price and its respective consumption;
c) For the same users mentioned in clause (a) of this Article, the theoretical energy price which results from applying the prices of peak power in buses to their respective consumptions will be determined;
d) With the base of the consumption and the theoretical prices obtained in the previous clause, a theoretical prudent average price will be determined; and
e) Energy prices in buses will be accepted if the value obtained in clause (d) of this Article does not differ more than 10% from the value obtained in clause (b) of this Article. Otherwise, the Committee will proportionally modify those values until reaching such a limit.

Article 130: For the purposes of Article 56 of the Law, "Isolated Systems" will refer to all systems that do not fulfill the conditions established in Article 80 of the Regulations.

For rate determinations, the Committee will only determine the rates in buses addressed to public service' users by complying with the same procedures mentioned in Title V of the Law and Regulations.

The Committee will take over the task assigned to COES. The Committee will use the generation and transmission holders' information.

Article 131: The compensation due to rationing mentioned in Article 57 of the Law, will be assumed by the generating enterprises committed to the generating deficit. Such a compensation will be paid through a discount in the invoice of the next month from when the rationing occurred.

The amount of energy to be compensated will be calculated as the difference between theoretical consumption and the recorded energy for the month. The theoretical consumption will be determined by taking into consideration the contracted power and the user's regular charge factor. If the resulting value is negative, no compensation will result.

The price of energy to be compensated will be valued by taking into consideration the difference resulting between the rationing cost and the respective energy price in bar.

Discounts in the power fixed charges will be paid proportionally to the number of interrupted hours relative to the number of the monthly total hours.

The distribution enterprises will pay the compensation to their users by following the same procedures mentioned in Article 86 of the Law.

MAXIMUM TRANSMISSION PRICES

Article 132: The conditions and judgments to be considered in determining the Main Transmission System will be the following:

a) High or very high tension installations;
b) Bi-directional energy flow; and
c) The usage regulations.

The main transmission systems will be evaluated and redefined in accordance with the Law and any pertinent modifications at the end of each four-year period or upon the addition of a new central station to the system.

Article 133: The measurement corresponding to the real value transported by the system will be considered in determining the Main Transmission System's economically adapted system.

Article 134: The investment annuity mentioned in Article 59 of the Law will be calculated by multiplying the investment amount which was determined in accordance with Article 133 by the capital recovery factor with a useful life of 30 years and the discount rate mentioned in Article 78 of the Law.

Article 135: The income rate for the Main Transmission System mentioned in Article 60 of the Law and the income rate of the Secondary Transmission System will be calculated by COES through the following procedure:

a) COES will determine the maximum power and energy for each generator given to each buses in the system;
b) COES will determine, by applying the rates in bar, the total amount resulting from the valuation of all maximum power and energy given to each bar;
c) COES will determine for each generator the maximum power and energy withdrawn from each buses of the system;
d) COES will determine the total amount resulting from the valuation of all maximum power and energy withdrawn from each buses by applying the rates in bar; and
e) The income rate will be the difference resulting from the amounts obtained in clauses (d) and (b) of this Article, only if the income rate is positive.

Monthly payments for each generator will be made to the owner of the Main Transmission System within fifteen (15) calendar days following COES liquidation.

Article 136: Following the procedure mentioned in Article 135, COES will calculate the estimated income rate required to determine each transmission rate for the next twelve-month, and COES will utilize the same information used to calculate the rates in bar.

The result for each generator must be totaled in order to determine the system's total estimated income rate.

Article 137: The connection toll will be obtained by subtracting the total transmission cost from the Main Transmission System's total estimated income rate determined in accordance with Article 136.

The connection toll will be divided among the generators in proportion to their firm power. The resulting amount for each generator will be divided in twelve parts which will be paid monthly to

the Main Transmission System's owners. The readjustment formulae mentioned in Article 61 of the Law will be applied to the payments at the same time of paying the income rate.

Article 138 In accordance with Article 62 of the Law, "prevailing energy flow" refers to the electricity transmission in excess of 90% of the energy transported by that system in the same direction. For that purpose, the annual energy flow that occurs in one hydrologic year with an average excess will be assumed.

Article 139: The compensation mentioned in Article 62 of the Law for the Secondary Transmission Systems will be calculated for each section and it will be paid to their owners through two categories: income rate and Secondary toll.

The income rate will be calculated in accordance with Article 135 of the Regulations.

The secondary toll is the difference between the total transmission cost of the Secondary Transmission System and the respective income rate. Such a toll will only be assumed by the users in proportion to the annual withdrawal of the peak power from each buses.

The Committee, when fixing the transmission rates, will determine the Secondary System's transmission total cost by taking into consideration the income rate given by the respective COES and making estimates for the next twelve months. The Committee will also fix and publish the Secondary Toll and its readjustment formulae.

The generator must pay the toll to the Secondary Transmission System's owners in accordance with the final part of Article 137 of the Regulations.

Article 140: The parties will agree to the compensation for the distribution systems mentioned in Article 62 of the Law by taking into consideration a similar system to the one established by the Secondary Transmission System.

Article 141: The connection toll, the secondary toll corresponding to the Secondary System, and the readjustment factors fixed by the Committee will be published only once in the official newspaper "El Peruano" within fifteen (15) calendar days from validation.

MAXIMUM DISTRIBUTION PRICES

Article 142: The use costs that will be taken into consideration for calculating the distribution tax are the unitary invoicing costs, which involve its reading, processing, issuing, and distributing, including the percentage of involvement in the enterprise.

Article 143: The standard losses to be taken into consideration for calculating the distribution tax will be the material and commercial losses.

Material losses will result from calculating the maximum tension fall mentioned in clause (a) of Article 64 of the Regulations.

Commercial losses can not exceed 50% of the material losses.

Article 144: The investment annuity mentioned in Article 65 of the Law will be calculated by multiplying the capital recovery factor for a useful life of 30 years, the discounting rate established in Article 79 of the Law, by the investment amount.

Article 145: The Committee will use a legal adviser to determine the characteristics, the number of Typical Distribution Sectors, and the ponderation factors to be used for rate fixing.

The Committee will submit to Management the final results. Management will establish the Typical Distribution Sectors within fifteen (15) calendar days from the proposal's presentation. If Management does not pronounce a judgment after the term has expired, the proposal will be approved.

Article 146: Cost studies to determine the distribution tax for each rate fixing will include the following procedures:

a) A consultant enterprise can not analyze more than one Typical Distribution Sector;
b) The Committee will select the franchises to evaluate each Typical Distribution Sector; and
c) The Typical Distribution Sectors chosen for a rate fixing cannot be used for the next rate fixing unless they are unique.

Article 147: The Committee will determine the distribution tax for each franchise by adding the distribution tax' on all products of each Typical Section. In this case the distribution tax will be determined by the ponderation factor.

The resulting taxes will take into consideration the coincidence factor which will adjust the franchise's total demand to the amount of contracted power among its users and the corresponding losses. Such a tax will be expressed as a charge for power unit.

Article 148: To calculate the internal return rate, the concessionaires must submit to the Committee the information mentioned in clauses (a) and (b) of Article 70 of the Law.

The Committee will verify and qualify the given information and will determine the amount to be included in the respective calculations.

Article 149: To calculate the internal return rate, the Committee will proceed as follows:

a) The Committee will group the franchises which have a distribution tax that does not differ in more than 10% and
b) The Committee will obtain, for each group, the total income values, total cost values, and new replacement values of the franchises which are part of that particular group.

The investment, income, and cost values will only take into consideration the values related to the Public Electrical Service.

Article 150: The following cost will be included to calculate the internal return rate:

a) Energy acquired from third parties;
b) Personnel expenses, including benefit packages;
c) Supplies;
d) Services handled by third parties;
e) Different management loads; and
f) Standard losses which are calculated in accordance with Article 143 of the Regulations.

The Committee will evaluate and qualify these costs. Such costs must correspond to international standard values, and a direct causal relationship must exist with the rendering service.

Article 151: To be published the permanent rate and its adjustment formulae mentioned in Article 72 of the Law must be structured, as tax formulas which indicate in an independent and explicit manner the following components:

a) Buses rate
b) Secondary Transmission System's costs, if applicable; and
c) Distribution tax.

Article 152: The Committee is required to publish the tax formulae mentioned in Article 151, only once. Publication will occur in the official newspaper "El Peruano", within fifteen (15) calendar days from validation.

At the same time, the distribution concessionaires must publish the rates, expressed in actual values, in a main newspaper of the town where the franchise is located. These rates result from applying the rate formula issued by the Committee . The distribution concessionaire must exhibit these values in its office.

Article 153: Within six months from distribution rates' expiration date, the Committee must notify the distribution enterprises about the reference terms for the performance of the studies of costs, the definition of the Typical Distribution Sectors, and the relationship among the approved adviser enterprises.

DIFFERENT RESOLUTIONS ABOUT RATES

Article 154: The following factors will be taken into consideration for readjusting all rates:

a) Wholesale price index;
b) Payroll general average;
c) Fuel price;
d) Custom duties;
e) International price for copper and/or aluminum; and
f) Type of exchange.

Article 155: The reconsideration application forms mentioned in Article 74 of the Law may be utilized by Management in the name of the users.

The reconsideration form must be presented along with the technical studies and/or supporting documentation.

Article 156: In accordance with Articles 54 and 75 of the Law, the Committee is not responsible for fixing the rates under the terms indicated in the Law and Regulations, even if the COES or concessionaires have complied with the proper delivery of the documentation. In this case, the enterprises must publish the rates fifteen (15) calendar days before the rates are put into effect.

Article 157: If a COES or any concessionaire does not comply with the presentation of studies and the information required for rate fixing within the period of time indicated in the Law and Regulations, the Committee will establish the rates.

Article 158: The construction period to establish the New Replacement Value will be determined by taking into consideration the construction magnitude and geographic conditions.

Article 159: The concessionaire must notify the Committee, within the period of time establish by the Committee, about all investments in distribution construction which increase the new replacement value.

The Committee may deny the incorporation of tangible property and/or rights that the Committee considers unnecessary and/or excessive. The Committee will notify the concessionaire of the denial within three (3) months. Lack of notification will mean that the property and/or rights are incorporated.

To exclude unused installations from the new replacement value, the concessionaire will notify the Committee annually about the withdrawal of such installations from rendering service.

Article 160: The discount rate, mentioned in Article 79 of the Law, may only be revised when the factors that affect its determination have been altered in such a manner that would justify the modifications.

The Committee, by its own will or by request of the concessionaires, may order the development of studies in accordance with the procedures mentioned in the Law.

Article 161: Entities dedicated to generation, transmission, and distribution activities of electrical energy are authorized to receive payment for its credit balances, the compensatory interest rate, and the late charges mentioned in Article 176 of the Regulations.

These entities must also provide to their users these same rates even when the users have not complied with the compensations and time periods of time established in the Law and Regulations.

Article 162: Every six months, the Committee will issue a technical report with the information mentioned in Article 81 of the Law. This report will be sent to all institutions of the electrical subsection. At the same time, the Committee will publish only once a summary report in the official newspaper "El Peruano."

TITLE VI

ELECTRIC PUBLIC SERVICE RENDERING

Article 163: To obtain an electrical energy supply, the user will apply for service to the concessionaire and will pay the installation fees involved in the installation itself, measurement and protection equipment, and the box. This investment twill be recorded in favor of the user who must pay to the concessionaire every month under a different category the maintenance cost and an amount that allows its reset within thirty (30) years.

Article 164: The concessionaire will not supply energy to those users who are late in payments for energy supplied to the same premises or other premises located in the franchise.

Article 165: When a user obtains an Public Electrical Service supply, he/she must sign a contract with the concessionaire. The contract will be recorded and will have the following specifications:

a) Concessionaire's name or business name;
b) User's name or business name;
c) Location where the supply will be used and the premises where the service is addressed;

d) Users classification in accordance with the type of supply;
e) Supply's characteristics;
f) Contracted power and expiration date;
g) Applicable rate; and
h) Other important conditions mentioned in the Law and Regulations.

The concessionaire must provide a copy of the contract to the user.

Article 167: Once the amount users must pay is determined, the payment mode and the refund date must be established within thirty (30) calendar days. If the money is not refunded at the indicated time, the concessionaire must pay interest and the late charge mentioned in Article 176 of the Regulations until the service is canceled.

Article 168: If there were a total or partial supply interruption as mentioned in Article 86 of the Law, the distribution concessionaire must compensate the user according to the following conditions:

a) The concessionaire must record every interruption period longer than four consecutive hours. The user must notify the concessionaire in order to obtain the compensation;
b) The amount of energy to be compensated will be calculated by multiplying the user's theoretical consumption by the quotient resulting from the number of hours of interruption and the number of the total hours for that month;
   The theoretical consumption will be determined in accordance with the second paragraph of article 131 of the Regulations; and
c) The amount to be compensated will be calculated by applying to the amount of energy mentioned in clause (b) of this article the difference between the rationing cost and the user's energy rate .

The discount in the fixed charges of power will be applied to a proportional part of the interrupted hours of service and the total hours of service for the month.

The user will be compensated through a discount in the user's invoice in the month from the following interruption.

Planned interruptions about which the user was notified within 48 hours in advance will not be considered.

Article 169: Management will evaluate and qualify the unforeseen circumstances mentioned in Article 87 of the Law.

Article 170: The delivery point for low tension supplies is the electrical connection between the connection and the concessionaire's installations.

In cases of medium and high tension, the concessionaire will establish the delivery point with the user. This delivery point must be recorded in the supply contract.

Article 171: The measurement equipment must be sealed by the concessionaire at time of installation and every time the concessionaire performs interventions in it. The concessionaire must give prior written notice to the user.

Article 172: The measurement equipment must be located in an accessible place in order to have easy access to be controlled by the concessionaire. If this requirement is not met, the concessionaire is authorized to invoice the user by estimating the average of energy used. If

there is not enough information to utilize this method, the monthly consumption will be estimated by multiplying the contracted power by 240 hours.

This invoicing method may be utilized for a six (6) month period. Once this time is over, the concessionaire will disconnect the service and verify the actual consumption. The concessionaire must notify the user at least thirty (30) calendar days before disconnecting the service.

If the consumption were higher than the amount invoiced, the user must pay for the amount actually used rate in effect at the time of liquidation. The amount due must be paid in one installment and within the collecting period. If the consumption were lower than the amount invoiced, the concessionaire would refund the difference to the user. This amount would be equivalent to the actual rate in effect during the month after liquidation.

Article 173: When measurement equipment is damaged due to imperfections in the user's internal installations, the user must pay for the measurement equipment's replacement or repair; the user must also repair his/her internal installations.

In this case, the concessionaire has the right to interrupt the service and supply it again once the installations are repaired and/or the payments are made.

Article 174: To extend the supplies or to expand the contracted power mentioned in Article 89 of the Law, the concessionaire is authorized to request from the interested party a refundable deposit which will be calculated in accordance with clause (a) of Article 83 of the Law.

Article 175: The concessionaire will record in the invoices the invoicing date and the due date. There must be a minimum of fifteen (15) calendar days between these two dates.

Article 176: The concessionaire is authorized to apply interest and a charge on hourly fee to the credit balances.

The interest will be equivalent to the active rate's average in the national currency in force at that time in the financial system. The negligent delay charge will be the equivalent to 30% of the interest.

The interest will be applied from the date unpaid invoice is issued until the date the invoice is canceled.

Article 177: If energy is consumed without the authorization mentioned in clause (b) of Article 90 of the Law, the concessionaire has the right to:

a) Calculate the amount of consumed energy by multiplying the unauthorized connected charge by 240 monthly hours for residential services and by 480 monthly hours for nonresidential services, up to a maximum period of twelve months;
b) Value the amount of consumed energy by applying the present rate at detection date, taking into consideration the service used and the interest and negligent delay charges; and
c) Request to Management, or to whom Management appoints in the cities located outside the Republic's Capital City, to impose the sanctions mentioned in Article 202 of the Regulations.

After complying with all payments mentioned in clauses (a), (b), and (c) of Article 177, the user must immediately regularize the service in accordance with the Law and Regulations.

Article 178: The concessionaires are authorized to charge a minimum monthly fee to those users whose service has been cut or those who have requested a temporary service interruption. The minimum monthly fee will cover the cost established in clause (a) of Article 64 of the Law.

For dual-rate services, a fixed charge will be applied for the contracted power during the term of the contract.

If the service interruption situation would be prolonged for more than six months, the contract will be terminated and the concessionaire has the right to remove the connection.

Article 179: The service will only be connected when the causes that originated the interruption are resolved and when the user has paid the consumption and minimum late charges, the interest and the negligent delay charges, and the cost for disconnection and reconnection.

Article 180: The user may request that the concessionaire investigate the measurement equipment of the supply.

If the investigation shows that the equipment operates within the precision margins established in the technical regulations, the user must pay all costs involved.

If the equipment does not work within the precision margins mentioned in the previous paragraph, the concessionaire will replace the equipment and recalculate and issue a corrected invoice for the energy consumed. In this case, the concessionaire will pay the investigation costs.

The corrected invoice will include the last 12 months. The difference in energy used between the faulty invoice and the corrected invoice will be valued according to the present rate and the difference will be refunded to the user or paid by him to the concessionaire in up to six monthly installments without interest or negligent delay charges.

Article 182: The verification of the measurement equipment will be the responsibility of INDECOPI. INDECOPI must enter into agreements with specialized private entities which will perform such activity.

Article 183: The users may present a complaint to the concessionaire when the concessionaire fails to supply the Public Electrical Service with the franchise contract and the user's contract in accordance with the quality standards mentioned in the Law and Regulations.

The user may address other complaints to Management or the authority representing that franchise outside the Republic's Capital City if the first complaint is not resolved within thirty (30) calendar days. This second complaint must be submitted within thirty (30) calendar days.

Article 184: The invoice for the consumption of the public lighting service's electric energy will be divided among the users in accordance with the second paragraph of Article 94 of the Law and the following factors:

a) 1 for residential users with a monthly consumption of energy of up to 200 kWh;
b) 2 for residential users with a consumption higher than 200 kWh; and
c) 4 for non-residential users.

The concessionaire will incorporate a special category for this concept in the invoice.

The municipalities' pending debt must be paid to the concessionaire.

Article 185: If the municipality incurs charges in the situation mentioned in the previous article, the concessionaire is not obliged to charge any arbitrary cost on the municipality account.

Article 186: The municipalities, to approve the permission for the use of lands or the construction of buildings, will request that the interested parties reserve areas for distribution substations. Such parties must establish prior agreements with the concessionaire regarding the substations.

Article 187: The developers must coordinate activities with the concessionaire in accordance with Article 96 of the Law.

Article 188: The concessionaires, in using the right given by Article 97 of the Law, must coordinate their activities with the other entities that provide Public Services to minimize the damages and costs.

Article 189: The repairs mentioned in Article 97 of the Law must be finished within a minimum of 96 hours from the beginning of the work.

If the size of repairs to be done requires more time, the concessionaire will start the repairs at the same time it applies to the municipality for an extension.

The concessionaire must complete the repairs within the indicated period of time or its approved extensions.

Article 190: The repairs mentioned in Article 98 of the Law will be performed by the concessionaire. For that purpose, the budget will be presented; objections to the budget by the interested party must be made before the repairs are started.

Payment involved in the previous paragraph will not be refundable by the concessionaire.

Article 191: The survey mentioned in Article 100 of the Law will be carried out in the first trimester of each year by a specialized adviser enterprise. This enterprise will be selected by Management from a list. Costs will be paid by the concessionaire.

Management will take corrective action to cure any problems noted in this survey. Such actions will be supported by the reports from Financial Direction.

TITLE VII

FINANCIAL DIRECTION

Article 192: The supervision mentioned in Article 101 of the Law will be performed by Management.

In the cities located outside the Republic's Capital City, the supervision will be performed by the entities appointed by Management. These entities must comply with the procedures established by Management.

Article 193: Natural or juridical persons, citizens or foreigners, may perform the specific supervisory activities. These persons must be pre-qualified by Management.

Article 194: The supervision must be permanent for those concessionaires and entities that develop electrical energy generation, transmission, and distribution. The supervision must comply with the Law and Regulations, particularly the following:

a) The unfulfilled obligations which could cause the termination of franchises and authorizations;
b) The Regulations that govern the proper operation of the System's Economic Operation Committee (COES);
c) The proper rates for user acquisition of energy at a regulated price;
d) The concessionaire's obligations for the users of the Public Electrical Service; and
e) The term, procedures, and other dispositions mentioned in the Law and Regulations for electric activity.

Article 195: Management and entities appointed by Management for cities outside the Republic's Capital City must notify the concessionaires and the entities that develop generation, transmission, and distribution activities of electrical energy, about violations of the Law and Regulations so that violations may be corrected, or sanctions imposed.

Article 196: Management has the right to inspect and correct the installations of the concessionaires and entities that develop generation, transmission, and distribution activities of electrical energy; directly or through the entities appointed by Management in the cities located outside the Republic's Capital City.

If there is evidence of danger to individuals or the environment, Management has the power to immediately suspend such activity or service. The service reconnection will be performed in accordance with Article 179 of the Regulations.

Article 197: The concessionaires and entities that develop generation, transmission, and distribution activities of electrical energy may request that Management performs inspections whenever there are emergency situations in the service.

Article 198: The supervision performed by Management will be recorded by the representative and by the supervised enterprise.

Article 199: The Committee may impose a sanction on the concessionaires and entities that supply energy at a regulated price due to the incorrect use of the Committee resolutions. The sanction may range from double to tenfold the amount charged in excess of the regulated price.

Article 200: Once the sanction is issued according to Article 199, the concessionaire may appeal within ten (10) calendar days from notification. The Committee must issue the final resolution within thirty (30) calendar days; this decision on appeal is the last administrative resort.

Article 201: Management will impose sanctions to the concessionaire and entities that develop generation, transmission, and distribution activities of electrical energy with an equivalent amount from 10,000 to 200,000 kWh, in the following circumstances:

a) For operating without franchise or authorization;
b) For failing to comply with the obligations mentioned in Articles 31, 32, 33, 34, and 55 of the Law. This provision does not apply to those obligations related to termination, which are specifically addressed in the Law and Regulations;
c) For failing to comply with the obligations as a constituent party of COES in relation to:
i) The delivery of information within the established period of time or the delivery of false information;
ii) Operation of their generating units and transmission systems outside the scheduled operation established by COES;
iii) Performance of the general maintenance of generating units and transmission equipment outside the permanent schedule or the coordination instructions established by COES; and
iv) Failure to comply with any other disposition related to operations as established by COES.

d) Failure to comply with the obligation of compensation to users in accordance with Articles 57 and 86 of the Law;
e) Failure to provide information established by the Law and Regulations;
f) For failure to publish rates and readjustment formulae established by the Committee in the official newspaper "El Peruano" before application of the rates and formulae;
g) For failure to refund the amount established in Article 84 of the Law;
h) For changing the supplying conditions without authorization from Management;
i) For being subject of a complaint to the municipality due to imperfections in the Public Lighting Service;
j) For failure to record the interruptions mentioned in Article 168 of the Regulations;
k) For misusing the imported capital assets which have received a tax fraction in accordance with clause (a) of Article 106 of the Law;
l) For misusing the natural resources, property of third parties, and public property;
m) For repeated infractions during construction, regarding the conservation of the Nation's cultural patrimony and/or the environment;
n) For failure to provide notice about the withdrawal of unused installations to subtract the new replacement value;
o) Failure to comply with supervision obligations; and
p) Failure to comply with dispositions and regulations issued by Management which were established in the Law and Regulations.

Article 202: Management will impose a sanction on the users in an equivalent amount from 500 to 10,000 kWh in the following circumstances:

a) Use energy without a concessionaire's authorization or change in the supplying conditions;
b) Alteration of the measurement instruments and /or the concessionaire's installations; and
c) Lack of compliance with the dispositions indicated in the Law and Regulations.

In such cases, the concessionaire must present supporting documents.

Article 203: The sanctions imposed by Management and mentioned in Article 201 and 202 of the Regulations may be reconsidered within ten (10) calendar days.

The reconsideration will be resolved within ten (10) calendar days and the decision could be appealed before the Department within ten (10) calendar days from notification.

The appeal will be resolved within ten (10) calendar days as the last administrative resort.

Article 204: For repeated violations, the penalties established in the Regulations could be doubled.

Article 205: The amount of the penalties mentioned in Articles 201 and 202 of the Regulations will be calculated in accordance with the final user's medium price of the monomial rate of low tension in force in the Republic's Capital City.

Article 206: Management will propose to the Department the sanctions and penalty details, as well as the procedures for its application which must be approved by Ministerial Resolution.

Article 207: In the cities located outside the Republic's Capital City, the sanctions will be imposed by entities appointed by Management. The entities must strictly comply with the penalties and conditions mentioned in Article 206.

Only Management and the Committee are authorized to impose the sanctions derived from the development of the generation, transmission, and distribution activities of electrical energy.

Article 208: The sanctioned parties must deposit the amount of the penalties in the Department's account within fifteen (15) days from notification.

If the sanctioned party requests reconsideration or presents an appeal according to Article 203 of the Regulations, but the appeal was not in his/her favor, the sanctioned party must pay the penalty plus the interest and negligent charges from the period of time between the date the service should have been legally terminated until the actual termination date.

The interest and negligent charges are mentioned in Article 176 of the Regulations.

TITLE VIII

INVESTMENT PROMOTION AND GUARANTEES

Article 209: The Net Funds Flow in relationship with the compensation mentioned in Article 105 of the Law will be estimated for a period of time of 25 years, and its present value will be obtained at the time of termination.

Article 210: The amount of the compensation that must be paid to the concessionaire, in accordance with Article 105 of the Law, will be calculated by a specialized adviser enterprise appointed by the concessionaire. Management will supervise the reference terms and will supervise the studies.

The study must be ordered and finished within sixty (60) calendar days from termination. When the study is finished, the Department will terminate the concessionaire within thirty (30) calendar days.

The expenses involved in the studies will be paid by the Department.

Article 211: The specified amount will be paid in cash by the Nation to the concessionaire. The payment will include the interest from the time of the proposed termination until the actual termination date.

The interest will be calculated by applying the equivalent rate to the compensatory interest mentioned in Article 176 of the Regulations.

Article 212: To comply with Article 106 of the Law, the concessionaire or entities will only present their franchise or authorization resolution.

Article 213: In accordance with article 107 of the Law, the concessionaires that uses the energy and natural resources coming from the country's hydraulic and geothermal sources must only pay the sole compensation to the Nation. This compensation will be calculated in relationship with the energy units produced at the central stations.

Article 214: The sole compensation to the Nation mentioned in Article 213 will be paid monthly according to the following procedures:

a) The central station's holder will perform an autoliquidation of his/her compensation by taking into consideration the energy produced during the previous month and 1% of the average price of energy at generation level;

b) The resulting amount must be deposited in the account indicated by the Agricultural Department of Hydroelectric Resources and the Department for the Geothermal Resources; and
c) The deposit will be completed by the concessionaire within the first ten (10) days of the next month.

Management will verify the compliance with this article, annually.

Article 215: The average energy price at generation level mentioned in Article 107 of the Law will be established and published by the Committee along with the rates in buses.

The average energy price will be calculated by taking into consideration the consumption of the demand of 1 kilowatt with the load factor of the respective system during the previous year. This factor will be valued according to the actual rates in buses where the basic energy price is calculated.

TITLE IX

USE OF THIRD PARTY AND PUBLIC SERVICES

Article 216: The dispositions of Title IX of the Law regarding the use of third party and public services are to be fulfilled by the franchise companies developing activities mentioned in Article 3 of the Law.

The enterprises that are not included in the previous paragraph and require the use of third party or public services in order to develop generation, transmission, and distribution activities of electrical energy will comply with the Civil Code.

Article 217: The concessions mentioned in Article 110 of the Law will have the same validation date as the franchises.

The concessions provided to develop studies or other activity mentioned in Article 116 of the Law will terminate as soon as the studies are completed.

Article 218: When the concessionaires, by using the rights mentioned in Article 109 of the Law, damage third party or Nation properties, they must pay and repair the damage.

For that purpose, the concessionaires will agree with the damaged party in the way to repair the damage and/or the indemnification. If they cannot agree, the parties will resort to arbitration.

Article 219: The concessions mentioned in clause (a) of Article 110 of the Law will also include the operation and maintenance of access routes and buildings.

Article 220: The concessions for use of electrical pipes utilized in the transmission and distribution systems, aerial or underground, include:

a) Occupation of the land, underground, and/or aerial surfaces which are needed to install the transformer substations;
b) Occupation of the needed surface and air for the installation of the electrical conductor structures, the areas in the underground or air where they are installed; and
c) Demarcation of the influence zone of the electrical pipe. If it is an aerial electrical pipe, the delimitation will be the projection over the ground of the conductors' occupied area. The

width of this area will be determined in accordance with the National Electric Code and other technical regulations.

The owner of the land could not build or have a plantation which intrudes on the minimum security distances or, under the lines or the influence of the electrical pipes mentioned in clause (c) of this article.

Article 221: For using explosives at a distance of less than 5,000 meters from the installations of a hydroelectric central station or at a distance of less than 200 meters from the axle of an electrical pipe, the holder must grant an authorization which will prove that all precautions have been taken.

Article 222: The application form for one or more concessions must be presented to Management by the concessionaire along with the following information and documents:

a) Origin and category of the concession;
b) Duration;
c) Economic and technical justification;
d) First and last names of the affected parties;
e) Description of the present situation of the land and air that will be affected;
f) Financial report and concession's plans with a number of copies equal to the number of affected owners; and
g) Other requested documents or information.

The concession's specifications mentioned in clause (f) of Article 25 of the Law will have the same information and documents described above.

Article 223: If the application form does comply with all requirements mentioned in Article 222, Management will check it, but it will only process the application if the interested party provides the rest of the information within twenty (20) calendar days from notification. If the interested party does not comply within this period of time, the application form will be canceled.

Article 224: Once the application form is accepted, Management will notify the owner of the land and will send copies of the request and its supporting documents. The owner must express his/her opinion within twenty (20) calendar days.

If the concession affects the real estate of the Nation, municipalities, or any other public institution, Management will request a report from the respective entity within the indicated period of time.

Article 225 If opposition exists to the concession's establishment, Management will notify the concessionaire. The concessionaire must acquit the proceedings within the third day.

The opposition must include complete supporting documentation and evidence.

Article 226: If the concessionaire does not resolve the opposition within the established period of time, the Department will issue the Resolution within seven (7) calendar days.

Article 227: If the concessionaire resolves the opposition, Management will receive the declarations of the parties and the evidence within ten (10) calendar days from the opposition notification.

Once the period of time expires, the Department will notify Management and issue the Resolution within ten (10) calendar days.

Article 228: The Resolution issued by the department, imposing or modifying concessions, could only be contradicted by legal proceedings relating to the indemnification amount.

The appraisal must be sent to Management within fifteen (15) calendar days from payment for the services to the Appraisal Technical Group. Management will notify the parties within three (3) days of receiving the report.

The costs must be paid by the interested parties in equal amount.

Article 230: Once the indemnification amount is determined in accordance with Article 229 of the Law, the applicant must pay or consign it jundically in favor of the owner of the land within ten (10) calendar days from Management notification. If the owner does not pay after the period of time has expired, he/she will lose the right to the concession.

Once the payment is made on time, the applicant may request the conditions mentioned in the last two paragraphs of Article 118 of the Law.

TITLE X

COMPLEMENTARY DISPOSITIONS

Article 231: The concessionaires and enterprises that develop generation, transmission, and distribution activities of electrical energy may sign agreements with the federal police for the installations' protection to guarantee the service to the community.

Article 232: The concessionaires have the right to delegate those activities whose nature permits them to be developed by other enterprises. This delegation will not develop any working relationship with the concessionaire. In this case, the concessionaire must notify Management and the Labor Union of the type of work to be done.

Article 233: The owners of the Main Transmission System of an interconnected system cannot commercialize electricity. Such commercialization will result in the termination of their rights.

Article 234: The Department will annually determine the payment amount which must be paid by the concessionaires in accordance with clause (g) of Article 31 of the Law. The amount cannot exceed the 1% of the annual sales. The Department must also indicate the amount that will be allocated to the Committee and to Management, as well as payment schedules.

The Department will fix the payment amount before November 30th of each year.

Article 235: The part of the payment mentioned in Article 234 of the Law that goes to the Committee will be directly given by the concessionaires in accordance with the established payment schedule. If payments are not made in time, they will be subject to interest and negligent delay charges mentioned in Article 176 of the Regulations.

Article 236: In order to fulfill the obligations mentioned in the Law and Regulations, Management will have the part of the payment mentioned in Article 234 of the Regulations and the resources obtained through the guarantees mentioned in Title III of these Regulations. These resources will be directed to hiring services in accordance with the regulations established by the Department.

The Department will deliver the resources to Management.

Article 237: The references to ITU will be automatically replaced by the new units.

Article 238: All entities developing project-related information must notify the Department for the information to be taken into consideration for the development of the Referential Plan mentioned in Article 47 of the Law.

Article 239: Management has the right to dictate the complementary dispositions for the compliance of the Law and Regulations.

TITLE XI

TEMPORARY DISPOSITIONS

FIRST: The Electric Franchise Record must be established within 120 calendar days from the Regulations enforcement date. In this period of time, Management will approve the internal regulations.

SECOND: The standard losses fixed according to Article 143 of the Regulations must be progressively attained in three periods when the distribution rates are being fixed. In the first period, a reduction of 50% of the total present losses must be attained.

THIRD: The generating and distribution enterprises that belong to the Nation's company activity must sign an electrical supply contract for five years. The price must be regulated.

FOURTH: The Committee's permanent budget for 1993 must be approved by the Board of Advisers in accordance with the terms mentioned in the Law within thirty (30) calendar days from installation.

Once the budget is approved, the Board of Advisers will send the budget to the Department for its acceptance within five (5) calendar days. The Department will pronounce its judgment within fifteen (15) calendar days. Once this period of time has expired, the budget will be deemed approved.

FIFTH: For the comparison mentioned in Article 129 of the regulations, the Committee will take until May 1994 as the date determining the average price value of the rates in buses which will be calculated by taking into consideration an economically adapted generation system.

SIXTH: If application fees have been paid (in cash or installments), application forms for new services or requests to increase the contracted power that were in the process of being accepted by the time the Law became effective will be ruled by the Regulations in existence at that time.

This disposition also applies to the applicants located outside the provisional franchise mentioned in the Fourth Temporary Disposition of the Law.

SEVENTH: The Committee will assume all COES functions related to fixing the rates.

EIGHTH: The Public Electrical Service distribution companies must notify each of their users about the Contracted Power within ninety (90) calendar days from the Regulations' awarding date.

NINTH: Management must impose the Technical Regulations in order to minimize the conditions which makes the service more expensive.

TENTH: Through Ministerial Resolution, the Department has the right to issue the complementary dispositions which could be needed for complying with the Law and Regulations.

TAB 9

Philippines:

- **Rules and Regulations to Implement Executive Order 215 on Private Sector Participation in Power Generation as Proposed by USAID (Not Adopted)**

- **Rules and Regulations Implementing Executive Order No. 215 on Private Sector Participation in Power Generation (As Adopted)**

- **Build, Operate and Transfer ("BOT") Law**

- **Speech Presented by Mario Baile of National Power Corporation Regarding Philippine Private Power Program**

- **Speech Presented by Flordeliza M. Andres, Acting Assistant Secretary for Policy and Programs, Philippine Department of Energy**

RULES AND REGULATIONS TO IMPLEMENT EXECUTIVE ORDER NO. 215 ON PRIVATE SECTOR PARTICIPATION IN POWER GENERATION

Pursuant to Section 2 of Executive Order No. 215, the National Power Corporation (NAPOCOR) and the National Electrification Administration (NEA) hereby promulgate the following Rules and Regulations, as approved by the Office of Energy Affairs (OEA).

PART I

GENERAL PROVISIONS OF THE RULES AND REGULATIONS

The succeeding Articles shall include the general provisions to be followed for all types of generating facilities owned by the private sector participating in power generation.

ARTICLE I

STATEMENT OF POLICY, SCOPE AND DEFINITION OF TERMS

SECTION 1. Statement of Policy. The NAPOCOR shall be responsible, for the strategic and rational development of the country's power grids including the construction of associated generating facilities and the setting up of transmission line grids in Luzon, Visayas, and Mindanao. However, private corporations, cooperatives or similar associations shall be allowed and encouraged to construct and operate electric generating plants.

SECTION 2. Scope. These Rules and Regulations shall govern the relation between the NAPOCOR, the NEA, and such private corporations, cooperatives or similar associations as may be allowed to acquire, construct and operate electric generating plants and facilities pursuant to Section 1 of the Executive Order.

SECTION 3. Definition of Terms. As used in these Rules and Regulations, the following terms shall have the following respective meanings:

a. "Avoided Cost" means the incremental investment and/or operating and maintenance and overhead costs that an electric utility would incur, thru putting on additional capacity and/or operating its own power plants, if such utility does not buy electric energy, or capacity or both from a private sector generation facility PSGF).

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b. "Back-up Power" means electricity supplied by NAPOCOR, or an electric utility to replace electricity ordinarily generated by a private sector generation facility (PSGF) during unscheduled outages of the latter.

c. "Block Power Production Facility (BPPF)" means [a facility which is programmed and included in the NAPOCOR Power Development Program] but is owned, constructed and operated by entities from the private sector and whose generated electricity shall be sold solely to NAPOCOR.

d. "Bottoming-cycle Cogeneration Facility" means a cogeneration facility in which the energy input to the system is first applied to a useful thermal energy process, and the reject heat emerging from the process is then used for power production.

e. "Capacity" means the load for which a generating unit, generating station, or other electrical apparatus is rated, usually in kilowatts by the manufacturer.

f. "Cogeneration Facility" means a facility which produces electric energy and forms of useful thermal energy (such as heat or steam), used for industrial, commercial, heating, or cooling purposes, through the sequential use of energy.

g. "Coincident Maximum Demand" means the maximum demand at the instant of greatest load of NAPOCOR.

h. "Developmental Plans", refers to and is used interchangeably with the Power Development Program (PDP) of the NAPOCOR.

i. "Distributing System", means the electric system of an electric utility which delivers electricity from transformation points on the transmission system to the consumers or end-users.

j. "Electric Cooperative" shall mean a corporation under RA 6038 or PD 269 as amended by PD 1645 or a cooperative supplying or empowered to supply electric service which has heretofore been organized under the Philippine Non-Agricultural Coop. Act. whether converted under P.D. 260 or not.

k. "Electric Energy", as commonly used in the electric utility industry, means kilowatt-hours.

l. "Electric Utility System", refers to the distribution system of an electric cooperative, local-government owned and privately-owned electric utility operating within the NAPOCOR and electric utility power grids.

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m. "Electric Utility", refers to the electric cooperative, local-government-owned and privately-owned electric utility operating within the NAPOCOR grids or other electric systems.

n. "Franchised Area" shall mean a geographical area franchised to a public service entity, such as: electric cooperative, local government or privately owned electric system.

o. "Grid" means the electrical system of interconnected transmission lines, substations and generating plants of the National Power Corporation, or the concerned electric utility as the case may be.

p. "Incremental PSG Power" means electricity supplied by NAPOCOR or an electric utility, regularly used by an owner of a qualified private sector generation facility in addition to that which the latter generates itself. It is the difference between the total electricity requirement of a private sector generator and the amount it generates.

q. "Interconnection" means the connection of a generating facility or a power distribution facility to an electric utility system or the NAPOCOR grid.

r. "Interconnection Costs" means the costs of all necessary interconnecting electrical equipment, protective devices and control equipment needed by a private sector generator for its PSGF to permit interconnected operations with NAPOCOR or an electric utility.

s. "Interruptible Power" means electricity supplied by NAPOCOR or an electric utility to a private sector generator subject to interruption by the former.

t. "Maintenance Power" means electricity supplied by NAPOCOR or an electric utility, to a private sector generator whose PSGF is undergoing scheduled maintenance work.

u. "National Electrification Administration or NEA" means the corporation, wholly-owned and controlled by the government, created under the provisions of Presidential Decree No. 269 of 8 October 1979 and tasked primarily to administer the rural electrification program.

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v. "National Power Corporation or NPC" means the corporation, wholly-owned and controlled by the government, formed under the provisions of Republic Act No. 6395 of 10 September 1971 and tasked primarily to undertake the development of hydroelectric generation of power and the production of electricity from nuclear, geothermal and other sources, as well as the transmission of electric power on a nationwide basis;

w. "Office of Energy Affairs or OEA" means the government agency formed under the provisions of Executive Order No. 193 of 10 June 1987 and be primarily responsible for the formulation, planning, monitoring, implementation of, and coordination of policies and programs in the field of energy. By virtue of Executive Order No. 215, the OEA was given the mandate to review and approve the draft Rules and Regulations to implement the Executive Order No. 215, initially drafted and submitted to the OEA by the NAPOCOR and NEA, after appropriate public consultation with concerned parties including the private sector.

x. "Peak Demand" means the maximum integrated load demand occurring for thirty (30) minutes continuously.

y. "Person" means any natural person, firm, association, corporation, business trust and partnership.

z. "Primary Energy Source" means the fuel used for the generation of electricity, except that such terms do not include:

1. The minimum amounts of fuel required for ignition, start up, testing, flame stabilization, and control uses, and

2. The minimum amounts of fuel required to alleviate or prevent:

i. unanticipated equipment outages, and

ii. emergencies, directly affecting the public health, safety or welfare, which would result from electric power outages.

aa. "Private Sector Generation Facility, (PSGF)" means:

1. any cogeneration and renewable resource power production facility, or

2. any electric generating facility, particularly a Block Power Production Facility (BPPF), intended primarily to sell all its production to the NAPOCOR grids, consistent with the development plans formulated by the National Power Corp., or

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3. any electric generating facility that shall use indigenous energy resources as its primary fuel.

b.1. "Private Sector Generator" refers to the owner and operator of the accredited PSGF.

c.1. "Purchase" means the purchase of electricity by NAPOCOR or an electric utility from a private sector generator.

d.1. "Rate" means any price, tariff or charge, as classified by NAPOCOR or the electric utility with respect to the sale or purchase of electricity.

e.1. "Renewable Energy Sources" means sources of energy that are regenerative or virtually inexhaustible such as biomass, solar, wind, geothermal or hydro, and also means by-product materials that but for their use as a source of energy would be considered waste.

f.1. "Rules on Sale of Electricity" refers to the procedures set by NAPOCOR for its customers to follow regarding matters on direct connection, billing, billing protest, adjustment clause, payment of bills, and other matters relative to customers' service.

g.1. "Renewable Resource Power Production Facility (RRPPF)" means a facility which produces electricity by the use of renewable energy resources as its primary energy source.

h.1. "Sale" means the sale of electricity by NAPOCOR or an electric utility to a private sector generator.

i.1. "Spinning Reserve" means generating capacity that is on-line and ready to take load, but in excess of the current load of the electric system.

j.1. "System Emergency" means a condition on NAPOCOR's or an electric utility's system which is likely to result in imminent significant disruption of service to customers or is imminently likely to endanger life or property.

k.1. "Topping-cycle Cogeneration Facility" means a cogeneration facility in which the energy input to the facility is first used to produce useful power with the reject heat recovered from power production then used to provide useful thermal energy.

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l.l. "Uncontrollable Forces" mean any occurrence beyond the control of a party which causes that party to be unable to perform its obligations and which the party has been unable to overcome by the exercise of due diligence, including but not limited to flood, drought, earthquake, storm, fire, pestilence, lightning and other natural catastrophes, epidemic, war, riot, civil disturbance or disobedience, action or inaction of legislature, judicial or regulatory agencies, or other proper authority affecting the operation of the PSGFs, failure or sabotage of facilities which have been maintained in accordance with good engineering and operating practices in the Philippines.

m.l. "Wheeling" means the provision of electric energy transmission services by NAPOCOR or an electric utility for the purpose of enabling the owner of an accredited PSGF to transmit power to another system or end-user.

ARTICLE II

QUALIFICATIONS OF A PRIVATE_SECTOR_GENERATION_FACILITY

SECTION 1. Ownership. Qualifications as to ownership of a PSGF shall be any of the following:

a. A PSGF may be constructed, owned and operated by private persons, private corporations, cooperatives or similar associations not primarily engaged in the generation or sale of electricity and shall be governed by applicable Philippine Laws on corporations or similar associations as to registration, independent auditing, taxation and other related matters as provided by said laws. Foreign entities may participate in electricity generation subject to applicable Philippine laws.

b. Private corporations, cooperatives and similar associations p[redacted] generation or sale of electric power, [redacted] implementing rules as electric utilities, may own, construct and operate generating facilities but shall be subject to electric utility regulations concerning rates, financial limitations, taxes and other laws applicable to their operations as electric utilities.

For entities availing of the government's Investment Priorities Program, such entities shall be guided by relevant legislation thereto.

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SECTION 2. Facility Classification. A Private Sector Generation Facility referred in this Part of these Rules and Regulation shall include the following electric generating plants:

a. Cogeneration facilities such as topping-cycle, bottoming-cycle and fossil fuel cogeneration units meeting engineering, operating and efficiency standards as prescribed in Section 5 of this Article;

b. Renewable Resource Power Production Facilities such as those using biomass, solar, wind, geothermal, hydro or wastes as the primary source of energy; and

d. Combined cycle facilities that sell power only to public utility.

c. Electric generating facilities that shall use indigenous energy resources as their primary fuels.

SECTION 3. Jurisdiction of NAPOCOR and NEA. NAPOCOR shall have jurisdiction over all private power production in areas served by the NAPOCOR grids. NEA shall have jurisdiction over all other areas not served by the NAPOCOR grids.

SECTION 4. Size of Generating Units. The maximum size of a generating unit of a PSGF shall be limited to the existing largest generating unit size or 10% of the coincident maximum demand of the concerned NAPOCOR grid or as allowed by NAPOCOR. Further, for areas within the jurisdiction of NEA, the size of generating units allowed by NEA shall be based on the demand of the electric cooperative in accordance with the Power Expansion Program as approved by NEA.

SECTION 5. Engineering, Operating and Efficiency Standards. A PSGF shall be guided by internationally-accepted standards in engineering, operations and reliability.

SECTION 6. Economic Criteria. optional Any proposed ~~electric~~ optional generating facility can qualify as a PSGF if it can provide a net foreign exchange savings to the nation, by virtue of:

a. generating electric energy more efficiently or cheaper than can otherwise be generated by existing plants;

b. using indigenous and/or renewable energy sources; ~~and~~

c. accessing lower costs of capital and/or cheaper plant investment.

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ARTICLE III

PROCEDURES FOR APPLYING FOR ACCREDITATION AND INTERCONNECTION OF A COGENERATION AND A RENEWABLE RESOURCE POWER PRODUCTION_FACILITY_AS_A_PRIVATE_SECTOR_GENERATION_FACILITY_

SECTION 1. Accreditation. A Private Sector Generation Facility (PSGF) which meets the qualifications for accreditation set forth in Article II is a qualified PSGF.

SECTION 2. Accreditation by NAPOCOR. The owner or operator of a proposed PSGF within the jurisdiction of NAPOCOR, whether solely for internal use or not and whether the facility is existing or shall be constructed, and whose generating unit is subject to the limitations under Article II hereof, shall apply for accreditation as a qualified PSGF to NAPOCOR. For facilities whose generation is not solely for internal use of the owner, but also for sale to NAPOCOR or electric utilities, NAPOCOR shall determine the franchised electric utility with the nearest distribution facilities to which the PSGF shall be obligated to interconnect. If the nearest electric utility distribution facilities are such that the interconnection would not be cost-effecitve, NAPOCOR may seek the approval of the OEA to directly connect the PSGF itself.

SECTION 3. Accreditation by the NEA. The owner of a proposed PSGF within the jurisdiction of NEA shall apply for certification and accreditation to the NEA, which shall determine whether the accredited PSGF shall be directly connected to any electric cooperative. In which case the qualified PSGF shall follow the procedures and technical and operational requirements of NEA.

SECTION 4. OEA_Monitoring_of_Accredited_PSGFs. A copy of the certificate of accreditation issued by NAPOCOR and NEA relative to foregoing Sections 2 or 3 together with the corresponding technical description shall be promptly forwarded to OEA for monitoring purposes.

SECTION 5. Generation_by_Electric_Utilities. Facilities owned by an electric utility and whose generation is solely for the internal use of the owner electric utility shall be further guided by Part V of these Rules and Regulations.

SECTION 6. Generation by Non-utilities Primarily for Internal Use. Facilities whose generation is intended primarily for the internal use of the non-utility owner but also plans to sell excess production to the NAPOCOR grid/concerned electric utility shall be further guided by either Part II or Part III as applicable, of these Rules and Regulations when such plan to sell is effected.

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SECTION 7. Representation_During_Accreditation/Negotiation. Where proposals for PSGFs are submitted by persons or entities, foreign or local, other than the organization which is or will be set up to construct, own and operate the facilities, agreement made during any negotiation after accreditation shall not legally bind parties involved thereto until such time when a final contract is agreed upon and signed. Documentary support such as Letters of Intent and Memorandum of Agreement made and signed during any negotiation shall be used as bases in the preparation of the actual contract between NAPOCOR or the electric utility and the Organization, existing or newly created, owning the PSGF.

SECTION 8. Revocation_of_Qualified_Status. NAPOCOR or NEA may revoke the qualified status of a PSGF which has been accredited under this Article if such facility fails to comply with the requirements of these Rules and Regulations or any of the statements contained in its application for certification. Decision of revocation of qualified status shall be done only upon approval of OEA and after the owner of the qualified PSGF has been given due process or the opportunity to explain failure of compliance.

SECTION 9. Application_and_Negotiation_for_Interconnection within_NAPOCOR_grids. In cases where NAPOCOR determines that the generation of an accredited PSGF within the NAPOCOR's jurisdiction should be sold to a concerned electric utility, the owner of said qualified PSGF shall apply and negotiate with the concerned electric utility for interconnection with the latter. If interconnection is hindered by any disagreement, the owner of the PSGF may negotiate with NAPOCOR for the latter to purchase the PSGF's generation itself. NAPOCOR shall then treat the PSGF generation site as a delivery point of NAPOCOR to the electric utility operating near the site where the PSGF is located. If neither NAPOCOR nor any concerned electric utility shall interconnect with the qualified PSGF, then the owner of the PSGF may elevate his case to the OEA for settlement.

Upon accreditation of a PSGF within NAPOCOR's jurisdiction and whose generation is also for sale to NAPOCOR, the owner of said qualified PSGF shall apply and negotiate with NAPOCOR. Any disagreement on any matter that hinders the interconnection of the PSGF with NAPOCOR shall settled by OEA.

Accredited PSGF whose generation is solely for the owners' internal use, need not apply for interconnection, but may do so if in the future there is a likelihood that sale to NAPOCOR or electric utilities would occur following the provisions of Parts I and either II or III of these Rules and Regulations.

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A privately owned electric utility connecting with a PSGF shall submit to the ERB and OEA a copy of any interconnection agreement reached with said PSGF for review and monitoring purposes. An electric cooperative connecting with a PSGF shall submit a copy of any interconnection agreement with said PSGF to the NEA and OEA for review and monitoring purposes. The NAPOCOR shall only furnish OEA a copy of any interconnection agreement with a PSGF for review and monitoring purposes.

It shall mean that the interconnection agreement, in this instance, already includes the agreement reached between the electric utility/NAPOCOR and the owner of the PSGF on matters pertaining to rates of purchase and sales, operating and maintenance schedules, procedures for dispatch, protective and metering devices and other items that are important to both parties.

SECTION 10. Action_on_Modification_of_a_PSGF. Prior to undertaking any substantial alteration or modification of a PSGF which has been certified under these Rules and Regulations, the owner or operator of such qualified PSGF shall apply to NAPOCOR, or to NEA as the case may be, for a ruling that the proposed alteration would not result in a revocation of the facility's qualified status. The term "substantial alteration or modification of a qualified PSGF" means such alteration, modification or other changes as will materially affect the accuracy of the information submitted pursuant to Section 4 of this Article.

ARTICLE IV

OBLIGATIONS OF NAPOCOR, NEA, ELECTRIC UTILITIES, AND OWNERS OF QUALIFIED PRIVATE SECTOR GENERATION FACILITIES

SECTION 1. Purchase_Electricity_Energy__from_Qualified_PSGF. NAPOCOR, or concerned electric utilities shall purchase, at rates to be established in accordance with Article V, hereof, any electric energy and capacity which is made available by the owner of a qualified PSGF.

SECTION 2. Purchase by Electric Utility of Power Already Contracted. Any electric utility, with the agreement of the owner of a qualified PSGF and the NAPOCOR or another concerned electric utility, may purchase any electricity that the NAPOCOR or the concerned electric utility is contracted to purchase from said owner of the PSGF under the provision of these Rules and Regulations.

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SECTION 3. Sale_of_Electricity_to_a_Qualified_PSGF. NAPOCOR or any concerned electric utility shall sell to any owner of a qualified PSGF electricity requested by the latter, in accordance with Article VI, hereof.

SECTION 4. Interconnection within NAPOCOR grids. The NAPOCOR or any concerned electric utility shall allow such interconnection with any qualified PSGF as may be necessary to accomplish purchases or sales under these Rules and Regulations. Upon approval of the application and effectivity of an agreement for interconnection by the owner of a qualified PSGF and NAPOCOR or any concerned electric utility, the NAPOCOR or the concerned electric utility may issue an order requiring the physical connection of the qualified PSGF to the transmission facilities of NAPOCOR or NEA, or to the distribution system of the concerned electric utility.

SECTION 5. Interconnection within NEA jurisdiction. The NEA shall allow such interconnections with any qualified PSGF as may be necessary to accomplish purchases or sales under these Rules and Regulations. Upon application for interconnection of any qualified PSGF to NEA, the NEA may issue an order requiring:

a. The physical connection of any qualified PSGF to the distribution facilities of any concerned electric cooperative;

b. The qualified PSGF to provide at its own expense the necessary interconnecting electrical equipment and devices including associated distribution facilities, melting equipment, protective relays and communication, in accordance with appropriate electrical plans approved by NEA to make an effective physical/electrical interconnection to the system of the electric utility concerned.

[SECTION 6. Transmission__to___Other__Electric___Utilities (Wheeling). The owner of a qualified PSGF may arrange with the NAPOCOR/any concerned electric utility, to transmit the electricity of the former to a third party (electric utility or end-user). Any third party electric utility or end-user to which such electricity is transmitted shall purchase the same under this Section.] The rate for purchase by the third party (electric utility or end-user) to which such electricity is transmitted shall be adjusted to reflect line losses and shall include charges for transmission. A tariff structure for wheeling shall be applied by NAPOCOR or a concerned electric utility to the owner of the PSGF for the use of transmission facilities.]

SECTION 7. Safety_Requirements. The owner of the PSGF shall provide and install protective devices in their facilities as a safeguard from any NAPOCOR or NEA or electric utility system disturbances.

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SECTION 8. Periodic_Reporting_to_NAPOCOR and NEA. The owner of the PSGFs shall regularly submit to NAPOCOR or NEA in a prescribed form, operating and other information as may be required by NAPOCOR or NEA for monitoring and planning purposes.

ARTICLE V

RATES_FOR_PURCHASES

SECTION 1. General_Provision. NAPOCOR or any electric utility shall not be required to pay more than their avoided cost.

SECTION 2. Purchase Rates Qualification. Rates for purchase shall:

a. Be just and reasonable to the electric customers of NAPOCOR or concerned electric utilities, and in the Public interest;

b. Be in accordance with the guidelines set by NEA, for electric cooperatives, and ERB, for privately owned electric utilities, on this matter for qualified PSGFs where full and/or excess production shall be sold to the systems of concerned electric utilities.

SECTION 3. Adjustments_in_Financial_Accounting. The NAPOCOR or and concerned electric utilities shall accordingly adjust their financial accounting systems and procedures resulting from purchases of electricity from private sector generators. The rate of return on rate base levels shall then be determined after all adjustments have been made and set in place.

SECTION 4. Determination_of_Avoided_Cost. The NAPOCOR and any other utility that purchases PSGF power under these Rules and Regulations shall calculate their avoided costs, not later than three (3) months from the date of effectivity of these Rules and Regulations, and shall make available to the Office of Energy Affairs the data and methodology from which avoided costs have been derived. These data and methodology shall be updated as may be required.

ARTICLE VI

Rates_for_Sales

SECTION 1. General_Rules. Except for back-up power, rates for sales of NAPOCOR or the concerned electric utility to the qualified PSGF, shall be based on the net interchange of energy between the said qualified PSGF and NAPOCOR or the concerned,

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electric utility. If said interchange of energy results in requiring the PSGF to pay for electricity used, the applicable rates in this case shall not discriminate against the PSGF in comparison to rates for sales to other customers served by NAPOCOR or the concerned electric utility.

SECTION 2. Services_to_be__Provided__to_any__Qualified_PSGF.

a. As contracted with the owner of a qualified PSGF, NAPOCOR or the concerned electric utility shall provide on "as available basis":

1. Incremental PSG power;

2. Back-up power;

3. Maintenance power; and

4. Interruptible power.

b. The NAPOCOR and concerned electric utilities may waive the requirement of the preceding Subsection (2a) if, after notice in the area served by NAPOCOR or NEA or the electric utility, NAPOCOR or NEA or the electric utility demonstrates and finds that compliance with such requirement shall:

1. Impair NAPOCOR's or the electric utility's ability to render adequate service to its customers; or

2. Place a harsh and undue burden on NAPOCOR or the affected electric utility.

SECTION 3. Rates_for_Back-up_Power. Rates for sales of back-up power to PSGF shall be at a rate mutually agreed upon and stipulated in a contract between the owner/proponent of the PSGF and NAPOCOR or the concerned electric utility.

ARTICLE VII

OPERATING STANDARDS, ENVIRONMENTAL CONCERNS AND OTHER MATTERS

SECTION 1. Standards for Operations and Reliability. The NAPOCOR and the concerned electric utility shall follow established internationally-accepted engineering standards to ensure safety, system-security and reliability for interconnected system operations. Furthermore, NAPOCOR or NEA and the concerned electric utility shall evaluate and approve the system

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design, adhere to Electrical and Mechanical Engineering standards, as well as physically inspect the power installations and witness the testing and commissioning of the PSGF that will be interconnected to the system to ensure that all necessary equipment are in place and functioning properly.

SECTION 2. Environmental Concerns. Qualified PSGFs shall meet standards on environmental management, including, among others, those on air quality, noise levels, water quality, solid waste, emission balances and controls, land use and esthetics as required by law through appropriate government agencies.

SECTION 3. Contents of Contract. Consistent with these rules and regulations, all contracts between the owners of PSGFs, and NAPOCOR or the concerned electric utility shall include, among others, the following:

a. Identification of Parties;

b. Recitals (rationale of contract);

c. Considerations (general agreements);

d. Purchase and Sale (stipulation of power purchase and sale);

e. Conditions of Delivery:

   1. Point of Delivery

   2. Character of Service (technical specifications for expected power output)

   3. Power Factor

   4. Continuity/reliability

f. Rates for Purchase from Facility and Adjustment clauses;

g. Rates for Sale to Facility and Adjustment clauses;

h. Billing Periods and Payment Terms;

i. Penalty and Discount Clauses;

j. Rights and Obligations of NAPOCOR/Electric Utility and PSGF;

   1. Ownership, Design, Operation and Maintenance

   2. Construction Requirements

   3. Plans and Specifications

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4. Inspection and Tests

5. Change of Equipment

6. Costs

7. Control and Protective Apparatus

8. Location

9. Delivery and Amount of Production

10. Notices

11. Land Rights

12. Regulatory Approvals

13. Codes and Standards

14. Removal of Equipment

15. Provisions for Contract Violation

k. Operations;

1. Date of Operation

2. Operating Procedure

3. Sell-back Conditions

l. Safety Requirements;

m. Force Majeure;

n. Meter Provisions and Metering Arrangements;

o. Right to Access for Inspection, etc.;

p. Liability of Each Party with Respect to Operations;

q. Duration of Contract and Conditions for Contract Cancellation;

r. Provision for Security; and

s. Additional Provisions.

SECTION 4. Force Majeure. Neither party to a contract shall be in default if failure of performance of the terms of the contract is caused by factors due to acts of God, nature or uncontrollable forces.

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PART II

SPECIFIC PROVISIONS FOR MINI-PRIVATE SECTOR GENERATION FACILITIES WITH CAPACITY LESS THAN 1000 KILOWATTS

In addition to Article I; Sections 1, 2, 3 and 6 of Article II; Sections 1, 4, 7, 8, 9 and 10 of Article III; Sections 1, 3, 4, 5, 6 and 7 of Article IV; Articles V, VI and VII of Part I of these Rules and Regulations, the following Articles shall guide proponents/owners of PSGFs whose plant capacity is 1000 kilowatts or below.

ARTICLE I

PROCEDURES FOR APPLYING FOR ACCREDITATION AS A PRIVATE SECTOR GENERATION FACILITY

SECTION 1. Accreditation of Mini-PSGFs. All mini-PSGFs served by the NAPOCOR grids shall be accredited by NAPOCOR. For applicants in the provinces, accreditation shall be done by the regional office of NAPOCOR where the proposed facility shall be situated. Accreditation by the NEA for applicants situated in areas not served by the NAPOCOR grids shall follow the provisions set on this matter in Section 3, Article III of Part I of these Rules and Regulations.

SECTION 2. NAPOCOR or NEA Assistance. The NAPOCOR or NEA shall assist the owners of the mini-PSGF in securing/meeting requirements set by various government agencies on matters regarding construction and operation of generating plants.

SECTION 3. Contents of Application. The contents for application for accreditation for a qualified mini-PSGF shall contain the following information:

a) Name and address of the applicant and locality of the facility;

b) Facility classification/Plant description;

c) Plant capacity and generating capability;

d) Fuel usage;

e) Equity ownership, and

f) Any other information that may be needed in the evaluation of proposed mini-PSGF.

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SECTION 4. Period_of_processing. NAPOCOR and NEA shall take action to approve or deny any application for accreditation for qualified mini-PSGF within one (1) month from date of application, provided all needed information and government approvals have been submitted them.

ARTICLE II

INTERCONNECTION COSTS, SYSTEM EMERGENCIES, AND OPERATING STANDARDS AND OTHER MATTERS

SECTION 1. Interconnection__Costs within NAPOCOR grids. NAPOCOR, or the concerned electric utility shall shoulder all costs needed for the realization of the physical connection of the mini-PSGF to the former's transmission facilities. Maintenance costs for the interconnection facilities shall also be borne by NAPOCOR or the concerned electric utility.

SECTION 2. Standards for Operations and Reliability. Notwithstanding the evaluation, approval and inspection described in Section 1 of Article VII, Part I of these Rules and Regulations, NAPOCOR, NEA and concerned electric utility make no representation as to the economic, technical and operational capability or reliability of the PSGF.

SECTION 3. Operating_Structure. The mini-PSGF directly connected to the NAPOCOR, or concerned electric utility grid, if required, shall be operated by its owner in accordance with arrangements scheduled by the NAPOCOR load dispatchers. The generating units shall be so designed and provided, if required, with controls to adequately operate on load - follow mode or on automatic load frequency control regulation under the dispatching system of NAPOCOR. Mini-PSGF connected to concerned electric utility shall be operated following the latter's dispatching/distribution system.

SECTION 4. System Emergencies. Private sector generators shall be obligated to provide power to NAPOCOR or the concerned electric utility during system emergencies to the extent provided by the agreement between the mini-PSGFs owners and NAPOCOR or the affected electric utility.

SECTION 5. Operation on "As-available" Basis. The electricity supplied by a mini-PSGF to NAPOCOR or an electric utility on an "as-available" basis shall follow a schedule provided by the owner of the mini-PSGF as to the time and period, and agreed to by NAPOCOR or the concerned electric utility.

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PART III

SPECIFIC PROVISIONS FOR COGENERATION AND RENEWABLE RESOURCE POWER PRODUCTION FACILITIES AS PRIVATE SECTOR GENERATION FACILITIES

In addition to the provisions of Part I of these Rules and Regulations, the following Articles shall guide proponents/owners of Private Sector Generation Facility (PSGF) whose plant capacity is over 1000 kilowatts.

ARTICLE I

PROCEDURES FOR APPLYING FOR ACCREDITATION AND INTERCONNECTION OF A COGENERATION AND A RENEWABLE RESOURCE POWER PRODUCTION FACILITY AS A PRIVATE SECTOR GENERATION FACILITY

SECTION 1. Contents of Application. The application for accreditation for a qualified PSGF status shall contain, among others, the following information:

a. The name and address of the applicant and the location of the facility;

b. A. description of the facility, including a statement indicating whether such facility is a renewable resource power production facility or a cogeneration facility;

c. The power production capacity and energy (kw and kwh) of the facility;

d. The primary energy source (fuel) of the facility;

e. The projected mode of operation of the facility, (i.e., whether, solely for internal use, or all its production to be sold to NAPOCOR grid/electric utility or just the excess) including plans for interconnection with the NAPOCOR grids, or electric utility operating at the site where facility is located;

f. A description of the equity ownership of the facility including the percentage of ownership by NAPOCOR and/or any electric utility, or by any organization or person;

g. The period of construction, installation and commissioning of the facility; and

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h. Any other information to be presented in forms as the concerned electric utility and/or the NAPOCOR may require.

SECTION 2. Period_of_Processing. Provided all requirements shall have been complied with, NAPOCOR or NEA shall approve or deny any application for accreditation for qualified PSGF status within three (3) months from the date of the application, unless NAPOCOR or NEA shall have required the submission of additional information, or postponement of final action on an application or other reasonable grounds. Any order postponing final action on an application shall state specifically the grounds for postponement, and the date on which a final ruling shall be issued. Any unresolved issue between NAPOCOR or concerned electric utility and qualifying PSGF shall be settled upon arbitration by the OEA.

ARTICLE II

RIGHTS OF NAPOCOR/NEA/CONCERNED ELECTRIC UTILITY ON THE DESIGN AND CONSTRUCTION OF THE PRIVATE SECTOR GENERATION FACILITY

SECTION 1. Rationale. For the protection and reliability of NAPOCOR's, or the concerned electric utility's power system, NAPOCOR or the concerned electric utility reserves the right to review the design and monitor the construction, operation and maintenance of the PSGF. By reviewing and monitoring, NAPOCOR or the electric utility makes no representations as to the economic and technical feasibility, operational capability or reliability of the PSGF. The owner of the PSGF is solely responsible for the economic and technical feasibility, operational capability and reliability thereof.

SECTION 2. Right_to_Review. NAPOCOR, NEA or the concerned electric utility shall have the right to review the drawings pertaining to the design of the PSGF and its interconnection facilities. Any flaws perceived by NAPOCOR, NEA or the electric utility in the design shall be described in writing. Internationally accepted engineering standards shall be utilized as reference in this review process.

SECTION 3. Right_to_Monitor. NAPOCOR ,NEA or the concerned electric utility shall have the right to monitor the construction work and construction schedule, start-up, operation and maintenance of the PSGF and shall have the right to consult with and make recommendations to the owner of the PSGF.

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ARTICLE III

OBLIGATIONS OF NAPOCOR, NEA, ELECTRIC UTILITIES, AND OWNERS OF QUALIFIED PRIVATE SECTOR GENERATION FACILITIES

Section 1. Interconnection within NAPOCOR grids. In addition to the provisions of Section 4, Article IV of Part I of these Rules and Regulations, upon the approval of the application and effectivity of the agreement for interconnection by the owner of a qualified PSGF and NAPOCOR or any concerned electric utility, the NAPOCOR or the concerned electric utility may issue an order requiring the owner of a qualified PSGF to advance investments for the necessary interconnecting electrical equipment and devices in accordance with appropriate electrical plans approved by NAPOCOR or the concerned electric utility. Payment for the investment on these facilities shall be made following arrangements as mutually agreed upon by contracting parties.

SECTION 2. Rate Satisfaction. A rate for purchases satisfies the requirements of Section 2 of Article V, Part I if such purchase rate equals or does not exceed the cost determined after consideration of the factors set forth in Section 5 of this Article.

SECTION 3. Case with Different Costs. In the case in which the rates for purchases are based upon estimates of costs over the specific period of a contract, the rates for such purchases do not violate this Article if the rates for such purchases differ from costs at the time of delivery.

SECTION 4. Purchases "as available". The rates for purchases of energy and capacity on an "as available" basis shall be based on the NAPOCOR's or the purchasing electric utility's costs calculated at the time of delivery or costs calculated and stipulated in a contract to purchase. Energy and capacity on an "as available" basis shall mean electricity supplied by a PSGF to NAPOCOR or an electric utility following a schedule provided by the owner of the PSGF as to time and period and agreed to by NAPOCOR or concerned electric utility.

Section 5. Factors Affecting Rates for Purchases. The NAPOCOR and a concerned electric utility may require that specific factors mentioned below shall, to the extent practicable, be taken into account in the determination of costs:

a. The data on avoided costs of NAPOCOR or the affected electric utility as submitted to the OEA in accordance with Section 4, Article V, Part I of these Rules and Regulations.

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b. The availability of capacity and energy from a qualified PSGF during the system daily and seasonal peak periods, including:

1. The ability of the NAPOCOR or the concerned electric utility to dispatch the qualified PSGF;

2. The expected or demonstrated reliability of the qualified PSGF;

3. The terms of any contract including the duration of the obligations, termination, notice requirement and sanctions for non-compliance;

4. The extent to which scheduled outages of the qualified PSGF can be usefully coordinated with scheduled outages of the NAPOCOR or the electric utility's facilities;

5. The usefulness of energy and capacity supplied from a qualified PSGF during system emergencies, including its ability to separate its load from its generation;

6. The individual and aggregate value of energy and capacity from qualified PSGFs on NAPOCOR's or the electric utility's system;

7. The smaller apacity increments and the shorter lead times available with additions of capacity from qualified PSGFs.

c. The relationship of the availability of electric energy and capacity from the qualified PSGF to the ability of NAPOCOR or the affected electric utility to avoid costs, including the deferral of capacity additions and the reduction of fossil fuel use.

d. The costs or savings resulting from variations in line losses from those that would have existed in the absence of purchases from a qualified PSGF if NAPOCOR or the purchasing electric utility generated an equivalent amount of energy itself or purchased an equivalent amount of electric energy and capacity.

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ARTICLE IV

INTERCONNECTION COSTS, SYSTEM EMERGENCIES, AND OPERATING STANDARDS AND OTHER MATTERS

SECTION 1. Interconnection Cost: within NAPOCOR grids. Consistent with the provision in Section 1 of Article III of Part III of these Rules and Regulations, the owner of a qualified PSGF shall advance all costs needed for the realization of the physical connection of the former to the transmission facilities of NAPOCOR or any concerned electric utility. Repayment on these investment costs shall be done in accordance with arrangements mutually agreed upon by the contracting parties. Maintenance costs for the interconnection facilities shall be borne by NAPOCOR or concerned electric utility.

SECTION 2. Operating Structure. The PSGF directly connected to the NAPOCOR or concerned electric utility grid, if required, shall be operated by its owner to carry its share of the system load demand and capacity reserve margin in accordance with the hourly, daily, weekly, monthly and/or yearly dictates/arrangements scheduled by the NAPOCOR Power Management Center's Load Dispatchers. The generating units shall be so designed and provided with electronic/automatic controls, if required, to adequately operate on load - follow mode or on automatic load frequency control regulation under the dispatching system of NAPOCOR. PSGF connected to concerned electric utility shall be operated following the latter's dispatching/distribution system.

SECTION 3. System Emergencies. Private sector generators shall be obligated to provide power to NAPOCOR or the concerned electric utility during system emergencies to the extent provided by the agreement between the qualified PSGF's owners and NAPOCOR or the affected electric utility.

PART IV

SPECIFIC PROVISIONS ON BLOCK POWER PRODUCTION FACILITIES

In addition to the provisions of Article I; Sections 1 and 5 of Article II; Sections 4 and 7 of Article III, Section 3 of Article VI; Section IV of Article VII of Part I of these Rules and Regulations, the following Articles shall guide proponents/owners of Block Power Production Facilities (BPPF) from the private sector. Electricity generated by BPPFs shall be sold only to NAPOCOR.

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ARTICLE 1

QUALIFICATIONS FOR A BLOCK POWER PRODUCTION FACILITY AS A PSGF

SECTION 1. Ownership. Qualifications as to ownership of a PSGF provided in Section 1, Article II of Part I of these Rules and Regulations shall be applicable to ownership of a BPPF. In addition, the following qualifications shall be allowed for owners of a BPPF.

a. Consistent with the development plans formulated by NAPOCOR, a BPPF may be constructed and operated by a NAPOCOR subsidiary corporation solely created for the purpose of owning the facility. Majority interest of the NAPOCOR subsidiary on the equity of the BPPF shall be considered as ownership by an electric utility and shall be subject to the applicable laws.

b. A proponent/owner of a BPPF in which NAPOCOR has a minority interest and in which the majority interest is being held by the private sector shall be governed by applicable laws other than for electric utilities.

SECTION 2. Conformance of BPPFs with NAPOCOR Development Plans. Block Power Production facilities shall follow the Power Development Program of NAPOCOR as to the plant type, capacity, number, size, location and other technical requirements of generating units or facilities programmed thereat. Exception to this provision shall be subject to the evaluation and approval by the NAPOCOR.

SECTION 3. Economic Criteria. A qualifying BPPF shall have a lower or equal investment cost and/or production cost as NAPOCOR.

ARTICLE II

PROCEDURES FOR APPLYING FOR ACCREDITATION AS A BLOCK POWER PRODUCTION FACILITY

SECTION 1. Accreditation. A private sector generation facility which meets the criteria for accreditation set forth in the preceding Article is a qualified BPPF.

SECTION 2. Accreditation Procedures of a BPPF. The NAPOCOR shall treat BPPF applicants from the private sector on a case to case basis. Accreditation shall commence upon public announcement of NAPOCOR for applicants from the private sector to construct and operate large generating facilities as included and programmed in the NAPOCOR Power Development Program. The

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application period shall be set by NAPOCOR. Evaluation and negotiation activities, and approval/disapproval of applications filed shall be completed within a reasonable period as determined by NAPOCOR. In case no applicant is chosen to construct and operate a specific block power generation project, ample time shall be given to NAPOCOR to undertake pre-construction and construction activities itself.

A facility not in conformity with NAPOCOR's Power Development Program may be proposed and its feasibility be submitted for consideration as a BPPF. NAPOCOR shall subject such proposal to a thorough evaluation and shall compare it with other BPPF applicants.

SECTION 3. Contents_of_Application. The application for accreditation for a qualifying BPPF shall contain, among others the following:

a. The name and address of the applicant, name of the BPPF project, and plant type;

b. Technical description of the BPPF citing, among others, the following:

   1. Installed capacity

   2. Annual Generation

   3. Forced Outage Rate

   4. Heat Rate

   5. Maintenance Days

   6. Dependable Capacity

   7. Station Use

   8. Economic Life

   9. Primary energy source (fuel)

   10. Mode of Operation (base or peaking)

c. Description of the equity ownership of the facility including the percentage of ownership, if applicable, of NAPOCOR and/or any electric utility;

d. Dates of construction, installation and commissioning of the BPPF;

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e. The project feasibility report, source and terms of foreign and local financing, operating capital budget, plans of obtaining manpower complement, qualification and training of personnel to run the facility;

f. The provisions of adequate equipment for protective relaying coordinated with the power system, direct communications, telemetering controls to the grid load dispatch center of NAPOCOR; and

g. Any other information as may be required by the National Power Corporation.

SECTION 4. Period_of_Processing. NAPOCOR shall take action to approve or deny any application for accrediting a qualifying BPPF within a predetermined period.

SECTION 5. Interconnection_After_Accreditation. Among others, provisions on interconnection after accreditation of a BPPF shall be included in a contract between NAPOCOR and the owner of the BPPF.

SECTION 7. Revocation_of_Accredited_Status. Instances or causes that may force NAPOCOR to revoke the qualified status of BPPF shall be clearly stated in the contract between NAPOCOR and the owner of the BPPF.

ARTICLE III

RIGHTS OF NAPOCOR ON THE DESIGN AND CONSTRUCTION OF THE BLOCK_POWER_GENERATION_FACILITY

SECTION 1. Rationale. For the protection and reliability of NAPOCOR'S power system, NAPOCOR reserves the right to review the design and monitor the construction, operation and maintenance of the BPPF. By reviewing and monitoring, NAPOCOR makes no representations as to the economic and technical feasibility, operational capability or reliability of the BPPF. The owner of the BPPF is solely responsible for the economic and technical feasibility, operational capability and reliability thereof.

SECTION 2. Right_to_Review. NAPOCOR shall have the right to review the drawings pertaining to the design of the BPPF and its interconnection facilities. Such review may include, among others, the building structure, generator, governor, excitation system, sychronizing equipment, protective relays, communication devices and metering system. Any flaws perceived by NAPOCOR in the design shall be described in writing. Internationally accepted engineering standards shall be utilized as reference in this review process.

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SECTION 3. Right_to_Monitor. NAPOCOR shall have the right to monitor the construction and construction schedule, start-up, operation and maintenance of the BPPF and shall have the right to consult with and make recommendations to the owner of the BPPF.

ARTICLE IV

OBLIGATIONS OF NAPOCOR AND OWNER OF BLOCK_POWER_PRODUCTION_FACILITIES

SECTION 1. Obligation_to_Purchase_Electric_Energy_from_the Qualified_BPPF. The NAPOCOR shall purchase, at rates to be agreed upon in accordance with the succeeding Article, hereof, electric energy and capacity which is made available by the owner of the qualified BPPF.

SECTION 2. Obligation_to_Sell_to_a_Qualified BPPF. NAPOCOR shall sell to the owner of a qualified BPPF maintenance power consistent with its maintenance schedule submitted to NAPOCOR, and back-up power.

SECTION 3. Obligation_to_Interconnect. NAPOCOR shall interconnect with a qualified BPPF to accomplish purchases or sales under these Rules and Regulations and following stipulations in the contract between NAPOCOR and the owner of the BPPF on this matter.

ARTICLE V

RATES_FOR_PURCHASES_AND_SALES

SECTION 1. Purchase_Rate. NAPOCOR's purchase rate from a BPPF shall be on a case to case basis and shall not exceed the avoided cost of NAPOCOR.

SECTION 2. Factors_Affecting_Purchase_Rates. In the calculation of the cost for a BPPF, NAPOCOR shall consider, to the extent practicable, the following factors that may be affecting rates for purchases:

a. The data on the avoided costs of NAPOCOR as submitted to the OEA in accordance with Section 4, Article V, Part I of these Rules and Regulations.

b. The availability of capacity and energy from the qualified BPPF during the system daily and seasonal peak periods, including:

   1. The ability of the NAPOCOR to dispatch the qualified BPPF;

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2. The expected or demonstrated reliability of the qualified BPPF;

3. The terms of any contract including the duration of the obligations, termination, notice requirement and sanctions for non-compliance;

4. The extent to which scheduled outages of the qualified BPPF can be usefully coordinated with scheduled outages of the NAPOCOR;

5. The usefulness of energy and capacity supplied from the qualified BPPF during system emergencies, including its ability to separate its load from its generation;

6. The individual and aggregate value of energy and capacity from qualified BPPFs on NAPOCOR's system.

7. The capacity increments and the lead times available with additions of capacity from qualified BPPFs.

8. The corresponding value of the reserve capacity being carried by NAPOCOR and to be shared by the BPPFs and the NAPOCOR customers.

c. The relationship of the availability of electric energy and capacity from the qualified BPPF to the ability of NAPOCOR to avoid costs, including the deferral of capacity additions and the reduction of fossil fuel use.

d. The costs of savings resulting from variations in line losses from those that would have existed in the absence of purchases from a qualified BPPF if NAPOCOR generated an equivalent amount of energy itself or purchased an equivalent amount of electric energy and capacity.

SECTION 3. Rates for Sales. NAPOCOR shall sell power to the BPPF for maintenance purposes at rates mutually agreed upon by NAPOCOR and the owner of the BPPF.

SECTION 4. Rates_to_BPPF_for_Electric_Power. NAPOCOR shall sell electric power to the BPPFs during unscheduled outages, as available, for their consumption at a rate mutually agreed upon by NAPOCOR and the owner of the BPPF. Back-up power for capacity unserved by BPPFs due to their unscheduled outages shall be provided by NAPOCOR's reserve units. Penalty due to the inability of the BPPF to provide contracted power during its unscheduled outage shall be stipulated in the contract between NAPOCOR and owner of the BPPF.

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SECTION 5. Adjustments_in_Financial_Accounting. NAPOCOR shall accordingly adjust its financial accounting systems and procedures resulting from purchases of electricity from the BPPF. The rate of return on rate base levels shall then be determined after all adjustments have been made and set in place.

ARTICLE VI

OPERATING_SYSTEMS_AND_PROCEDURES

SECTION 1. Standards_for_Operations_and_Reliability. NAPOCOR shall ascertain that the owner of the BPPF follows established internationally-accepted engineering standards to ensure safety, system-security and reliability for interconnected system operations. NAPOCOR shall evaluate and approve the system design, adhere to electrical and mechanical engineering standards, physically inspect the BPPF installations and witness the testing and commissioning of the BPPF that will be interconnected to the NAPOCOR grid to ensure that all equipment are in place and functioning properly.

SECTION 2. Operating_Structure. The BPPF as a PSGF directly connected to the NAPOCOR grid shall be operated by its owner to carry its share of the system load demand and capacity reserve margin in accordance with the hourly, daily, weekly, monthly and/or yearly arrangements scheduled by the NAPOCOR Power Management Center's Load Dispatchers. Although, the BPPF generating units may have been conceived as a base load plant, these generating units shall be so designed and provided with electronic or automatic controls to operate adequately on load-follow mode or on automatic load frequency control regulation by the SCADA (dispatching) system of NAPOCOR.

SECTION 3. Environmental Concerns. The BPPF shall consider the environmental impact/effect of its operations. The owner of the BPPF shall ascertain that environmental management standards as required by law through appropriate governmental agencies are met in the construction, operation and maintenance of the BPPF.

ARTICLE VII

OTHER_PROVISIONS_ON_BPPF

SECTION 1. Interconnection_Costs. The owner of a BPPF shall advance investments needed in interconnecting the BPPF with the NAPOCOR grid. Repayment shall be made in accordance with mutually agreed upon arrangements of the contracting parties. Maintenance costs for the interconnection facilities shall also be agreed upon by the NAPOCOR and the owner of the BPPF.

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SECTION 2. BPPF_Contract. A contract with the owner of a BPPF shall be prepared by NAPOCOR on a case to case basis. However, the basic contents of this contract shall include, among others, the items enumerated in Section 3, Article VII of Part I of these Rules and Regulations.
of these Rules.

SECTION 3. Security_of_BPPF. For emergency situations, NAPOCOR, with the assistance of the military, shall take over the operations of the BPPFs to ensure continuity of electric service and/or to prevent brownouts.

SECTION 4. Power_Planning. The NAPOCOR shall provide interested parties its Power Development Program for their reference. Same Power Development Program shall be followed by NAPOCOR in considering the private sector entities to participate in power generation activities. The NAPOCOR may include in the PDP schedules the following:

a. Period of application for the private sector to construct and operate the power plant stated in the PDP;

b. Period of evaluation of application;

c. Period of negotiation with qualified applicants for the BPPF activity; and

d. Period for approval and other matters relative to the BPPF activity.

PART V

RULES GOVERNING GENERATING FACILITIES SOLELY FOR THE INTERNAL USE OF ELECTRIC UTILITIES

In addition to the provisions of Article I; Sections 5 and 6 of Article II; Section 8 of Article III, the following Articles shall guide electric utilities engaged in power generation solely for internal use.

ARTICLE I

QUALIFICATIONS_AS_A_PRIVATE_SECTOR_GENERATION_FACILITY_(PSGF)

SECTION 1. Ownership. Electric utilities other than NAPOCOR shall be allowed to construct, operate and maintain generating facilities, (whether already existing or still to be installed) solely for their internal use. They shall be subject to electric utility regulations concerning rates, financial limitations, taxes and other laws applicable to their operations

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as electric utilities. The term "internal use" as utilized in this Part of the Rules and Regulations shall mean that electric utilities could use for plant maintenance and/or sell the electricity they generate directly to their customers.

SECTION 2. Size of Generating Units. The limitation on maximum size of generating units as stipulated in Section 4 of Article II, Part I of these Rules and Regulations shall be encouraged in order to facilitate possible NAPOCOR service to these generating plants during breakdown or maintenance periods.

ARTICLE II

PROCEDURES FOR APPLYING FOR ACCREDITATION AS A PRIVATE SECTOR GENERATION FACILITY

SECTION 1. Accreditation. An electric utility's generating facility which meets the criteria for accreditation set forth in the preceding Article is a qualified PSGF.

SECTION 2. Accreditation by NAPOCOR or NEA. The electric utility shall apply for accreditation as a qualified PSGF to NAPOCOR or NEA, as the case may be. The electric utility concerned shall also submit to NAPOCOR or NEA the technical description and the operating data of its generating units, as well as the units' respective annual maintenance schedules for planning and monitoring purposes.

SECTION 3. Contents of Application. The application for accreditation for a qualified PSGF status shall contain, among others, the following information:

a. The name and address of the applicant and the location of the facility;

b. A description of the facility, including a statement indicating whether such facility is a renewable resource power production facility, a cogeneration facility, or any other electric power generating facility;

c. The power production capacity and energy (kw and kwh) of the facility;

d. The primary energy source (fuel) used or to be used by the facility;

e. A description of the equity ownership of the facility;

f. The date of construction, installation and commissioning of the facility; and

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g. Any other information to be presented in forms as the National Power Corporation or NEA may require.

SECTION 4. Period of Processing. Provided all requirements shall have been complied with, the NAPOCOR or NEA, as the case may be, shall take action to approve or deny any application for accreditation within three (3) months from the date of the application, unless NAPOCOR or NEA shall have required the submission of additional information, or postponement of final action on an application or other reasonable grounds. Any order postponing final action on an application shall state specifically the grounds for postponement, and the date on which a final ruling shall be issued. Any unresolved issue between the NAPOCOR or NEA and electric utility owning the qualifying PSGF may be settled upon hearing by the Office of Energy Affairs.

SECTION 5. Assumption on Interconnection. It shall be assumed that the electric utilities owning generating units for their internal use are already interconnected with the NAPOCOR grid. Any possible interchange of electricity to and from NAPOCOR shall be coursed through said interconnection facilities. This provision does not apply electric utilities not served by the NAPOCOR grids and are under NEA's jurisdiction.

NAPOCOR'S OR NEA'S OPERATIONAL RELATIONSHIP WITH ELECTRIC UTILITIES OWNING GENERATING FACILITIES SOLELY FOR INTERNAL USAGE

SECTION 1. Provision on Reserve Capacity. NAPOCOR shall maintain a reserve capacity in the NAPOCOR grid system considering all generating facilities existing and operating therein. A minimal annual reserve capacity carrying fee as determined by NAPOCOR, shall be paid by all electric utilities with generating facilities for their internal use to NAPOCOR. Such payment shall make NAPOCOR obligated to serve the affected electric utilities maintenance and back-up power.

SECTION 2. Provision On Incremental Power. NAPOCOR shall supply incremental PSG power to the electric utility owning generating facilities for its internal use to the extent provided in a contract for this purpose. The selling rate of NAPOCOR for this incremental power shall be the rate mutually agreed upon by NAPOCOR and the owner of the PSGF.

SECTION 3. Rate of Back-Up/Maintenance Power. The rate of NAPOCOR to generating facilities solely for the internal use of an electric utility of maintenance power shall be the rate mutually agreed upon by NAPOCOR and the PSGF which shall be stipulated in a contract between NAPOCOR and the PSGF

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SECTION 4. Provision for System Emergencies. Electric utilities generating power solely for its internal use may arrange with NAPOCOR to provide the electric utilities or vice versa electric power during system emergencies to the extent possible and under terms to be agreed upon by both parties.

SECTION 5. Dispatchability. Generating facilities solely for internal use by an electric utility shall not be obligated to be under the Dispatch Management System (DMS) of the NAPOCOR.

SECTION 6. Production Cost Higher than NAPOCOR's. At a time when production cost from the generating units solely for internal use of an electric utility is higher than buying from NAPOCOR, and the electric utility decides to get power from NAPOCOR to replace its own generation, NAPOCOR shall sell to said electric utility provided that: NAPOCOR's unit production cost would remain the same with the added load; NAPOCOR's system operations would not be hampered; NAPOCOR's service to other customers would not be unduly affected; and NAPOCOR would not be pressured to add new capacities to meet the new load. At this time also, NAPOCOR shall not be obligated to purchase the generating facilities of the electric utility as this may be detrimental to the interest of NAPOCOR's regular customers.

SECTION 7. Excess Production of PSGF. In instances when the generating units of electric utilities are capable of producing electricity in excess of their requirement, NAPOCOR shall not be obligated to purchase such excess power.

In instances when NAPOCOR may opt to purchase power from said electric utility, purchase rate shall not exceed the cost of NAPOCOR had it generated the power itself at the time of delivery.

SECTION 8. Change of Status. An electric utility with an accredited generating facility solely for its internal use may decide to sell excess production on a regular basis to NAPOCOR. Terms and conditions of purchase by NAPOCOR shall be consistent with the applicable provisions given in Parts I and III of these Rules and Regulations and shall be stipulated in a Contract.

SECTION 9. Periodic Reporting to NAPOCOR or NEA. The electric utility owning generating facility for internal use shall regularly submit to NAPOCOR or NEA, in a prescribed form, operating and other information as may be required by NAPOCOR or NEA for monitoring and planning purposes.

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PART VI

GENERAL PROVISIONS

SECTION 1. Implementation_of_the_Rules_and_Regulations. The OEA shall take all the necessary and reasonable measures to ensure that the provisions of these Rules and Regulations are made effective.

SECTION 2. OEA_Revision_of_the_Rules and Regulations. The OEA shall prescribe and, from time to time thereafter, revise such Rules as it determines necessary to encourage private sector participation in power production. Such Rules shall be prescribed after consultation with the private sector and appropriate government agencies.

SECTION 3. Publication. These Rules and Regulations shall take effect thirty (30) days after publication thereof in the Official Gazette.

Makati, Metro Manila, Philippines, 25 May 1989.

ERNESTO M. ABOITIZ
President
National Power Corporation

RODRIGO E. CABRERA
Administrator
National Electrification Administration

Approved:

WENCESLAO R. DE LA PAZ
Executive Director
Office of Energy Affairs

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MALACAÑANG
MANILA

EXECUTIVE ORDER NO. 215

AMENDING PRESIDENTIAL DECREE NO. 40 AND ALLOWING THE PRIVATE SECTOR TO GENERATE ELECTRICITY

WHEREAS, Presidential Decree No. 40 places the responsibility of setting up transmission line grids and the construction of associated generation facilities in Luzon, Visayas, Mindanao and the major islands of the country to the National Power Corporation (NPC);

WHEREAS, the generation of electricity, unlike the transmission and distribution of electricity, is not a natural monopoly and can be undertaken by more than one entity;

WHEREAS, the government, as a matter of policy, is encouraging the private sector to participate in economic development and has started to disengage in areas which can be adequately handled by the private sector;

WHEREAS, the generation of electricity by the private sector can provide a means of increasing power capacity to meet the projected increase in power demand in the future without in any way requiring financial assistance or guarantee from the government;

WHEREAS, there is, on the other hand, an imperative need to rationalize the development of energy resources and the operation of electric generating facilities in the power grid;

NOW, THEREFORE, I, CORAZON C. AQUINO, President of the Philippines, do hereby order:

SECTION 1. The strategic and rational development of the country's power grids shall be the responsibility of the National Power Corporation. Accordingly, the setting up of transmission line grids and the construction of associated generating facilities in Luzon, Visayas and Mindanao, including the major islands of the country, to meet the power demand, shall be the responsibility of the National Power Corporation. However, private corporations, cooperatives or similar associations shall be allowed to construct and operate the following types of electric generating plants, subject to the rules and regulations hereinafter adopted in accordance with Section 2 hereof:

a) Cogeneration units, defined as the production of electric energy and forms of useful thermal energy (such as heat or steam), used for industrial,

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commercial, heating or cooling purposes through sequential use of energy;

b) Electric generating plants intending to sell their production to the grids, (consistent with the developmental plans formulated by the National Power Corporation;)

c) Electric generating plants, intended primarily for the internal use of the owner, which also plan to sell excess production to the grids; and

d) Electric generating plants, outside the National Power Corporation grids, intending to sell directly or indirectly to end-users.

SECTION 2. Rules and regulations to govern private sector involvement in power generation shall be formulated by the National Power Corporation for areas within the National Power Corporation grids, and the National Electrification Administration for areas outside the National Power Corporation grids. Such rules and regulations shall be made subject to consultation with concerned agencies including the private sector and the approval of the Office of Energy affairs. These rules and regulations shall include the following:

a) Qualifications for accrediting private sector generators;

b) Procedures for applying for accreditation as a private sector generator of electricity;

c) Obligations of private sector generators which shall include efficiency standards to ensure reliability of power supply and the corresponding penalties for failure to comply with said standards;

d) Terms and conditions for the purchase or for the transmission/distribution, as the case may be, of electricity generated by the non-National Power Corporation entities; and

e) Other matters which shall be necessary to implement this Order.

SECTION 3. The Office of Energy Affairs shall take the necessary measures to ensure that the provisions of this Order are made effective.

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SECTION 4. The Department of National Defense shall assist the National Power Corporation, the private utilities and the electric cooperatives in providing security to the generating plants to prevent power black-outs, and in instituting the necessary safeguards in cases of emergencies, including the training of Armed Forces of the Philippines personnel in power generation operations.

SECTION 5. Numbers 2, 4, 5 and 6 of Presidential Decree No. 40 are hereby amended accordingly. All laws, orders, issuances, rules and regulations or parts thereof inconsistent with this Executive Order are hereby repealed or modified accordingly.

SECTION 6. This Executive Order shall take effect fifteen (15) days after the issuance of the rules and regulations for the implementation of this Executive Order.

Done in the City of Manila, this 10th day of July in the year of Our Lord, nineteen hundred and eighty-seven.

By the President:

JOKER P. ARROYO
Executive Secretary

CERTIFIED COPY:

MELQUIADES T. DE LA CRUZ
Presidential Staff Director
Malacanang Records Office
Date 7/14/87

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ENERGY REGULATIONS NO.

Rules and Regulations Implementing Executive Order No. 215 on Private Sector Participation in Power Generation

Pursuant to Section 2 of Executive Order No 215 (EO 215) allowing private sector participation in power generation activities, and the relevant provisions of Republic Act No. 7638 (RA 7638) creating the Department of Energy (DOE), the DOE hereby promulgates the following amended Rules and Regulations to implement the provisions of EO 215.

PART I

GENERAL PROVISIONS OF THE RULES AND REGULATIONS

The succeeding Articles shall include the general provisions to be followed for all types of generating facilities owned by the private sector participating in power generation.

ARTICLE I

STATEMENT OF POLICY, SCOPE AND DEFINITION OF TERMS

SECTION 1 Statement of Policy Pursuant to the general provisions of RA 7638, it is hereby declared the policy of the State to ensure a continuous, adequate, and economic supply of energy with the end in view of ultimately achieving self-reliance in the country's energy requirements through the economic development of indigenous energy resources and through the efficient utilization of energy.

The DOE shall provide policy directions for the formulation of power system expansion plans and programs to achieve the above-stated objectives, following the approved national economic plan and consistent with policies on environmental protection, and conservation and maintenance of ecological balance

Pursuant to Section 1 of EO 215, the National Power Corporation (NAPOCOR) shall continue to be responsible for the strategic and rational development of the country's power grids including the construction of associated generating facilities and the setting up of transmission line grids in Luzon, Visayas, and Mindanao. However, private corporations, cooperatives or similar associations shall be allowed to construct and operate electric generating plants and associated transmission facilities

Furthermore, it is hereby declared the policy of the State to promote competition in generation, and to increase the responsibility of all utilities to perform their own planning, including the acquisition of an efficient portfolio of generation and demand-side resources. It is the intent of the State that these rules promote the ability of all utilities to meet these expanded responsibilities, in particular by ensuring transmission access at fair prices and by establishing standard NAPOCOR tariffs for services required by utilities when contracting for other sources of generation

SECTION 2 Scope. These Rules and Regulations shall govern the relation between the DOE, NAPOCOR, the National Electrification Administration (NEA), the Energy Regulatory Board (ERB), private electric distribution utilities and cooperatives, and such private corporations, cooperatives or similar associations as may be allowed to own and operate electric generating plants and facilities that will sell all or excess electricity production to the NAPOCOR, other electric utilities, and end-users in areas within and outside the NAPOCOR transmission grids, pursuant to Section 1 of EO 215

These rules and regulations shall be an interim set of rules that shall be amended, replaced, or repealed in due time as restructuring and privatization efforts for the Philippine power industry moves through ongoing and anticipated phases towards an increasingly competitive and efficient industry structure for the Philippine power sector

SECTION 3. Definition of Terms As used in these rules and regulations, the following terms shall have the following respective meanings

a "Avoided Cost" means the least incremental cost that an electric utility would incur towards meeting its anticipated power demand if such utility does not buy power from a Private Sector Generation Facility (PSGF)

b. "Back-up Power" means electricity supplied by NAPOCOR or an electric utility to replace electricity ordinarily generated by PSGF during unscheduled outages of the latter

c. "Block Power Production Facility (BPPF)" means any electric generating facility intended primarily to sell all or the bulk of its power output to the grid, consistent with the development plans formulated by NAPOCOR and/or electric utilities, and approved by the DOE.

d "Bottoming cycle Cogeneration Facility" means a cogeneration facility in which the energy input to the system is first applied to a useful thermal energy process, and the reject heat emerging from the process is then used for power production

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e "Capacity" means the load for which a generating unit, generating station, or other electrical machine is rated by the manufacturer.

f "Cogeneration Facility" means a facility which produces electrical and/or mechanical energy and forms of useful thermal energy (such as heat or steam), used for industrial, commercial, heating, or cooling purposes, through the sequential use of energy.

g. "Coincident Maximum Demand" means the maximum demand at the instant of greatest load of NAPOCOR

h "Department of Energy or DOE" refers to the government agency created pursuant to RA 7638 promulgated on December 9, 1992.

i "Developmental Plans", refers to Power Development Program or PDP formulated and updated yearly by the NAPOCOR and/or individual electric utilities.

j "Distribution System", means the electric system of an electric utility which delivers electricity from transformation points on the transmission system to the consumers or end-users

k. "Electric Cooperative" shall mean a corporation under RA 6038 or PD 269 as amended by PD 1645, or a cooperative supplying or empowered to supply electric service.

l. "Electric Energy", as commonly used in the electric utility industry, means kilowatt-hours

m "Electric Utility System", refers to the distribution system of an electric cooperative, local-government owned and privately-owned electric utility operating within the NAPOCOR and electric utility power grids

n "Electric Utility", refers to the electric cooperative, local-government-owned and privately-owned electric utility operating within the NAPOCOR grids or other electric systems.

o. "Energy Industry Administration Bureau or EIAB" refers to the Bureau under the DOE that shall, among others, assist in the formulation of regulatory policies to encourage and guide the operations of both government and private entities involved in energy resource supply activities such as independent power production, electricity distribution, as well as importation, exportation, stockpiling, storage, shipping, transportation, refinement, processing, marketing, and distribution of all forms of energy products, whether conventional or nonconventional.

p. "Energy Planning and Monitoring Bureau or EPMB" refers to the Bureau under the DOE that shall, among others, supervise, coordinate, and integrate the formulation, monitoring, and review of programs and plans for energy supply development such as power development, local energy resource development and production, and energy importation.

q. "Energy Regulatory Board or ERB" refers to the quasi-judicial agency created under Executive Order 172, dated May 8, 1987, which, among other functions, fixes and regulates the prices of petroleum products and the power rates of electric utilities, now including the NAPOCOR and the electric cooperatives, pursuant to Section 18 of RA 7638.

r. "Energy Resource Development Bureau or ERDB" refers to the Bureau under the DOE that shall, among others, assist in the formulation and implementation of policies to develop and increase the domestic supply of local energy resources like fossil fuels, nuclear fuels, hydropower and geothermal resources.

s. "Total Energy Input", for purposes of calculating thermal efficiencies of cogeneration facilities, is defined as the total kilograms of fuel used multiplied by the Higher Heating Value (HHV) of the fuel input/s as received.

t. "Franchise Area" shall mean a geographical area franchised to a public service entity, such as: electric cooperative, local government or privately-owned electric utility system.

u. "Grid" means the electrical system of interconnected transmission lines, substations and generating plants of NAPOCOR or the concerned electric utility, as the case may be.

v. "Host Utility" means the franchised electric utility operating nearest to where, or within whose area a qualified PSGF is located.

w. "Incremental PSG Power" means electricity supplied by NAPOCOR or an electric utility, regularly used by an owner of a qualified private sector generation facility in addition to that which the latter generates itself. It is the difference between the total electricity requirement of a private sector generator and the amount it generates

x. "Interconnection" means the connection of a generating facility or a power distribution facility to an electric utility system or the NAPOCOR grid.

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"Interconnection Costs" means the costs of all necessary interconnecting electrical equipment, protective devices and control equipment needed by a private sector generator for its PSGF to permit interconnected operations with NAPOCOR or an electric utility.

7. "Interruptible Power" means electricity supplied by NAPOCOR or an electric utility to a private sector generator subject to interruption by the former.

a.1. "Maintenance Power" means electricity supplied by NAPOCOR or an electric utility, to a private sector generator whose PSGF is undergoing scheduled maintenance work

b.1. "Mini-Hydro Facilities" means hydro facilities with capacities of 101 kilowatts to 10,000 kilowatts.

c.1. "National Electrification Administration or NEA" means the corporation, wholly-owned and controlled by the government, created under the provisions of Presidential Decree No. 269, as amended, of 06 August 1973, and tasked primarily to administer the rural electrification program

d.1. "National Power Corporation or NAPOCOR" means the corporation, wholly-owned and controlled by the government, formed under the provisions of Republic Act No 6395 of 10 September 1971 and tasked primarily to undertake the development of hydroelectric generation of power and the production of electricity from nuclear, geothermal and other sources, as well as the transmission of electric power on a nationwide basis.

e.1 "Peak Demand" means the maximum integrated load demand occuring for thirty (30) minutes continuously.

f.1 "Person" means any natural person, firm, association, corporation, business trust and partnership

g.1. "Primary Energy Source" means the fuel used for the generation of electricity, except that such terms do not include:

1 The minimum amounts of fuel required for i gnition, start up, testing, flame stabilization, and control uses, and

2 The minimum amounts of fuel required to alleviate or prevent

i unanticipated equipment outages, and

ii emergencies, directly affecting the public health, safety or welfare, which would result from electric power outages

h.1. "Private Sector Generation Facility, (PSGF)" means:

1. any cogeneration facility meeting the minimum thermal efficiency standards set by the DOE for cogeneration systems, or

2 any renewable resource power production facility, or

3. any electric generating facility that shall use indigenous energy resources as its primary energy source, or

4 any electric generating facility, particularly a Block Power Production Facility, intended primarily to sell all or the bulk of its power output to the grid, consistent with the development plans formulated by NAPOCOR and/or electric utilities, and approved by the DOE.

i.1. "Private Sector Generator" refers to the owner and/or operator of the accredited PSGF.

j.1. "Purchase" means the purchase of electricity by NAPOCOR or an electric utility from a private sector generator.

k.1. "Rate" means any price, tariff or charge, as classified by NAPOCOR or the electric utility, with respect to the sale or purchase and/or wheeling of electricity

l.1 "Renewable Energy Sources" means sources of energy that are regenerative or virtually inexhaustible such as biomass, solar, wind, geothermal or hydro, and also means by-product materials that, but for their use as a source of energy, would be considered waste.

m.1. "Renewable Resource Power Production Facility (RRPPF)" means a facility which produces electricity by the use of renewable energy resources as its primary energy source.

n.1. "Sale" means the sale of electricity by NAPOCOR or an electric utility to a private sector generator.

o.1. "System Emergency" means a condition on NAPOCOR's or an electric utility's system which is likely to result in imminent significant disruption of service to customers or is imminently likely to endanger life or property

p.1. "Thermal Efficiency", as it pertains to cogeneration facilities, is defined as the ratio of useful energy output to the total energy input

q.1. "Topping cycle Cogeneration Facility" means a cogeneration facility in which the energy input to the facility is first used to produce useful power with the reject heat recovered from power production then used to provide useful thermal energy

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r.1 "Uncontrollable Forces" means any occurrence beyond the control of a party which causes that party to be unable to perform its obligations and which the party has been unable to overcome by the exercise of due diligence, including but not limited to flood, drought, earthquake, storm, fire, pestilence, lightning and other natural catastrophes, epidemic, war, riot, civil disturbance or disobedience, action or inaction of legislature, judicial or regulatory agencies, or other proper authority affecting the operation of the PSGFs, failure or sabotage of facilities which have been maintained in accordance with good engineering and operating practices in the Philippines.

s.1 "Useful Energy Output", for purposes of calculating thermal efficiencies of cogeneration facilities, is defined as the sum of electricity and/or mechanical power plus the useful heat in the steam or hot exhaust gases and such other thermal energy recovered for useful purposes.

t.1 "Wheeling" means the provision of electric energy transmission services by NAPOCOR or an electric utility for the purpose of enabling the owner of an accredited PSGF to transmit power to another electric utility system or end-user

ARTICLE II

JURISDICTION OF THE DOE, NAPOCOR, NEA AND ERB

SECTION 1. Jurisdiction of the DOE. The DOE shall have overall jurisdiction in the accreditation of qualified PSGFs. As part of its rule-making powers granted under RA 7638, the DOE shall have the authority to amend these Rules and Regulations as may be necessary if the common good so requires, as determined upon public hearing to ascertain the nature of the exigency or cause requiring the introduction of amendments. Pursuant to Section 12(c) of RA 7638, the review, evaluation, and accreditation of qualified private sector proposals shall be undertaken by the EIAB of the DOE, based on the procedures and criteria for accreditation set forth in these Rules and Regulations

The Director of the EIAB shall have the authority to issue Certificates of Accreditation, as well as denials of requests for accreditations, as the case may be, for and in behalf of the DOE. Decisions of the EIAB as regards applications for accreditation as a qualified PSGF are appealable within a period of thirty (30) days to the Secretary of the DOE, who in turn must decide on the case within sixty (60) days after receipt of the appeal

SECTION 2. Jurisdiction of NAPOCOR. NAPOCOR shall have responsibility for the formulation and implementation of such programs as are necessary to ensure the reliability of electricity throughout the country's power grids, consistent with the general and specific policies adopted by the DOE. In this regard, NAPOCOR may undertake required generation and transmission projects through private sector participation, subject to the provisions of these Rules and Regulations, and supplemented by Republic Act No 6957, the amendments thereto, and its implementing guidelines. Pursuant to NAPOCOR's functions as a bulk power generation and transmission utility, high-voltage wheeling of electricity generated by qualified PSGFs to the concerned electric utility or end-user shall be provided by NAPOCOR, where necessary.

DOE shall require NAPOCOR as well as individual electric utilities, to submit power development programs which reflects an efficient portfolio of generation and demand-side resources, for the DOE's review and approval, indicating projects to be undertaken through private sector participation, the justifications for such, and indicative timetables for undertaking competitive procurement of each of the listed projects. NAPOCOR and/or individual electric utilities shall seek the DOE's prior approval to implement generation projects not included in the approved power development plans of the respective electric utilities

SECTION 3 Jurisdiction of the NEA. Pursuant to the NEA's role as a developmental and financial institution to electric cooperatives, the NEA shall make appropriate recommendations to the DOE regarding applications of electric cooperatives to build and operate power generation facilities for its internal use, as defined and allowed in the relevant provisions of Part IV of these Rules and Regulations, or applications of electric cooperatives for authority to contract its power supply requirements with a PSGF, consistent with the provisions of Part III of these Rules and Regulations

Such endorsement by the NEA shall consider the impact of a cooperative's power generation proposal on the latter's ability to render efficient and reliable service to its existing customers, to expand its service coverage to non-electrified areas, and to continue its debt service to the NEA. In endorsing a cooperative's application, NEA makes no representation as to the overall viability of an electric cooperative's operations.

SECTION 4 Jurisdiction of the ERB. The ERB shall have jurisdiction over the implementation of regulations concerning power rates of investor-owned electric distribution utilities, electric cooperatives, and NAPOCOR. Such authority shall include the review and approval of tariff schedules for wheeling, back-up and maintenance power, incremental PSG power, and reserve capacity carrying fees, as well as the review and approval of power purchase agreements of NAPOCOR and other franchised electric utilities between qualified PSGFs with respect to the reasonableness of power purchase rates and its corresponding impacts on electric utilities' rates of return, as well as on end-user tariffs.

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The ERB shall hear and arbitrate disputes between and/or among franchised electric utilities, NAPOCOR, and qualified PSGFs on matters which have implications on rates of NAPOCOR and/or electric utilities.

ARTICLE III

QUALIFICATIONS OF A PRIVATE SECTOR GENERATION FACILITY AND A PRIVATE SECTOR GENERATOR

SECTION 1. Ownership. Qualifications as to ownership of a PSGF shall be any of the following:

a. A PSGF may be constructed, owned and operated by private persons, private corporations, cooperatives or similar associations not primarily engaged in the transmission and/or distribution of electricity, and shall be governed by applicable Philippine Laws on corporations or similar associations as to registration, independent auditing, taxation and other related matters as provided by said laws. Foreign entities may participate in electricity generation subject to applicable Philippine laws.

b. Private corporations, cooperatives and similar associations primarily engaged in the transmission and/or distribution of electricity, referred to in these Rules and Regulations as electric utilities, may own, construct and operate generating facilities, subject to electric utility regulations concerning rates, financial limitations, taxes and other laws applicable to their operations as electric utilities, and subject to the specific provisions of Part IV for "Electric Utility-Owned Generation Facilities".

c. Companies or consortiums of companies, whether private or government-owned, primarily engaged in indigenous energy upstream exploration, development, and production activities, may own, construct and operate power generation facilities to the extent that the primary energy source in power generation shall come from the local production of such companies or consortiums of companies, and subject to limitations provided by relevant legislations, regulations, and/or service contract terms of the Department of Energy, and the specific provisions on Block Power Production Facilities (BPPFs), where applicable.

Majority interest of the NAPOCOR and/or any other electric utility on the equity of a PSGF shall be considered as ownership by an electric utility, and shall, thus, be subject to applicable utility regulations. A PSGF in which NAPOCOR and/or any other electric utility has a minority interest, and in which the majority interest is being held by non-utility companies shall be governed by applicable laws other than for electric utilities.

For entities availing of incentives offered under the government's annual Investment Priorities Plan, such entities shall be guided by relevant legislation thereto.

SECTION 2. Technical and Financial Qualifications. Private Sector Generators, more particularly private corporations, cooperatives, and similar associations seeking to construct, own, and operate power generation facilities under these Rules and Regulations, must possess the technical capability (i.e., engineering and management qualifications) and a proven track record in the field of power generation, particularly in the generation technology being proposed. A Private Sector Generator must likewise demonstrate the financial strength and capability to undertake the scale of project being proposed under these Rules and Regulations.

SECTION 3. Facility Classification. A Private Sector Generation Facility (PSGF) referred to in this Part of these Rules and Regulation shall include the following electric generating plants:

a. Cogeneration facilities such as topping- or bottoming-cycle facilities, utilizing fossil fuels or a blend of fossil fuels and renewable energy forms, meeting engineering, operating and efficiency standards as prescribed in Section 5 of this Article;

b. Renewable Resource Power Production Facilities such as those using biomass, solar, wind, geothermal, hydro or wastes as the primary energy source;

c. Electric generating facilities that shall use indigenous energy resources as their primary energy sources; and

d. Electric generating facilities intended primarily to sell all or the bulk of its power production to the grid (i.e., to NAPOCOR or to other electric utilities), consistent with the developmental plans formulated by NAPOCOR and/or electric utilities and approved by DOE.

SECTION 4. Size of Generating Units. The maximum size of a generating unit of a PSGF shall be limited to the existing largest generating unit size or 10% of the coincident maximum demand of the concerned NAPOCOR grid or as allowed by the DOE. For areas not covered by the main transmission networks of NAPOCOR, the size of generating units shall be limited by the power demand in the concerned isolated area, island or grid, taking into account reasonable projections of load growth over the period of PSGF commissioning.

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SECTION 5. Engineering, Operating and Efficiency Standards. A PSGF shall be guided by internationally-accepted standards in engineering, operations and reliability.

Cogeneration facilities utilizing fossil fuels, or a blend of fossil and renewable energy sources, shall be required to meet the minimum thermal efficiency standard set forth in Part II of these Rules and Regulations, for purposes of availing incentives offered under the Investment Priorities Plan of the Board of Investments and/or securing a DOE accreditation as a qualified Cogeneration facility under these Rules and Regulations.

SECTION 6. Economic Criteria. Any proposed electric generating facility should be able to demonstrate its potential for providing net foreign exchange savings to the country, by virtue of:

a. generating electric energy more efficiently or cheaper than can otherwise be generated by existing or programmed generation facilities under the power development plans of NAPOCOR and/or other electric utilities;

b. using indigenous and/or renewable energy sources; and

c. accessing lower costs of capital, cheaper plant investment, and/or locally-manufactured equipment.

ARTICLE IV

GENERAL PROCEDURES FOR APPLYING FOR ACCREDITATION AND INTERCONNECTION AS A PRIVATE SECTOR GENERATION FACILITY

SECTION 1. Contents of the Application. The contents of applications for accreditation as a qualified PSGF should generally contain the following information:

a) Name and address of the applicant and location of the proposed facility;
b) Project organizational setup;
c) Names of cooperating/participating companies, equity participation, incorporation documents, audited financial statements for the last two fiscal years, and records of successful experience in similar activities over the last five (5) years;
d) Project financing plans;
e) Administrative and technical manpower complement;
f) Facility classification and general plant description;
g) Sale of PSGF generation (whether generation is solely for sale to the grid, dedicated to an electric utility, or for internal use with provision for sale of excess power to the grid);
h) Projected mode of operation (baseload or peaking);
i) Power and annual energy production capacity (in kW and kWh, respectively) of the proposed facility;
j) Primary energy source (fuel) of the facility, heating value, and net plant heat rate;
k) Projected forced outage rate, maintenance days, dependable capacity, and station energy use;
l) Projected economic life of project and proposed duration of interconnection/cooperation period;
m) Interconnection plans with NAPOCOR or other electric utility;
n) Detailed project timetable, specifically target periods for financial closing, groundbreaking, installation of major plant equipment, testing and commissioning of the facility;
o) Any other information as may be required under the specific provisions of Parts II, III, and IV, or as may be deemed necessary by the EIAB for evaluation purposes.

SECTION 2. Facilities Qualified for Accreditation. A Private Sector Generation Facility (PSGF) which meets all of the qualifications for accreditation set forth in Sections 1 through 6 of Article III is a qualified PSGF.

SECTION 3. Accreditation by the EIAB. The owner or operator of a proposed PSGF intending to sell excess or all its power production to the grid, and whether the facility is existing or shall be constructed, and whose generating unit is subject to the limitations under Article III hereof, shall apply for accreditation as a qualified PSGF to the EIAB.

A PSGF whose generation is solely for the owners' internal use need not apply for accreditation with the EIAB, but may do so if in the future there is a likelihood that sale to NAPOCOR or electric utilities would occur following the provisions of these Rules and Regulations.

Provided that all the information requirements shall have been complied with, the EIAB shall approve or deny any application for accreditation as a qualified PSGF, based on the foregoing qualifications for accreditation in Article III, within two (2) months from the date of application, unless EIAB shall have required the submission of additional information, or postponement of final action on an application for reasonable grounds. Any order postponing final action on an application shall state specifically the grounds for postponement, and the date on which a final ruling shall be issued.

The EIAB shall issue Certificates of Accreditation to PSGFs which are found to have qualified under these Rules and Regulations.

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SECTION 4 EIAB Issuance of Provisional Accreditations. The EIAB may issue provisional accreditations to PSGFs qualifying under Sections 1, 3, 4, 5, and 6 of Article III of this Part of the Rules and Regulations if the Private Sector Generator is able to demonstrate in its formal application sound, reasonable, and timebound development plans, consistent with overall timetables for project commissioning, for the formation of a technically and financially qualified consortium or collaborative of corporations to undertake the proposed PSGF.

In all cases, notwithstanding compliance with Sections 1 through 6 of Article III, the EIAB may impose the timebound achievement of specific project milestones with the end in view of ensuring the timely completion of the proposed facility, as well as for monitoring the progress of the provisionally-accredited PSGF.

Provisional accreditations issued by the EIAB shall have a maximum validity period of one (1) year. The EIAB may decide on the extension or non-extension of the provisional accreditation on the basis of progress made by the proponent towards complying with the conditions of the provisional accreditation, ensuring timely completion of the project, and EIAB's evaluation of the continued viability of the proposed generation project.

SECTION 5 Non-transferability of Accreditation. Accreditations issued by the EIAB shall not be transferable or assignable except to subsidiaries, affiliated companies and/or partners, determined to be technically and financially-qualified by the EIAB, of the originally-accredited owners/proponents of the qualified PSGFs.

Transferability of accreditations issued to electric utilities shall be governed by the relevant provisions of Part IV on "Electric Utility-Owned Generation Facilities".

SECTION 6 Interconnection of Accredited PSGFs. For facilities whose generation is not solely for internal use of the owner, but also for sale to NAPOCOR or to electric utilities other than the franchised electric utility operating nearest to, or within whose area a qualified PSGF is located (host utility), the host utility shall interconnect the accredited PSGF and wheel the power out of its franchised area.

In this regard, NAPOCOR and franchised electric utilities with transmission and/or distribution facilities of 69 KV or above shall file with the ERB standard interconnection policies and procedures, as well as wheeling tariffs to be approved by the ERB. Should there be a dispute as to whether a PSGF should connect with the local franchised host utility or with NAPOCOR, said dispute shall be resolved by ERB.

SECTION 7 EIAB Accreditation of Block Power Production Facilities (BPPFs). NAPOCOR and/or other electric utilities shall be allowed to undertake competitive procurement for projects identified for private sector implementation under any power development plan approved by the DOE. Implementation of these generation projects, more particularly referred to as Block Power Production Facilities (BPPFs), shall be guided by the general provisions of Part I, as well as by specific provisions on BPPFs in Part III of these Rules and Regulations.

SECTION 8 EIAB Monitoring of Accredited PSGFs. Owners/proponents of accredited PSGFs shall submit quarterly status reports on the progress of each accredited project to the EIAB, and shall immediately inform the EIAB of any substantial changes in the project that may have an impact on the PSGF's qualified status. The PSGF shall likewise urgently advise the EIAB on the attainment of project milestones (e.g., site groundbreaking, issuance of environmental clearances and other permits, financial closing, etc.) for monitoring purposes.

The EIAB shall render quarterly reports to the DOE Secretary on the progress of accredited projects. Copies of these reports shall be regularly furnished to concerned bureaus and agencies of the DOE for information and coordination.

SECTION 9 Generation by Electric Utilities. Facilities owned by an electric utility, whose generation is solely for the internal use of the owner electric utility, shall be further guided by Part IV of these Rules and Regulations.

SECTION 10 Generation by Non-utilities Primarily for Internal Use. Facilities whose generation is intended primarily for the internal use of the non-utility owner but also plans to sell excess production to NAPOCOR and/or other electric utilities shall be further guided by Part II of these Rules and Regulations when such plan to sell is effected.

SECTION 11 Generation by Companies or Consortiums Primarily Engaged in Energy Upstream Operations. Construction and operation of PSGFs by energy upstream companies or consortiums shall be guided further by the relevant provisions of Parts II or III of these Rules and Regulations, as applicable.

SECTION 12 Representation During Accreditation/Negotiation. Where proposals for PSGFs are submitted by persons or entities, foreign or local, other than the organization which is or will be set up to construct, own and operate the facilities, agreement made during any negotiation after accreditation shall not legally bind parties involved thereto until such time when a final contract is agreed upon and signed. Documentary support such as Letters of Intent and Memorandum of Agreement made and signed during any negotiation shall be used as bases in the preparation of the actual contract between NAPOCOR or the electric utility and the Organization, existing or newly created, owning the PSGF.

SECTION 13 Revocation of Qualified Status. The EIAB may revoke the qualified status of a PSGF which has been accredited under this Article if such facility fails to comply with the requirements of these Rules and Regulations, or any of the

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conditions contained in the Certificate of Accreditation, whether provisional or not, issued by the EIAB. The EIAB shall urgently advise relevant parties of its decision to revoke the qualified status of a PSGF, citing the reasons for such revocation.

SECTION 14. Application and Negotiation for Interconnection within NAPOCOR grids. The owner of a qualified PSGF shall apply and negotiate with the concerned electric utility where the PSGF is located for interconnection with the latter. If interconnection is hindered by any disagreement, the owner of the PSGF may negotiate with NAPOCOR or any other electric utility for the latter to purchase the PSGF's generation.

In the case of an accredited PSGF whose generation is also for sale to NAPOCOR, the owner of the said qualified PSGF shall apply and negotiate with NAPOCOR. NAPOCOR shall then treat the PSGF generation site as a delivery point of NAPOCOR to the electric utility operating nearest to the site where the PSGF is located.

Any disagreement on any matter that hinders the interconnection of the PSGF with NAPOCOR or the concerned electric utility shall be elevated to and settled by the EIAB. If neither NAPOCOR nor any concerned electric utility shall interconnect with the qualified PSGF, then the owner of the PSGF may elevate his case to the EIAB for settlement.

An accredited PSGF whose generation is solely for the owners' internal use need not apply for interconnection, but may do so if in the future there is a likelihood that sale to NAPOCOR and/or electric utilities would occur following the provisions of Parts I and either II or III of these Rules and Regulations.

NAPOCOR, privately-owned electric utilities, and electric cooperatives connecting with a PSGF shall submit to the EIAB a copy of any interconnection agreement reached with said PSGF for monitoring purposes.

It shall mean that the interconnection agreement, in this instance, already includes the agreement reached between the electric utility/NAPOCOR and the owner of the PSGF on matters pertaining to rates of purchase and sales, operating and maintenance schedules, procedures for dispatch, protective and metering devices and other items that are important to both parties. Copies of such interconnection agreements shall be submitted to the ERB for its review and approval, in line with its rate-setting function.

SECTION 15. Action on Modification of a PSGF. Prior to undertaking any substantial alteration or modification of a PSGF which has been certified under these Rules and Regulations, the owner or operator of such qualified PSGF shall apply to the EIAB for a ruling that the proposed alteration would not result in a revocation of the facility's qualified status. The term "substantial alteration or modification of a qualified PSGF" means such alteration, modification or other changes as will materially affect the accuracy of the information submitted pursuant to Article III and Section 1 of this Article under this Part of the Rules and Regulations.

ARTICLE V

OBLIGATIONS OF NAPOCOR, ELECTRIC UTILITIES, AND OWNERS OF QUALIFIED PRIVATE SECTOR GENERATION FACILITIES

SECTION 1. Purchase of Electric Energy from Qualified PSGF. NAPOCOR and/or the concerned electric utilities shall purchase that power (electric energy and/or capacity) needed to serve its anticipated demand (including reasonable reserve requirements) at rates whose reasonableness is established in accordance with Article VI hereof.

SECTION 2. Purchase by Electric Utility of Power Already Contracted. Any electric utility, with the agreement of the owner of a qualified PSGF and the NAPOCOR or another concerned electric utility, may purchase any electricity that the NAPOCOR or the concerned electric utility has contracted to purchase from said owner of the PSGF under the provisions of these Rules and Regulations.

SECTION 3. Sale of Electricity to a Qualified PSGF. NAPOCOR or any concerned electric utility shall sell to any owner of a qualified PSGF electricity requested by the latter, in accordance with Article VII hereof.

SECTION 4. Interconnection within NAPOCOR grids. The NAPOCOR and/or other electric utilities shall allow interconnection with any qualified PSGF as may be necessary to accomplish electric energy purchases or sales under these Rules and Regulations. Upon effectivity of an agreement for interconnection by the owner of a qualified PSGF and NAPOCOR or any concerned electric utility, the NAPOCOR or the concerned electric utility shall issue an order requiring the physical connection of the qualified PSGF to the transmission facilities of NAPOCOR or to the distribution system of the concerned electric utility.

SECTION 5. Transmission to Other Electric Utilities (Wheeling). NAPOCOR or any host utility shall be obligated to transmit or wheel the electricity generated by a qualified PSGF to a third party (electric utility or end-user) through the former's transmission and/or distribution lines of 69 KV or higher. Any third party electric utility or end-user to which such electricity is transmitted shall purchase the same under this Section. The rate for purchase by the third party (electric utility or end-user) to which such electricity is transmitted shall be adjusted to reflect line losses and shall include transmission charges of NAPOCOR or the host utility.

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Wheeling of power from NAPOCOR or the host utility to a third party shall be guided by standard interconnection policies, procedures, and tariffs submitted to and approved by the ERB. Wheeling rates, charges, terms, and conditions shall permit the recovery by such utility of all the costs incurred in connection with the transmission and necessary associated services, and the costs of any required expansion of transmission facilities. The appropriate share, if any, of legitimate, verifiable, economic costs associated with the provision of transmission services may be included in these charges, while taking into account any benefits of providing such services to the transmission system.

Such rates, charges, terms, and conditions should promote the economic and efficient transmission and generation of electricity, and shall be just and reasonable, and not unduly discriminatory or preferential. Rates, charges, terms, and conditions for transmission services provided shall ensure that, to the extent possible, costs incurred in providing wholesale transmission services, as well as property allocated to the provision of such services, are recovered from the concerned PSGF, and not from a transmitting utility's existing wholesale, retail, and transmission customers. Utility regulations concerning rates, financial limitations, and taxes shall apply to wheeling tariffs of NAPOCOR and other electric utilities.

SECTION 6. Safety Requirements. The owner of the PSGF shall provide and install protective devices in their facilities as a safeguard from any NAPOCOR or electric utility system disturbances.

SECTION 7. Periodic Reporting to the EIAB and the Concerned Electric Utility. The owner of the PSGFs shall regularly submit to the concerned electric utility and the EIAB in a prescribed form, operating and other information as may be required by the utility and EIAB for monitoring and planning purposes. EIAB shall furnish copies of such reports to other relevant units and line agencies of the DOE.

ARTICLE VI

RATES FOR PURCHASES

SECTION 1. General Provision. NAPOCOR or any electric utility shall not pay more than their "avoided cost". "Avoided cost" as herein defined shall mean the least incremental cost that an electric utility would incur towards meeting its anticipated power demand, if such utility does not buy power from a PSGF.

SECTION 2. Purchase Rates Qualification. Rates for purchase shall:

a. Be just and reasonable to the electric customers of NAPOCOR and/or other concerned electric utilities, and in the public interest; and

b. Be in accordance with guidelines set by the EIAB on this matter where full and/or excess energy production shall be sold to the systems of concerned electric utilities. An acceptable competitive procurement scheme (e.g., bidding) is one means of setting avoided cost as well as reasonable purchase rates.

SECTION 3. Adjustments in Financial Accounting. The NAPOCOR and the concerned electric utilities shall accordingly adjust their financial accounting systems and procedures resulting from purchases of electricity from private sector generators. The rate of return on rate base levels shall then be determined after all adjustments have been made and set in place.

SECTION 4. Determination of Avoided Cost. The EIAB, in coordination with the ERB and in consultation with NAPOCOR, electric utilities and other relevant private sector entities, shall formulate and adopt a standard methodology for the calculation of NAPOCOR's and electric utilities' avoided costs. Criteria for competitive procurement schemes (e.g., bidding) shall also be formulated to define acceptable means of solicitation that can also provide the basis for determining an electric utility's avoided costs and reasonable purchase rates. Said methodology and criteria shall be formulated by the EIAB within three (3) months from the effectivity of these Rules and Regulations, and disseminated to relevant agencies, including ERB, NAPOCOR, and concerned electric utilities for information and immediate adoption.

The EIAB, to the extent possible, shall take into account the following factors in its formulation of a standard methodology for the calculation of avoided cost:

a. The structure of the incremental costs that would have been incurred by NAPOCOR and/or other electric utilities had they built the required generation facilities and/or generated electric power themselves to serve its anticipated demand (including reasonable reserve requirements);

b. The availability of capacity and energy from a qualified PSGF during the system daily and seasonal peak periods, including, but not limited to:

1. The ability of the NAPOCOR or the concerned electric utility to dispatch the qualified PSGF;
2. The expected or demonstrated reliability of the qualified PSGF, and the corresponding value of reserve capacity required to be carried by NAPOCOR and/or other electric utilities;
3. The extent to which scheduled outages of the qualified PSGF can be usefully coordinated with scheduled outages of the NAPOCOR or the electric utility's facilities;

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4 The individual and aggregate value of energy and capacity from qualified PSGFs on NAPOCOR's or the electric utility's system;

c The ability of NAPOCOR or the affected electric utility to avoid costs including the deferral of capacity additions and the reduction of fossil fuel use;

d The costs or savings resulting from variations in line losses from those that would have existed in the absence of purchases from a qualified PSGF; and

e The costs of environmental mitigation measures necessary to ensure compliance with regulations and standards on environmental management.

For purposes of promoting the economic utilization of specific indigenous and renewable energy forms, the DOE may, in line with its rule-making powers, fix power purchase rates for electricity generated from such resources after due consultation with relevant private and government entities

ARTICLE VII

Rates for Sales

SECTION 1 General Rules. Except for back-up power, rates for sales of NAPOCOR and/or the concerned electric utility to the qualified PSGF shall be based on the net interchange of energy between the said qualified PSGF and NAPOCOR or the concerned electric utility. If said interchange of energy results in requiring the PSGF to pay for electricity used, the applicable rates in this case shall be the rates stipulated in a contract between the qualified PSGF and NAPOCOR or the concerned electric utility

SECTION 2 Services to be Provided to any Qualified PSGF. As contracted with the owner of a qualified PSGF, NAPOCOR or the concerned electric utility shall provide:

1. Incremental PSG power;
2. Back-up power;
3. Maintenance power, and
4. Interruptible power.

SECTION 3. Rates for Back-up and Maintenance Power. NAPOCOR and the individual electric utilities shall submit to the ERB, for the latter's review and approval, rates for sales of back-up and/or maintenance power to qualified PSGFs

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ARTICLE VIII

OPERATING STANDARDS, ENVIRONMENTAL CONCERNS AND OTHER MATTERS

SECTION 1. Standards for Operations and Reliability. Qualified PSGFs NAPOCOR, and other electric utilities shall follow established internationally-accepted engineering standards to ensure safety, system security, and reliability for interconnected system operations. NAPOCOR and the concerned electric utilities shall have the right to physically inspect the power installations and witness the testing and commissioning of the PSGF that will be interconnected to its system to ensure that all necessary equipment are in place and functioning properly

The PSGF directly connected to the NAPOCOR grid shall be operated by its owner in accordance with the terms of the interconnection agreement with NAPOCOR and/or the concerned electric utility with respect to the wheeling and/or purchase of electricity generated by the qualified BPPF

SECTION 2 Environmental Concerns Qualified PSGFs shall meet standards on environmental management, including, among others, those on air quality, noise levels, water quality, solid waste, emission balances and controls, land use and aesthetics as required by law through appropriate government agencies

SECTION 3 Contents of Contract. Consistent with these rules and regulations, all contracts between the owners of PSGFs, and NAPOCOR or the concerned electric utility shall include, among others, the following:

a. Identification of Parties;
b. Recitals (rationale of contract);
c. Considerations (general agreements);
d. Purchase and Sale (stipulation of power purchase and sale);
e. Conditions of Delivery:
   1. Point of Delivery
   2. Character of Service (technical specifications for expected power output)
   3. Power Factor
   4. Continuity/reliability
f. Rates for Purchase from Facility and Adjustment clauses;
g. Rates for Sale to Facility and Adjustment clauses;
h. Billing Periods and Payment Terms;
i. Penalty and Discount Clauses;
j. Rights and Obligations of NAPOCOR/Electric Utility and PSGF as to:
   1. Ownership, Design, Operation and Maintenance
   2. Construction Requirements
   3. Plans and Specifications

4 Inspection and Tests
5 Change of Equipment
6 Costs
7 Control and Protective Apparatus
8 Location
9. Delivery and Amount of Production
10 Notices
11. Land Rights
12 Regulatory Approvals
13 Codes and Standards
14 Removal of Equipment
15. Provisions for Contract Violati on

k Operations,
1 Date of Operation
2 Operating Procedure
3. Sell-back Conditions

l. Safety Requirements;
m. Force Majeure;
n. Meter Provisions and Metering Arrangements;
o Right to Access for Inspection, etc.;
p Liability of Each Party with Respect to Operations;
q Duration of Contract and Conditions for Contract Cancellation;
r. Provision for Security; and
s Additional Provisions

SECTION 4 Force Majeure Neither party to a contract shall be in default if failure of performance of the terms of the contract is caused by factors due to acts of God, nature, or uncontrollable forces

PART II

SPECIFIC PROVISIONS FOR COGENERATION AND RENEWABLE RESOURCE POWER PRODUCTION FACILITIES

In addition to the provisions of Part I of these Rules and Regulations, the following Articles shall guide proponents/owners of Cogeneration or Renewable Resource Power Production Facilities (RRPPFs).

ARTICLE I

DEFINITIONS OF COGENERATION AND RENEWABLE RESOURCE POWER PRODUCTION FACILITIES

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SECTION 1 Definition of Cogeneration Facilities Cogeneration facilities, as defined in these Rules and Regulations, means a facility which produces electrical and/or mechanical energy and forms of useful thermal energy (such as heat or steam), used for industrial, commercial, heating, or cooling purposes, through the sequential use of energy.

A cogeneration facility may either be a topping-cycle or bottoming cycle facility. A topping-cycle cogeneration facility means a cogeneration facility in which the energy input to the facility is first used to produce useful power with the reject heat recovered from power production then used to provide useful thermal energy, while a bottoming-cycle facility refers to a cogeneration facility in which the energy input to the system is first applied to a useful thermal energy process, and the reject heat emerging from the process is then used for power production

SECTION 2 Definition of Renewable Resource Power Production Facilities (RRPPFs). RRPPFs, as defined in these Rules and Regulations, refers to any facility which produces electricity by the use of renewable energy resources as its primary energy source. Renewable energy sources means sources of energy that are regenerative or virtually inexhaustible such as biomass, solar, wind, geothermal or hydro, and also means by-product materials that, but for their use as a source of energy, would be considered waste.

Primary energy source, on the other hand, means the fuel's used for the generation of electricity, except that such terms do not include

a. The minimum amounts of fuel required for ignition, start up, testing, flame stabilization and control uses, and

b. The minimum amounts of fuel required to alleviate or prevent
   i. unanticipated equipment outages, and
   ii emergencies, directly affecting the public health, safety or welfare, which would result from electric power outages.

ARTICLE II

QUALIFICATIONS OF RRPPFs AND COGENERATION FACILITIES

SECTION 1 Accreditation of RRPPFs and Cogeneration Facilities. An RRPPF meeting the general qualifications under Article III of Part I of these Rules and Regulations is a qualified PSGF. A cogeneration facility is a qualified PSGF under these Rules and Regulations if it meets the general qualifications under Article III of Part I, and the thermal efficiency standard for cogeneration projects, as defined in Section 2 of this Article

SECTION 2 Thermal Efficiency Standards for Cogeneration Facilities. In addition to the general qualifications for accreditation under Article III of Part I of these Rules and Regulations, cogeneration facilities should be able to achieve a minimum thermal efficiency of sixty (60) percent for purposes of availing incentives offered under the Investment Priorities Plan of the Board of Investments and/or securing accreditation from the EIAB as a qualified PSGF. The DOE shall review the applicability of such thermal efficiency standard for cogeneration from time to time, considering the viability of efficiency advances in generation technologies, boilers, and heat recovery systems

Thermal efficiency, as herein defined, means the ratio of useful energy output to the total energy input, calculated on an annual basis.

Useful energy output, for purposes of calculating thermal efficiencies of cogeneration facilities, is defined as the sum of electricity and/or mechanical power plus the useful heat in the steam or hot exhaust gases, and such other thermal energy recovered for useful purposes

Total energy input on the other hand, is defined as the total kilograms of fuel used multiplied by the Higher Heating Value (HHV) of the fuel input/s as received

SECTION 3 Cogeneration Facilities Utilizing Renewable Energy Sources. Cogeneration facilities utilizing renewable energy forms as its primary energy source shall be classified as Renewable Resource Cogeneration Facilities for purposes of accreditation as qualified PSGFs. Cogeneration facilities utilizing renewable energy sources and fossil fuels, either through a blend, combination, or alternating use of such fuels, shall be treated and evaluated as Cogeneration Facilities By virtue of this distinction, Renewable Resource Cogeneration Facilities shall not be subject to minimum thermal efficiency standards required for cogeneration facilities under Section 2 of this Article

SECTION 4 Ownership of Cogeneration Facilities. Any private corporation, cooperative, or similar associations requiring thermal and electric energy for industrial, commercial, heating, or cooling purposes (thermal host) may own and operate cogeneration facilities intended to supply their internal requirements for thermal and electric energy, and to sell any excess power generation to the grid.

Private corporations, cooperatives, or similar associations, other than the thermal hosts described above, shall be allowed to own and operate cogeneration facilities, and to sell electric and thermal energy directly to the concerned thermal hosts, as well as to sell any excess power generation to the grid, under exclusive contracts with the thermal host and/or concerned electric utility, and subject to the provisions and limitations of the Public Service Law.

ARTICLE III

PROCEDURES FOR APPLYING FOR ACCREDITATION AS A COGENERATION OR RENEWABLE RESOURCE POWER PRODUCTION FACILITY

SECTION 1 Period of Processing. All Cogeneration and RRPPFs intending to sell excess or all its power production to NAPOCOR or any electric utility and/or thermal host shall apply for accreditation with the EIAB. Provided all requirements shall have been complied with, the EIAB shall approve or deny any application for accreditation for qualified PSGF status within one (1) month from the date of the application, unless the EIAB shall have required the submission of additional information, or ordered the postponement of final action on an application for reasonable grounds

SECTION 2 Accreditation of Mini-Hydro Projects Applications concerning the construction and operation of mini-hydro facilities shall be referred by the EIAB to the Energy Resource Development Bureau (ERDB) of the DOE. Such applications shall be governed by the implementing rules and regulations of Republic Act No. 7156 (Mini-hydro Act of 1991), promulgated by the Office of Energy Affairs in August 1992

Evaluation and processing of such applications shall be undertaken by the Mini-Hydro Division of the ERDB. The ERDB shall inform the proponents and the EIAB of its decision to issue or deny a license to construct and operate mini-hydro facilities within a period of four (4) months, provided all information requirements to process the application have been submitted to the Mini-Hydro Division The EIAB shall thereafter prepare and issue the appropriate accreditation certificates for mini-hydro projects approved by the ERDB.

SECTION 3 Accreditation of Waste-to-Energy Facilities. Prior to filing an application with the EIAB for accreditation as a qualified PSGF under these Rules and Regulations, RRPPFs utilizing fuels derived from municipal solid wastes, or by-product materials that, but for their use as a source of energy, would be considered waste, shall first seek an endorsement from the appropriate government authority (i e, the Presidential Task Force on Solid Waste Management, the Department of Environment and Natural Resources) certifying that the proposed Waste-to-Energy facility is consistent with the overall country framework for solid waste management Such requirement may be waived by the EIAB for agricultural and industrial wastes not generally classified as municipal solid wastes.

Notwithstanding any endorsement or certification from the appropriate government authorities on environmental/waste management, qualified Waste-to-Energy facilities under these Rules and Regulations shall meet standards on environmental management, including, among others, those on air quality, noise

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levels, water quality, solid waste, emission balances and controls, land use and aesthetics as required by law through appropriate government agencies.

SECTION 4 Contents of Applications for Cogeneration Facilities. In addition to the general information requirements listed in Section 1, Article IV, Part I of these Rules and Regulations, applications for accreditation as a qualified Cogeneration Facility shall contain the following information:

a. Minimum, maximum, and average volumes of steam and/or thermal energy required for industrial, commercial, heating or cooling purposes, on a monthly and annual basis, together with the required temperatures, pressures, and conditions of such volumes;

b. Minimum, maximum, and average requirements of power and electric energy on a monthly and annual basis;

c. A description of the basic industrial, commercial, heating, or cooling processes requiring any amounts of thermal and/or electric energy;

d. Single-line mass-balance and energy flow diagrams indicating volumes and conditions of exhaust gases, steam, heat, and electric energy produced and utilized at various points of the cogeneration cycle;

e. Detailed calculation of the overall thermal efficiency of the cogeneration system, including assumptions used for ambient temperature, fuel heating values, and other parameters; and

f. Other information that may be required by the EIAB in evaluating a cogeneration proposal.

SECTION 5 Contents of Applications for RRPPFs. In addition to the general information requirements listed in Section 1, Article IV, Part I of these Rules and Regulations, applications for accreditation as a qualified RRPPF shall include detailed information on fuel supply, collection, and delivery systems in the form of a feasibility or pre-feasibility study. The EIAB may require the submission of any other information that may be necessary for the exhaustive evaluation of RRPPF proposals.

ARTICLE IV

RIGHTS OF NAPOCOR AND THE CONCERNED ELECTRIC UTILITY ON THE DESIGN AND OPERATION OF THE PRIVATE SECTOR GENERATION FACILITY

SECTION 1 Right to Review. NAPOCOR and/or the concerned electric utility shall have the right to review the drawings pertaining to the design of the

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qualified PSGFs' interconnection and fuel storage facilities. Any flaws perceived by NAPOCOR and/or the concerned electric utility in the design shall be described in writing. Internationally-accepted engineering standards shall be utilized as reference in this review process.

SECTION 2 Right to Monitor. NAPOCOR and/or the concerned electric utility shall have the right to monitor the construction work and construction schedule, start-up, operation and maintenance, and fuel inventory practices of the PSGF, and shall have the right to consult with and make recommendations to the owner of the PSGF.

ARTICLE V

OBLIGATIONS OF NAPOCOR, ELECTRIC UTILITIES, AND OWNERS OF QUALIFIED PRIVATE SECTOR GENERATION FACILITIES

SECTION 1 Interconnection and Interconnection Costs. In addition to the provisions of Section 4, Article V of Part I of these Rules and Regulations, NAPOCOR and/or the concerned electric utility may issue an order requiring the owner of a qualified PSGF to advance investments for the necessary interconnecting electrical equipment and devices in accordance with appropriate electrical plans approved by NAPOCOR and/or the concerned electric utility. Repayment for the investment on these facilities shall be done following arrangements mutually agreed upon by contracting parties. Maintenance costs for the interconnection facilities shall be borne by NAPOCOR and/or the concerned electric utility.

For RRPPFs and cogeneration facilities with capacities of less than 10,000 kilowatts, however, the NAPOCOR or the concerned electric utility shall shoulder all costs needed for the realization of the physical connection of the mini-PSGF to the former's transmission facilities. Maintenance costs for the interconnection facilities shall also be borne by NAPOCOR or the concerned electric utility.

SECTION 2 Rate Satisfaction. A rate for purchases satisfies the requirements of Section 2 of Article VI, Part I if such purchase rate equals or does not exceed the concerned electric utility's "avoided cost" determined following the methodology formulated and adopted by the EIAB, pursuant to Section 4, Article VI of Part I of these Rules and Regulations.

SECTION 3 Case with Different Costs. In the case in which the rates for purchases are based upon estimates of NAPOCOR and/or the concerned electric utility's "avoided cost" over the specific period of a contract, the rates for such purchases do not violate this Article if such purchase rates differ from NAPOCOR's or the concerned electric utility's "avoided cost" at the time of delivery.

SECTION 4. Purchases "as available". The rates for purchases of energy and capacity on an "as available" basis shall be based on NAPOCOR's and/or the purchasing electric utility's costs calculated at the time of delivery and stipulated in a contract to purchase. Energy and capacity on an "as available" basis shall mean electricity supplied by a PSGF to NAPOCOR and/or an electric utility following a schedule provided by the owner of the PSGF as to time and period and agreed to by NAPOCOR or concerned electric utility.

SECTION 5. Rates for Purchases of Power Generated by RRPPFs and Cogeneration Facilities with Capacities of less than 10,000 kilowatts. NAPOCOR shall formulate and adopt, subject to ERB's review and approval, a schedule of power purchase rates which reflects the structure of capacity and energy costs of NAPOCOR for varying levels of power availability and dispatchability. Such power purchase rates shall be adopted as standard power purchase rates for RRPPFs and Cogeneration facilities less than 10,000 kilowatts upon ERB approval of such rates to facilitate price negotiations between NAPOCOR and/or other electric utilities and qualified RRPPFs or Cogeneration facilities with capacities of less than 10,000 kilowatts

ARTICLE VI

OPERATING STANDARDS AND SYSTEM EMERGENCIES

SECTION 1. Operating Structure. Qualified PSGFs under this Part of the Rules and Regulations shall be operated by its owner in accordance with the terms of the interconnection agreement with NAPOCOR and/or the concerned electric utility with respect to the wheeling and/or purchase of electricity generated by the qualified BPPF.

SECTION 2. System Emergencies. Private sector generators shall be obligated to provide power to NAPOCOR or the concerned electric utility during system emergencies to the extent provided by the agreement between the qualified PSGF's owners and NAPOCOR and/or the affected electric utility.

PART III

SPECIFIC PROVISIONS ON BLOCK POWER PRODUCTION FACILITIES

The following Articles shall further guide proponents/owners of Block Power Production Facilities (BPPFs), in addition to the general provisions of Part I of these Rules and Regulations

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ARTICLE I

DEFINITIONS AND QUALIFICATIONS OF A BLOCK POWER PRODUCTION FACILITY AS A QUALIFIED P

SECTION 1. Formulation and Submission of Power Developm NAPOCOR and/or Other Electric Utilities. Pursuant to Section 1 of Art Sections 1 and 2 of Article II, Part I, the DOE shall require NAPOCO individual electric utilities to submit power development programs, for th review and approval. NAPOCOR shall submit to the DOE an annual upd Power Development Program (PDP) on or before the first day of June b 1995 and every year thereafter.

Such submissions should include NAPOCOR's system load forecas generation requirements, resource and technology assessments and evaluations assumptions and other technical parameters, and the resulting system expansion p for NAPOCOR's major and small-island power grids. NAPOCOR submissions should identify power generation projects to be undertaken through private sector participation, the justifications for such, and the indicative timetables for undertaking prequalification of interested private sector entities, tendering of bids, evaluation, and award of private power contracts for each of the projects identified.

Individual electric utilities seeking to implement or contract the implementation of generation projects shall be required to enter into long-term (ten-year) power supply agreements with NAPOCOR to facilitate NAPOCOR's system planning activities. Such electric utilities shall submit to the DOE their individual or combined long-term power development plans which shall contain an efficient portfolio of generation (including projected power purchases from NAPOCOR and qualified PSGFs) and demand-side resources on or before 15 January 1996, for the DOE's review and approval.

SECTION 2. DOE Review of Power Development Plans. The DOE, through its Energy Planning and Monitoring Bureau (EPMB), shall review the power development plans of NAPOCOR and other electric utilities for consistency with the general and specific policies for the sector, validate the assumptions used in formulation of such plans, and check the consistency of such plans with national and regional resource assessments, development programs, and project timetables of various energy upstream activities.

The EPMB shall likewise review the list of power generation projects for private sector implementation and the indicative timetables towards ensuring sufficient lead times for undertaking information dissemination, project organization, and preparation of competitive proposals. The EPMB may also recommend in its approval of the individual development plans of NAPOCOR and/or electric utilities the scaling down or integration of proposed generation projects to ensure the

generation of more competitive proposals, with due consideration of cost advantages from economies of scale.

NAPOCOR and/or other electric utilities shall inform and seek the DOE's prior approval to implement generation projects not included in the approved power development plans.

SECTION 3. Definition of Block Power Production Facilities. Block Power Production Facilities, or BPPFs, refer to power generation facilities forming part of the approved power development plans of NAPOCOR and/or other electric utilities, and which shall be implemented through private sector participation via the Build-Own-Operate, Build-Operate-Transfer, Build-Transfer-Operate, or other variants of the aforementioned private power schemes.

Renewable energy-based power generation facilities forming part of NAPOCOR's and/or electric utilities' development plans are BPPFs.

SECTION 4. Qualifications of BPPFs. The general qualifications for PSGFs, as set forth in Sections 1 through 6 of Article III, Part I, shall be applicable to BPPFs.

ARTICLE II

PROCEDURES FOR APPLYING FOR ACCREDITATION AS A BLOCK POWER PRODUCTION FACILITY

SECTION 1. DOE Announcement of Generation Projects for Private Sector Implementation. Upon the DOE's approval of the power development plans of NAPOCOR and/or electric utilities, the EIAB shall cause the publication of the list of projects for private sector implementation, together with the target commissioning dates and indicative timetables for commencement of competitive procurement procedures. Such announcements shall be published in at least three (3) newspapers of general circulation, once a week for two (2) consecutive weeks.

SECTION 2. BPPF Solicitation by NAPOCOR and other Electric Utilities. Following announcement of generation projects for private sector implementation, electric utilities, more particularly investor-owned distribution utilities and electric cooperatives, may express their interest to the EIAB to undertake competitive procurement (e.g., bidding) for certain blocks of capacity included in said announcements.

The EIAB shall allow an electric utility or groups of electric utilities to conduct competitive procurement for certain blocks of programmed BPPF capacity, subject to the following conditions:

1. That power to be generated the block of capacity to be solicited by a electric utility or groups of electric utilities shall not exceed the electr utilities' anticipated demand (including the provision of reasonable reserv requirements);

2. That such blocks of capacity are sufficient in size to generate competitiv proposals, and that the remaining block of capacity can still b competitively bided or contracted out; and

3. For electric cooperatives, that the cooperative first obtain NEA' endorsement of the cooperative's plan to solicit BPPF proposals and to purchase power from qualified BPPFs.

The EIAB shall then issue an order authorizing the concerned electric utilities to undertake competitive procurement for BPPF proposals. Such competitive procurement activities shall meet the criteria set by the EIAB, or follow the procedures detailed in Section 6 of this Article.

NAPOCOR shall undertake competitive solicitation procedures for the remaining blocks of BPPF capacities within the corresponding timeframe indicated for each of the projects for private sector implementation if, within such timeframes, no other electric utility has expressed interest in undertaking competitive procurement for the remaining blocks of BPPF capacity.

In case no award for the implementation of BPPF capacities are made following conduct of competitive procurement activities (e.g., failure of biddings), ample time shall be given to NAPOCOR and/or other electric utilities to undertake pre-construction and construction activities itself. Actual incremental investments, fuel, operating, maintenance and overhead costs of NAPOCOR or the concerned electric utility shall be benchmarked against avoided cost figures of NAPOCOR or the concerned electric utility, determined on the basis of the standard methodology adopted by the EIAB.

SECTION 3. Participation of Corporations or Consortiums Primarily Engaged in Energy Upstream Operations. Pursuant to ownership qualifications provided in Section 1, Article III, Part I, companies or consortiums primarily engaged in indigenous energy exploration, development, and production may undertake the construction and operation of associated generation facilities to the extent that the primary fuel sources for power generation shall come from the local production of such companies or consortiums, and subject to de... ...ating the technical and financial qualifications in undertaking the scale and type of generation facility proposed.

Government-owned and controlled corporations involved in energy upstream operations shall be required to seek accreditation for associated generation

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facilities owned and operated by the same. Private corporations engaged in energy upstream operations intending to generate electricity for sale to the grid, either directly or in joint venture or under contract with state-owned energy upstream companies, shall likewise apply for accreditation with the EIAB.

In all cases, rates for purchases of power generated from such facilities shall be governed by limitations provided in Section 1 of Article V of this Part of the Rules and Regulations.

SECTION 4. Implementation of BPPFs by Electric Utilities. Electric utilities seeking to implement blocks of BPPF capacity shall be governed by the specific provisions of Part IV on Facilities for the Internal Use of Electric Utilities.

SECTION 5. Facilities not in conformity with Power Development Plans. A facility not in conformity with the approved power development plans of NAPOCOR and/or other electric utilities may be proposed and its feasibility be submitted to the EIAB for consideration as a BPPF. The proponent of a facility not in conformity with the approved development plans should include in its application with the EIAB the block of BPPF capacity that the proposed BPPF can displace with regard to capacity, availability, and commissioning schedule.

The EIAB shall subject such proposals to a thorough evaluation and shall compare its reliability, cost-competitiveness, and potential generation of net foreign exchange savings against programmed BPPFs, as basis for issuing or denying accreditation as a qualified BPPF. Only Provisional Accreditations shall be issued by the EIAB in such instances.

A facility not in conformity with NAPOCOR's development plans but which has been provisionally accredited by the EIAB as a qualified PSGF under these Rules and Regulations shall be allowed to participate in competitive procurements being undertaken by NAPOCOR and/or any other electric utilities.

SECTION 6. BPPF Solicitation Procedures. The following procedure and provisions shall guide the solicitation of proposals or bids for BPPFs by the NAPOCOR, electric utilities, and government-owned and controlled energy upstream companies, in lieu of procurement schemes meeting the EIAB's criteria for competitive requirement

1. Announcement of request for proposals for required BPPF capacities, together with together with information on the availability of prequalification documents, as well as schedules, venues, and procedures for prequalification and tendering of bids. Publication should be made in three (3) newspapers of general circulation, at least once a week for three (3) consecutive weeks, with the last date of publication at least one (1) month before the deadline for the submission of pre-qualification documents.

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2. Conduct of pre-bid conference for prequalified proponents to present the project concept and timetables, government taxes and incentives applicable to proponents, basic criteria for bid evaluation, the negotiable and non-negotiable specifications or requirements of NAPOCOR or the concerned electric utility, bid evaluation procedures, and other information vital for the preparation of competitive technical and financial proposals

3. Tendering of bids must be scheduled so as to allow proponents a reasonable length of time for the preparation of implementable and competitive technical and financial proposals. In setting the date for the submission of bids, the scale of the solicitation, the type of technology and fuel to be employed, and the risks involved on the part of the Private Sector Generator must be considered by NAPOCOR and/or the concerned electric utility

4. To maintain the transparency of the whole solicitation and bidding process, representatives of BPPF proponents must be allowed to witness the receipt, opening, tabulation, and final certification of the contents of the bids received by duly-authorized officials of NAPOCOR and/or electric utilities

Alternative schemes meeting the criteria set by the EIAB for competitive procurement, pursuant to Section 4, Article VI, of Part I, shall be allowed by the EIAB under this Part of these Rules and Regulations.

SECTION 7. EIAB Accreditation of BPPFs. Following the conduct of competitive procurement for BPPFs, NAPOCOR and/or the concerned electric utility shall submit to the EIAB a complete copy of the records pertaining to the solicitation, evaluation, selection, and award of a BPPF contract.

Electric utilities which have successfully conducted competitive procurement activities for BPPF facilities shall be required to enter into and submit to the EIAB a long-term, preferably ten-year, power purchase agreement with NAPOCOR for any existing, incremental, and/or back-up power supply requirements. Should interconnection of an electric utility with NAPOCOR no longer be necessary, the concerned electric utility shall furnish NAPOCOR and the EIAB a copy of its board's resolution/decision to disconnect from the service of NAPOCOR

Upon submission of the required documents (i.e., long-term power purchase agreement or board resolution) from the concerned electric utility, the EIAB shall issue the required accreditation documents for the utility-solicited BPPF project upon verification of the BPPF's compliance with the general qualifications for accreditation as a PSGF, and NAPOCOR's and/or the concerned electric utility's compliance with the criteria for competitive procurement or with the recommended solicitation procedure provided in Section 6 above. The EIAB shall issue the required accreditation documents within one (1) month from receipt of all requirements.

For BPPF proposals not in conformity with the power development plans of NAPOCOR and/or individual electric utilities, the EIAB shall take action to approve or deny any application for accreditation as a qualified PSGF within two (2) months from receipt of an application, provided the all necessary information have been submitted to the EIAB. Such accreditation shall be a provisional accreditation which shall be cancelled by the EIAB upon conclusion of competitive procurement procedures and the non-selection of the provisionally-accredited BPPF in the competitive procurement.

ARTICLE III

RIGHTS OF NAPOCOR AND THE CONCERNED ELECTRIC UTILITY ON THE DESIGN AND CONSTRUCTION OF THE BLOCK POWER GENERATION FACILITY

SECTION 1. Right to Review. NAPOCOR and/or the concerned electric utilities shall have the right to review the drawings pertaining to the design of the BPPF and its interconnection and fuel storage facilities. Any flaws perceived by NAPOCOR and/or the concerned electric utility in the design of the BPPF shall be described and communicated in writing to the owners of the BPPF, with a copy furnished to the EIAB. Internationally accepted engineering standards shall be utilized as reference in this review process

SECTION 2. Right to Monitor. NAPOCOR and/or the concerned electric utilities shall have the right to monitor the construction and construction schedule, start-up, operation and maintenance, and fuel inventory practices of the BPPF, and shall have the right to consult with and make recommendations to the owner of the BPPF.

ARTICLE IV

OBLIGATIONS OF NAPOCOR, ELECTRIC UTILITIES, AND OWNERS OF BLOCK POWER PRODUCTION FACILITIES

SECTION 1. Obligation to Purchase Electric Energy from the Qualified BPPF. The NAPOCOR and/or the concerned electric utility shall purchase, at rates in accordance with the succeeding Article hereof, electric energy and capacity which is made available by the owners of the qualified BPPF.

SECTION 2. Obligation to Sell to a Qualified BPPF. NAPOCOR shall sell to the owner of a qualified BPPF maintenance and/or back-up power. In cases of electric utilities contracting to purchase power from a qualified BPPF, NAPOCOR and the concerned electric utilities may include in their long-term power purchase agreements BPPF requirements for back-up and maintenance power.

SECTION 3. Obligation to Interconnect. NAPOCOR and/or the concerned electric utility shall interconnect with qualified BPPFs to accomplish purchases or sales under these Rules and Regulations and following stipulations in the contract between NAPOCOR or the concerned electric utility and the owner of the BPPF on this matter.

SECTION 4. Transmission to Other Electric Utilities (Wheeling). NAPOCOR and/or any host utility shall be obligated to transmit or wheel the electricity generated by a qualified BPPF to an electric utility or to NAPOCOR through the former's transmission and/or distribution lines of 69 KV or higher. NAPOCOR and/or any electric utility to which such electricity is transmitted shall purchase the same under this Section. The rate for purchases by the third party electric utility to which such electricity is transmitted shall be adjusted to reflect line losses and shall include wheeling charges of NAPOCOR or the host utility.

ARTICLE V

RATES FOR PURCHASES AND SALES

SECTION 1. Purchase Rate. The purchase rate from a BPPF shall not exceed the "avoided cost" of NAPOCOR and/or the concerned electric utility, as determined thru the conduct of competitive procurement schemes meeting EIAB's criteria for BPPF solicitation or using the standard methodology adopted by the EIAB, pursuant to Section 4, Article VI, of Part I of these Rules and Regulations.

SECTION 2. Rates for Sales. NAPOCOR shall sell maintenance power and/or back-up power during unscheduled outages, as available, to BPPFs or to electric utilities contracting power supply with qualified BPPFs, at rates approved by the ERB. Back-up power for capacity unserved by BPPFs due to their unscheduled outages shall be provided by NAPOCOR's reserve units. Penalty due to the inability of the BPPF to provide contracted power during its unscheduled outage shall be stipulated in the contract between the owner of the BPPF and NAPOCOR or the concerned electric utility.

SECTION 3. Adjustments in Financial Accounting. NAPOCOR and the concerned electric utilities shall accordingly adjust its financial accounting systems and procedures resulting from purchases of electricity from a BPPF. The rate of return on rate base levels shall then be determined after all adjustments have been made and set in place.

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ARTICLE VI

OPERATING SYSTEMS AND PROCEDURES

SECTION 1. Standards for Operations and Reliability. NAPOCOR or the concerned electric utility shall ascertain that the owner of the BPPF follows established internationally-accepted engineering standards to ensure safety, system-security and reliability for interconnected system operations. NAPOCOR or the concerned electric utility shall physically inspect the BPPF installations and interconnection facilities, and witness the testing and commissioning of the BPPF that will be interconnected to the NAPOCOR grid or to the electric utility system to ensure that all equipment are in place and functioning properly.

SECTION 2. Operating Structure. The BPPF shall be operated by its owner in accordance with the terms of the interconnection agreement with NAPOCOR and/or the concerned electric utility with respect to the wheeling or purchase of electricity generated by the qualified BPPF.

SECTION 3. Environmental Concerns. The BPPF shall consider the environmental impact/effect of its operations. The owner of the BPPF shall ascertain that environmental management standards as required by law through appropriate governmental agencies are met in the construction, operation and maintenance of the BPPF.

ARTICLE VII

OTHER PROVISIONS ON BPPF

SECTION 1. Interconnection Costs. The owner of a BPPF shall advance investments needed in interconnecting the BPPF with the NAPOCOR grid or the concerned electric utility system. Repayment shall be made in accordance with mutually agreed upon arrangements of the contracting parties. Maintenance costs for the interconnection facilities shall also be agreed upon by the NAPOCOR and the owner of the BPPF.

SECTION 2. BPPF Contract. The basic contents of the contract between the owner of a BPPF and NAPOCOR or the concerned electric utility shall include, among others, the items enumerated in Section 3, Article VIII of Part I of these Rules and Regulations.

SECTION 3. Security of BPPF. For national emergency situations, NAPOCOR, with the assistance of the military, shall provide on-site coordination of BPPF operations to prevent brownouts and ensure the continuity of electric service.

PART IV

SPECIFIC PROVISIONS ON ELECTRIC UTILITY-OWNED GENERATING FACILITIES

The following Articles shall further guide electric utilities engaged or seeking to engage in power generation solely for internal use. The term "internal use" as utilized in this Part of the Rules and Regulations shall mean electricity used by electric utilities for plant maintenance and/or electricity sold directly to their customers.

ARTICLE I

QUALIFICATIONS AS A PRIVATE SECTOR GENERATION FACILITY

SECTION 1. Ownership. Electric utilities shall be allowed to construct, operate and maintain existing or new generating facilities for their internal use subject to financial limitations provided in Section 2 below. Majority interest by an electric utility on the equity of a PSGF shall be considered as ownership by an electric utility, and shall thus be subject to electric utility regulations concerning rates, financial limitations, taxes and other laws applicable to their operations as electric utilities.

SECTION 2. Financial Limitations on Electric Utilities. An electric utility shall be allowed to own and operate new generation facilities meeting the qualifications provided in Section 1 above, and Sections 3 and 4 below, provided that the electric utility's ratio of long-term debt to equity is maintained at or below 1.5.

The above financial limitations on electric utilities shall be waived by the EIAB for purposes of accrediting existing generation facilities of electric utilities and for already accredited PSGFs for the internal use of electric utilities as of the effectivity of these Rules and Regulations.

SECTION 3. Facility Classification. Facility classifications allowed under Section 3, Article III, Part I shall apply to PSGFs seeking accreditation under this Part of the Rules and Regulations.

SECTION 4. Size of Generating Units. The limitation on maximum size of generating units as stipulated in Section 4 of Article II, Part I of these Rules and Regulations shall be encouraged in order to facilitate possible NAPOCOR service to these generating plants during forced outages or maintenance periods.

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ARTICLE II

PROCEDURES FOR APPLYING FOR ACCREDITATION AS A PRIVATE SECTOR GENERATION FACILITY

SECTION 1. Contents of Application. In addition to the requirements of Section 1, Article IV, Part I, an electric utility seeking accreditation for a facility which qualifies under the preceding Article shall submit to the EIAB a copy of its long-term power purchase agreement with NAPOCOR for any incremental, maintenance, or back-up power requirements. Adjustments in the long-term power purchase agreement between NAPOCOR and the concerned electric utility shall be considered to the extent that NAPOCOR may still adjust its Power Development Program.

In cases where an electric utility has opted or is opting to no longer connect with NAPOCOR for any incremental or back-up power supply, the electric utility shall present to NAPOCOR and the EIAB a copy of the relevant Board Resolution/s stating such decisions, and releasing NAPOCOR from any obligation to supply the electric utility's power requirements.

SECTION 2. Accreditation. An electric utility's generating facility which meets the criteria for accreditation set forth in the preceding Article, and the conditions of Section 1 of this Article is a qualified PSGF.

Pursuant to the provisions of Section 4, Article IV, Part I, the EIAB may issue a provisional accreditation to a PSGF which meets the criteria for accreditation set forth in the preceding Article, to give the concerned electric utility a reasonable length of time to either finalize a long-term power purchase agreement with NAPOCOR, or issue a Board Resolution releasing NAPOCOR from any further obligation to serve the power requirements of the concerned electric utility.

SECTION 3. Period of Processing. Provided all requirements shall have been complied with, the EIAB shall take action to approve or deny any application for accreditation within two (2) months from the date of the application, unless the EIAB shall have required the submission of additional information, or postponement of final action on an application or for other reasonable grounds. Any order postponing final action on an application shall state specifically the grounds for postponement, and the date on which a final ruling shall be issued.

SECTION 4. Non-transferability of Accreditation. Accreditations issued by the EIAB to electric utilities owning and operating qualified PSGFs shall not be transferable or assignable except to an electric utility subsidiary determined to be technically and financially-qualified by the EIAB. For purposes of this Section, an electric utility subsidiary shall mean any company wherein the concerned electric utility holds a majority equity interest.

SECTION 5. Assumption on Interconnection. It shall be assumed that electric utilities owning generating units for their internal use are already interconnected with the NAPOCOR grid. Any possible interchange of electricity to and from NAPOCOR shall be coursed through said interconnection facilities.

Should a qualified electric utility-owned PSGF, however, require the transmission of any amount of power generated to the owner-electric utility, NAPOCOR and/or the host utility shall be obligated to interconnect such qualified facilities and provide the required wheeling services, pursuant to the provisions of Section 5, Article V, Part I.

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ARTICLE III

NAPOCOR'S RELATIONSHIP WITH ELECTRIC UTILITIES OWNING GENERATING FACILITIES SOLELY FOR INTERNAL USE

SECTION 1. Provision on Reserve Capacity. NAPOCOR shall maintain a reserve capacity in the NAPOCOR grid system considering all generating facilities existing and operating therein. A reasonable annual reserve capacity carrying fee, as determined by NAPOCOR and approved by the ERB, shall be paid by all generating electric utilities requiring maintenance and/or back-up power from NAPOCOR. Such payment shall make NAPOCOR obligated to provide maintenance and back-up power requirements of affected electric utilities on an "as-available" basis.

SECTION 2. Provision of Incremental PSG Power. NAPOCOR shall supply incremental PSG power to the electric utility owning generating facilities for its internal use to the extent provided in a long-term contract for this purpose. The selling rate of NAPOCOR for incremental PSG power shall be at rates approved by the ERB.

SECTION 3. Provision for System Emergencies. NAPOCOR and electric utilities generating power solely for its internal use may mutually agree on the provision of power during system emergencies in their respective systems to the extent possible and under terms to be agreed upon by both parties.

SECTION 4. Dispatchability. Generating facilities solely for internal use by an electric utility shall not be obligated to be under the Dispatch Management System (DMS) of the NAPOCOR.

SECTION 5. Production Cost Higher than NAPOCOR's. At a time when production cost from the generating units solely for internal use of an electric utility is higher than buying from NAPOCOR, and the electric utility decides to get power

from NAPOCOR to replace its own generation, NAPOCOR shall sell to said electric utility provided that: NAPOCOR's unit production cost would remain the same with the added load; NAPOCOR's system operations would not be hampered; NAPOCOR's service to other customers would not be unduly affected; and NAPOCOR would not be pressured to add new capacities to meet the new load. NAPOCOR shall not be obligated to purchase the generating facilities of the electric utility as such action may be detrimental to the interest of NAPOCOR's regular customers

SECTION 6. Excess Production of PSGE. In instances when the generating units of electric utilities are capable of producing electricity in excess of their requirement, NAPOCOR shall not be obligated to purchase such excess power.

In instances when NAPOCOR may opt to purchase power from said electric utility, purchase rate shall not exceed the "avoided cost" of NAPOCOR at the time of delivery.

SECTION 7. Change of Status. An electric utility with an accredited generating facility solely for its internal use may decide to sell excess production on a regular basis to NAPOCOR or to another electric utility. Terms and conditions of purchase by NAPOCOR shall be consistent with the applicable provisions given in Parts I and III of these Rules and Regulations and shall be stipulated in a Contract.

SECTION 8. Periodic Reporting to EIAB. The electric utility owning generating facility for internal use shall regularly submit to the DOE, thru the EIAB, operating and other information as may be required by DOE or EIAB for monitoring and planning purposes.

SECTION 9 Formulation of Power Development Plans. Electric utilities owning and operating generation facilities for its internal use shall submit to the DOE, for review and approval, their individual or combined long-term power development plans which shall contain an efficient portfolio of generation (including projected power purchases from NAPOCOR and other qualified PSGEs) and demand-side resources on or before 15 January 1996.

PART V

GENERAL PROVISIONS

SECTION 1. Implementation of the Rules and Regulations. The EIAB shall take all the necessary and reasonable measures to ensure that the provisions of these Rules and Regulations are made effective.

SECTION 2. DOE Revision of the Rules and Regulations. The DOE shall prescribe and, from time to time thereafter, revise such Rules as it determines necessary to encourage private sector participation in power production. Such Rules shall be prescribed after consultation with the private sector and appropriate government agencies.

SECTION 3. Publication. These Rules and Regulations shall take effect immediately after its complete publication in one (1) newspaper of general circulation.

DELFIN L. LAZARO
Secretary

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CONGRESS OF THE PHILIPPINES
Second Regular Session

HOUSE OF REPRESENTATIVES

H. No. 10943

INTRODUCED BY HONORABLE TEVES, PAYUMO, DE VENECIA, JR., ORTEGA, AMATONG, DANGWA, DIAZ (A.), GULLAS, VILLAROSA, KHO, LIZARDO, GAREN, MADRONA, GARCIA (P.), LOCSIN, BORJA-AGANA, ERMITA, CUA, TIRADOR, BARBERS, MAMBA, TULAWIE, TINGA, ENVERGA, BADELLES, SR., BULUT, DATUMANONG, LAVIDES, LORENZO, REYES, ALMENTADO, ACUÑA, DY, JR., VERGARA, OCAMPO, FAJARDO, NAZARENO, JR., LOPEZ (E.), PIMENTEL, ASISTIO, LEVISTE, TUPAS, FIGUEROA, ENRILE, ADIONG, AQUINO (H.), TANJUATCO, JR., GUANZON, ROMUALDO, LINGAD, LAZATIN, ABINES, ALMORO, UNAS, ZARRAGA, ALMARIO, CARLOTO, ROXAS, BAGATSING, JR., AQUINO-ORETA, ROMERO, ABLAN, JR., FUENTEBELLA, PLAZA, MERCADO, DELA CRUZ, JR., VERCELES (E.), SIBUG, YAP (J.), BAGATSING (A.), APOSTOL, AND DIAZ (R.), PER COMMITTEE REPORT NO. 320

AN ACT AMENDING CERTAIN SECTIONS OF REPUBLIC ACT NO. 6957, "AN ACT AUTHORIZING THE FINANCING, CONSTRUCTION, OPERATION AND MAINTENANCE OF INFRASTRUCTURE PROJECTS BY THE PRIVATE SECTOR, AND FOR OTHER PURPOSES"

Be it enacted by the Senate and House of Representatives of the Philippines in Congress assembled:

SECTION 1. Sections 1, 2, 3 and 4 of Republic Act No. 6957 are hereby amended to read as follows:

"SECTION 1. *Declaration of Policy.* - It is the declared policy of the State to recognize the indispensable role of the private sector as the main engine for national growth and development and provide the most appropriate favorable incentives to mobilize private resources for the purpose[.], AND THAT INCENTIVES SHALL NOT BE LIMITED TO FINANCIAL INCENTIVES BUT SHALL INCLUDE A CLIMATE OF MINIMUM GOVERNMENT REGULATIONS AND PROCEDURES.

"SEC. 2. *Definition of Terms.* - The following terms used in this Act shall have the meanings stated below:

"(A) PRIVATE SECTOR INFRASTRUCTURE SCHEMES - A CONTRACTUAL ARRANGEMENT WHEREBY INFRASTRUCTURE PROJECTS NORMALLY FINANCED AND OPERATED BY THE PUBLIC SECTOR ARE WHOLLY OR PARTLY IMPLEMENTED BY PRIVATE SECTOR FUNDS AND/OR MANAGEMENT SUCH AS BUT NOT LIMITED TO HIGHWAYS, RAILWAYS, PORTS, AIRPORTS, POWER, TELECOMMUNICATIONS, INFORMATION TECHNOLOGY NETWORKS AND DATABASE INFRASTRUCTURE, IRRIGATION, WATER SUPPLY, SEWERAGE, DRAINAGE, TOURISM, EDUCATION AND HEALTH FACILITIES, LAND RECLAMATION, DREDGING, INDUSTRIAL ESTATES, MARKETS, SLAUGHTERHOUSES, WAREHOUSES, SOLID WASTE MANAGEMENT, TOWNSITES, HOUSING, AND RELATED PROJECTS.

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SUCH ARRANGEMENTS SHALL INCLUDE BUT NOT BE LIMITED TO BUILD-OPERATE-AND-TRANSFER (BOT), BUILD-AND-TRANSFER (BT), BUILD-OWN-AND-OPERATE (BOO), AND VARIATIONS THEREOF AS DEFINED IN THE IMPLEMENTING RULES AND REGULATIONS HEREOF.

FOR THE CONSTRUCTION STAGE OF SUCH INFRASTRUCTURE SCHEMES, THE PROJECT PROPONENT MAY OBTAIN FINANCING FROM FOREIGN AND/OR DOMESTIC SOURCES AND/OR ENGAGE THE SERVICES OF A FOREIGN AND/OR FILIPINO CONTRACTOR: *PROVIDED*, THAT IN THE CASE OF FOREIGN CONTRACTORS, FILIPINO LABOR SHALL BE EMPLOYED OR HIRED IN THE DIFFERENT PHASES OF THE CONSTRUCTION WHERE FILIPINO SKILLS ARE AVAILABLE: *PROVIDED, FURTHER*, THAT THE FINANCING OF A FOREIGN OR FOREIGN-CONTROLLED PROJECT PROPONENT FROM PHILIPPINE GOVERNMENT FINANCING INSTITUTIONS SHALL NOT EXCEED TWENTY PERCENT (20%) OF THE TOTAL COST OF THE INFRASTRUCTURE FACILITY OR PROJECT: *PROVIDED, FURTHERMORE*, THAT SMALL AND MEDIUM PROJECTS WHICH WOULD HAVE DIFFICULTY IN SOURCING FUNDS MAY BE FINANCED PARTLY FROM DIRECT GOVERNMENT APPROPRIATIONS NOT EXCEEDING TWENTY-FIVE PERCENT (25%) OF THE PROJECT COST OR FROM OFFICIAL DEVELOPMENT ASSISTANCE OF FOREIGN GOVERNMENTS OR INSTITUTIONS NOT EXCEEDING TWENTY-FIVE PERCENT (25%) OF THE PROJECT COST, AND FROM THE PROJECT PROPONENT COVERING THE BALANCE OF THE PROJECT COST: *PROVIDED, FINALLY*, THAT FINANCING FROM FOREIGN SOURCES SHALL NOT REQUIRE A FINANCIAL GUARANTEE BY THE GOVERNMENT OR BY GOVERNMENT-OWNED OR CONTROLLED CORPORATIONS, EXCEPT WHERE PARTIAL FINANCING OF TOTAL PROJECT COST NOT TO EXCEED TWENTY-FIVE PERCENT (25%) FOR SMALL- AND MEDIUM-SIZED PROJECTS AND FIFTY PERCENT (50%) FOR LARGE-SCALE PROJECTS SHALL COME FROM OFFICIAL DEVELOPMENT ASSISTANCE (ODA).

[(a)](B) Build-operate-and-transfer scheme - A contractual arrangement whereby the [contractor] PROJECT PROPONENT undertakes the construction, including financing, of a given infrastructure facility, and the operation and maintenance thereof. The [contractor] PROJECT PROPONENT, operates the facility over a fixed term during which it is allowed to charge facility users appropriate tolls, fees, rentals, and charges [sufficient] NOT EXCEEDING THOSE PROPOSED IN ITS BID OR AS NEGOTIATED AND INCORPORATED IN THE CONTRACT to enable the [contractor] PROJECT PROPONENT to recover its INVESTMENT, operating and maintenance expenses [and its investment] in the project [plus a

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reasonable rate of return thereon]. The [contractor] PROJECT PROPONENT transfers the facility to the government agency or local government unit concerned at the end of the fixed term which shall not exceed fifty (50) years[ ]: [For the construction stage, the contractor may obtain financing from foreign and/or domestic sources and/or engage the services of a foreign and/or Filipino constructor:] *Provided,* That the ownership structure of the [contractor] PROJECT PROPONENT of an infrastructure facility whose operation requires a public utility franchise must be in accordance with the Constitution. [: *Provided, however,* That, in the case of corporate investors in the build-operate-and-transfer corporation, the citizenship of each stockholder in the corporate investors shall be the basis for the computation of Filipino equity in the said corporation: *Provided, further,* That, in the case of foreign constructors, Filipino labor shall be employed or hired in the different phases of the construction where Filipino skills are available: *Provided, furthermore,* That the financing of a foreign or foreign-controlled contractor from Philippine government financing institutions shall not exceed twenty percent (20%) of the total cost of the infrastructure facility or project: *Provided, finally,* That financing from foreign sources shall not require a guarantee by the Government or by government-owned or controlled corporations.]

The build-operate-and-transfer scheme shall include a supply-and operate situation which is a contractual arrangement whereby the supplier of equipment and machinery for a given infrastructure facility, if the interest of the Government so requires, operates the facility providing in the process technology transfer and training to Filipino nationals.

]([b])[(C) Build-and-transfer scheme - A contractual arrangement whereby the [contractor] PROJECT PROPONENT undertakes the construction, including financing, of a given infrastructure facility, and its turnover after completion to the government agency or local government unit concerned which shall pay the [contractor its total investment expended on the project plus] PROJECT PROPONENT AN AMOUNT NOT EXCEEDING ITS TOTAL BID PRICE OR IN THE CASE OF NEGOTIATED CONTRACT THE NEGOTIATED PRICE WHICH INCLUDES a reasonable rate of return [thereon.] ON INVESTMENTS, SUCH PAYMENT CAN BE MADE IMMEDIATELY OR OVER A SCHEDULED PERIOD OF TIME ACCORDING TO THE TERMS OF EACH AGREEMENT AND MAY HAVE PROVISIONS FOR ALL OR PART OF SUCH PAYMENT TO BE MADE OTHER THAN IN MONETARY FORM. This arrangement may be employed in the construction of any infrastructure project including critical facilities which, for security or strategic reasons, must be

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operated directly by the Government.

"(D) BUILD-OWN-AND-OPERATE SCHEME - A CONTRACTUAL ARRANGEMENT WHEREBY A PROJECT PROPONENT IS GRANTED A FRANCHISE TO PROVIDE A SERVICE VIA A GIVEN INFRASTRUCTURE PROJECT WHICH IS CONSTRUCTED, FINANCED AND OPERATED BY THE PROJECT PROPONENT. THE PROJECT PROPONENT PROVIDES, IN EXCHANGE FOR THE FRANCHISE, AN ACCEPTABLE LEVEL OF SERVICE IN RETURN FOR INCOME OR TOLLS RECEIVED FOR THE SERVICE PROVIDED. THE ASSETS OF THE PROJECT INCLUDING BUT NOT LIMITED TO LANDS AND IMPROVEMENTS THEREON ARE OWNED BY THE PROJECT PROPONENT AND ITS SHAREHOLDERS, AND THE PROJECT PROPONENT IS FINANCED WITHOUT DIRECT GOVERNMENT GUARANTEES.

"(E) PROJECT PROPONENT - THE PRIVATE SECTOR ENTITY WHICH SHALL HAVE CONTRACTUAL RESPONSIBILITY FOR THE PROJECT AND SHALL HAVE AN ADEQUATE FINANCIAL BASE TO IMPLEMENT SAID PROJECT.

"(F) CONTRACTOR - ANY ENTITY DULY ACCREDITED ACCORDING TO PHILIPPINE LAWS WHICH MAY OR MAY NOT BE AFFILIATED TO THE PROJECT PROPONENT, WHICH IS RESPONSIBLE FOR THE CONSTRUCTION AND/OR SUPPLY OR EQUIPMENT FOR THE PROJECT.

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"(G) CONSTRUCTION - REFERS TO NEW CONSTRUCTION, REHABILITATION, IMPROVEMENT, EXPANSION, ALTERATION AND RELATED WORKS AND ACTIVITIES, INCLUDING THE NECESSARY SUPPLY OF EQUIPMENT, LABOR, SERVICES AND RELATED ITEMS.

"(H) REASONABLE RETURN ON INVESTMENTS AND OPERATING AND MAINTENANCE COSTS - FOR NEGOTIATED CONTRACTS, SUCH RATES OF RETURN THAT REFLECT THE PREVAILING COST OF CAPITAL IN THE DOMESTIC AND INTERNATIONAL MARKETS WHICH THE PROJECT PROPONENT MAY TAP TO FINANCE THE PROJECT.

"SEC. 3. *Private Initiative in Infrastructure.* - All government [infrastructure] agencies, including government-owned and controlled corporations and local government units, are hereby authorized to enter into contract with [any duly prequalified private contractor] THE PROJECT PROPONENT OF ANY APPROVED SCHEME for the financing, construction, operation and maintenance of any financially viable infrastructure facilities [through the build-operate-and-transfer or build-and-transfer scheme,] subject to the terms and conditions hereinafter set forth.

"SEC. 4. *Priority Projects.* - All concerned [infrastructure] GOVERNMENT agencies, including government-owned and controlled corporations and local government units, shall include in

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their infrastructure programs those priority projects that may be financed, constructed, operated and maintained by the private sector under the provisions of this Act. It shall be the duty of all concerned [infrastructure] GOVERNMENT agencies to give wide publicity to all projects eligible for financing under this Act, including publication in national AND, WHERE APPLICABLE, INTERNATIONAL newspapers of general circulation once every six (6) months and official notification of [contractors] PROJECT PROPONENTS registered with them. The lists of all such national projects must be part of the medium-term infrastructure programs of the agencies concerned and must be [duly approved by Congress.] SUBMITTED TO THE INVESTMENT COORDINATION COMMITTEE OF THE NATIONAL ECONOMIC AND DEVELOPMENT AUTHORITY, FOR CONFIRMATION/APPROVAL, WITH REGARDS TO ITS CONSISTENCY WITH NATIONAL GOVERNMENT'S OVERALL SOCIOECONOMIC POLICIES: *PROVIDED, HOWEVER,* THAT ANY PROJECT SUBMITTED TO THE INVESTMENT COORDINATION COMMITTEE OR ANY OF ITS SUPPORT OFFICES WHICH ARE NOT APPROVED/DISAPPROVED WITHIN THIRTY (30) WORKING DAYS SHALL BE CONSIDERED AUTOMATICALLY APPROVED. Local projects [funded and] TO BE implemented by the local government units concerned shall be submitted to the local development

councils for confirmation [or approval]."

SEC. 2. A new section to be denominated as Section 5 is hereby added as follows:

"SEC. 5 *UNSOLICITED PROPOSALS.* - UNSOLICITED PROPOSALS FOR PROJECTS WHICH ARE NOT INCLUDED IN THE LIST OF PRIORITY PROJECTS MAY, HOWEVER, BE ACCEPTED BY THE CONCERNED NATIONAL GOVERNMENT AGENCY OR LOCAL GOVERNMENT UNIT: *PROVIDED,* THAT THESE PROJECTS DO NOT INVOLVE ANY GOVERNMENT FINANCING OR FINANCING GUARANTEE. SUCH PROJECTS MAY BE PURSUED AND IMPLEMENTED BY THE AGENCIES CONCERNED AFTER THEY ARE APPROVED BY THE SECRETARY OF THE NATIONAL GOVERNMENT AGENCY OR HEAD OF THE LOCAL GOVERNMENT UNIT CONCERNED AS AUTHORIZED BY THE LOCAL SANGGUNIAN: *PROVIDED,* THAT FOR EACH NATIONAL PROJECT, A COPY OF THE PROPOSAL AND THE EVENTUAL CONTRACT SHALL FORTHWITH BE SUBMITTED TO THE NEDA FOR ITS INFORMATION, WITHIN THIRTY (30) DAYS FROM RECEIPT AND/OR SIGNING THEREOF."

SEC. 3. Section 5 of the same Act is hereby renumbered as Section 6 to read as follows:

"SEC. [5] 6. *Public Bidding of Projects.* - Upon approval of the projects mentioned in Sections 4 AND 5 of this Act, the concerned

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head of the [infrastructure] GOVERNMENT agency or local government unit shall forthwith cause to be published, once every week for three (3) consecutive weeks, in at least two (2) NATIONAL AND, WHERE APPLICABLE, INTERNATIONAL newspapers of general circulation and in at least one (1) local newspaper which is circulated in the region, province, city or municipality on which the project is to be constructed, a notice inviting all duly prequalified infrastructure [contractors] PROJECT PROPONENTS to participate in a public bidding for the projects so approved. In the case of a build-operate-and-transfer arrangement, the contract shall be awarded to the lowest complying bidder based on the present value of its proposed tolls, fees, rentals, and charges over a fixed term for the facility to be constructed, operated, and maintained according to the prescribed minimum design and performance standards, plans and specifications. For this purpose, the winning [contractor] PROJECT PROPONENT shall be automatically granted by the [infrastructure] GOVERNMENT agency or local government unit the franchise to operate and maintain the facility, including the collection of tolls, fees, rentals, and charges in accordance with Section [6] 7 hereof.

"In case of a build-and-transfer arrangement, the contract shall be awarded to the lowest complying bidder based on the present value of its proposed schedule of amortization payments for

the facility to be constructed according to the prescribed minimum design and performance standards, plans and specifications: *Provided, however,* That a Filipino [constructor] PROPONENT who submits an equally advantageous bid shall be given preference.

"THE PUBLIC BIDDING PROCESS MAY BE CONDUCTED UNDER A TWO-ENVELOPE/TWO-STAGE SYSTEM, THE FIRST ENVELOPE TO CONTAIN THE TECHNICAL PROPOSAL AND THE SECOND ENVELOPE TO CONTAIN THE FINANCIAL PROPOSAL, THE PROCEDURES OF WHICH SHALL BE OUTLINED IN THE IMPLEMENTING RULES AND REGULATIONS OF THIS ACT.

"DIRECT NEGOTIATION OF CONTRACTS MAY BE RESORTED TO WHEN PUBLIC BIDDING FAILS OR FOR UNSOLICITED PROPOSALS FOR APPROVED NATIONAL OR LOCAL GOVERNMENT PROJECTS WHICH DO NOT REQUIRE GOVERNMENT FUNDING OR FINANCING GUARANTEES.

"A copy of each [build-operate-and-transfer, or build-and-transfer] contract ENTERED INTO BY THE GOVERNMENT UNDER THE PROVISIONS OF THIS ACT shall forthwith be submitted to Congress for its information."

SEC. 4. Section 6 is hereby renumbered as Section 7 to read as follows:

"SEC. [6] 7. *Repayment Scheme* - For the financing,

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construction, operation, and maintenance of any infrastructure project undertaken THROUGH THE BUILD-OPERATE-AND-TRANSFER SCHEME OR ANY OF ITS VARIATIONS pursuant to the provisions of this Act, the [contractor] PROJECT PROPONENT shall be [entitled to a reasonable return of its investment and operating and maintenance costs in accordance with its bid proposal as accepted by the concerned contracting infrastructure agency or local government unit and incorporated in the contract's terms and conditions. In the case of a build-operate-and-transfer arrangement, this repayment scheme is to be effected by authorizing the contractor] REPAID BY AUTHORIZING IT to charge and collect reasonable tolls, fees, AND rentals[, and charges] for the use of the project facility not exceeding those [proposed in the bid and] incorporated in the contract[.], AND, WHERE APPLICABLE, THE PROPONENT MAY LIKEWISE BE REPAID IN THE FORM OF A SHARE IN THE REVENUE OF THE PROJECT OR OTHER NON-MONETARY PAYMENTS, SUCH AS BUT NOT LIMITED TO THE GRANT OF A PORTION OR PERCENTAGE OF THE RECLAIMED LAND, SUBJECT TO THE CONSTITUTIONAL REQUIREMENTS WITH RESPECT TO THE OWNERSHIP OF LAND. *Provided,* That [the government infrastructure agency or local government unit concerned shall approve the fairness and equity of the tolls, fees, rentals and charges

except in case of tolls for national highways, roads, bridges and public thoroughfares which shall be approved by the Toll Regulatory Board;] FOR NEGOTIATED CONTRACTS, AND FOR PROJECTS WHICH HAVE BEEN GRANTED A NATURAL MONOPOLY OR WHERE THE PUBLIC HAS NO ACCESS TO ALTERNATIVE FACILITIES, THE APPROPRIATE GOVERNMENT REGULATORY BODIES SHALL APPROVE THE TOLLS, FEES, RENTALS, AND CHARGES BASED ON A REASONABLE RATE OF RETURN: *Provided, further,* That the imposition and collection of tolls, fees, rentals, and charges shall be for a fixed term as proposed in the bid and incorporated in the contract but in no case shall this term exceed fifty (50) years: *PROVIDED, FURTHERMORE,* THAT THE TOLLS, FEES, RENTALS, AND CHARGES MAY BE SUBJECT TO ADJUSTMENT DURING THE LIFE OF THE CONTRACT, BASED ON A PREDETERMINED PARAMETRIC FORMULA USING OFFICIAL PRICE INDICES AND INCLUDED IN THE INSTRUCTIONS TO BIDDERS AND IN THE CONTRACT: *PROVIDED, ALSO,* THAT ALL TOLLS, FEES, RENTALS, AND CHARGES AND ADJUSTMENTS THEREOF SHALL TAKE INTO ACCOUNT THE REASONABLENESS OF SAID RATES TO THE END-USERS OF PRIVATE SECTOR-BUILT INFRASTRUCTURE: *Provided, finally,* That during the lifetime of the franchise, the [contractor] PROJECT PROPONENT shall undertake the necessary maintenance and repair of the facility

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in accordance with standards prescribed in the bidding documents and in the contract. In the case of a build-and-transfer arrangement, the repayment scheme is to be effected through amortization payments by the government [infrastructure] agency or local government unit concerned to the [contractor] PROJECT PROPONENT according to the scheme proposed in the bid and incorporated in the contract.

"[In the case of land reclamation or the building of industrial estates, the repayment scheme may consist of the grant of a portion or percentage of the reclaimed land or industrial estate built, subject to the constitutional requirements with respect to the ownership of lands.]

SEC. 5. Section 8 of the same Act is hereby amended to read as follows:

"SEC. 8. *[Toll] Regulatory Boards.* - The Toll Regulatory Board WHICH WAS CREATED BY PRESIDENTIAL DECREE NO. 1112 is hereby attached to the Department of Public Works and Highways with the Secretary of Public Works and Highways as Chairman.

ALL OTHER REGULATORY BODIES SHALL HAVE AS CHAIRMAN THEIR RESPECTIVE DEPARTMENT SECRETARIES, UNLESS OTHERWISE PROVIDED FOR BY LAW."

SEC. 6. Section 7 of the same Act is hereby renumbered as

Section 9 to read as follows:

"SEC. [7] 9. *Contract Termination [and Adjustment].* - In the event that a project is revoked, cancelled or terminated by the Government through no fault of the [contractor] PROJECT PROPONENT or by mutual agreement, the Government shall compensate the said [contractor] PROJECT PROPONENT for its actual expenses incurred in the project plus a reasonable rate of return thereon not exceeding that stated [in the bidding documents and] in the contract as of the date of such revocation, cancellation or termination: *Provided,* That the interest of the Government in these instances shall be duly insured with the Government Service Insurance System or any other insurance entity duly accredited by the Office of the Insurance Commissioner: *Provided, finally.* That the cost of the insurance coverage shall be included in the terms and conditions of the bidding referred to above. [The tolls, fees, rentals and charges on the facility are subject to adjustment according to a formula related to official government price indices which shall be defined before the bidding, through the bidding documents, and incorporated in the contract.]

"IN THE EVENT THAT THE GOVERNMENT DEFAULTS ON CERTAIN MAJOR OBLIGATIONS AS INDICATED IN THE IMPLEMENTING RULES AND REGULATIONS HEREOF AND/OR IN THE CONTRACT AND SUCH FAILURE IS NOT REMEDIABLE OR IF

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REMEDIABLE SHALL REMAIN UNREMEDIED FOR AN UNREASONABLE LENGTH OF TIME, THE PROJECT PROPONENT/CONTRACTOR MAY, BY PRIOR NOTICE TO THE CONCERNED NATIONAL GOVERNMENT AGENCY OR LOCAL GOVERNMENT UNIT SPECIFYING THE TURN-OVER DATE, TERMINATE THE CONTRACT. THE PROJECT PROPONENT/CONTRACTOR SHALL BE REASONABLY COMPENSATED BY THE GOVERNMENT FOR EQUIVALENT OR PROPORTIONATE CONTRACT COST AS DEFINED IN THE CONTRACT."

SEC. 7. Section 9 of the same Act is hereby renumbered as Section 10 to read as follows:

"SEC. [9] 10. *Project Supervision.* - Every infrastructure project undertaken under the provisions of this Act shall be [constructed, operated and maintained by the contractor PROJECT PROPONENT concerned] in accordance with the plans, specifications, standards, and costs approved by the concerned government [infrastructure] agency and SHALL BE under the [technical] supervision of the said agency[ ] OR LOCAL GOVERNMENT UNIT IN THE CASE OF LOCAL PROJECTS."

SEC. 8. A new section to be denominated as Section 11 is hereby added to read as follows:

"SEC. 11. *TAX EXEMPTION.* - ALL IMPORTATION OF CAPITAL

EQUIPMENT, SPARE PARTS AND ACCESSORIES IN PURSUIT OF BOT PROJECTS OR ANY OF ITS VARIATIONS SHALL ENJOY DUTY AND TAX EXEMPTION PRIVILEGE UPON THE EFFECTIVITY OF THIS ACT UNTIL DECEMBER 31, 1999."

SEC. 9. Section 10 is hereby renumbered as Section 12 to read as follows:

"SEC. [10] 12. *Implementing Rules and Regulations.* - A committee composed of ONE representative[s] EACH from the Department of Public Works and Highways, THE DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS, THE DEPARTMENT OF ENERGY, THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, THE DEPARTMENT OF AGRICULTURE, THE DEPARTMENT OF TRADE AND INDUSTRY, the Department of Finance, the Department of INTERIOR AND Local Government, the National Economic and Development Authority, the COORDINATING COUNCIL OF THE PHILIPPINE ASSISTANCE PROGRAM, AND OTHER CONCERNED GOVERNMENT AGENCIES and duly accredited organizations representing the private Philippine construction industry AND THE FINANCIAL SECTOR shall, WITHIN SIXTY (60) DAYS FROM THE EFFECTIVITY OF THIS ACT, formulate and prescribe, after public hearing and publication as required by law, the implementing rules and regulations, including, among

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others, the criteria and guidelines for evaluation of bid proposals, LIST OF FINANCIAL INCENTIVES AND ARRANGEMENTS THAT THE GOVERNMENT MAY PROVIDE FOR THE PROJECT, provisions to subject the facility collections to audit by the Commission on Audit, and conditions for the cancellation of contracts, in order to carry out the provisions of this Act[ ] IN THE MOST EXPEDITIOUS MANNER.

"THE CHAIRMAN OF THIS COMMITTEE SHALL BE APPOINTED BY THE PRESIDENT OF THE REPUBLIC OF PHILIPPINES.

"IN FORMULATING THE RULES AND REGULATIONS TO IMPLEMENT THIS ACT, DUE CONSIDERATION AND RESPECT SHOULD BE GIVEN TO EXISTING LAWS, DECREES AND EXECUTIVE ORDERS SUCH AS, BUT NOT LIMITED TO THE SHIPMENT OF MACHINERIES AND EQUIPMENT INTENDED FOR BOT PROJECTS OR ANY OF ITS VARIATIONS WHICH SHALL BE COURSED THROUGH PHILIPPINE-OWNED OR -OPERATED FLAG VESSELS WHENEVER THESE ARE AVAILABLE DURING THE TIME OF SHIPMENT. IN CASE NO PHILIPPINE FLAG VESSEL IS AVAILABLE, A WAIVER SHOULD BE SECURED FROM THE PHILIPPINE SHIPPERS COUNCIL (SHIPPERCON) OF THE DEPARTMENT OF TRADE AND INDUSTRY. SUCH WAIVER SHALL BE GIVEN WITHIN A PERIOD OF FIFTEEN (15) DAYS.

"ANY ADDITIONAL RULES AND REGULATIONS PRESCRIBED BY THIS COMMITTEE NOT INCONSISTENT WITH THE PROVISIONS OF THIS ACT SHALL BE DEEMED VALID AND OPERABLE UNDER THIS ACT."

SEC. 10. A new section, to be denominated as Section 13 is hereby added to read as follows:

"SEC. 13. *APPLICABILITY CLAUSE.* - THE PROVISIONS OF THIS ACT IS WITHOUT PREJUDICE TO REPUBLIC ACT 7648, OTHERWISE KNOWN AS THE "ENERGY CRISIS ACT."

SEC. 11. Sections 11, 12 and 13 of the same Act are hereby renumbered as Sections 14, 15, and 16 respectively.

SEC. 12. This Act shall take effect fifteen (15) days after its publication in at least two (2) newspapers of general circulation.

Approved,

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Classification of PSGFs

- Cogeneration facilities meeting engineering, operating and efficiency standards;
- Block Power Production Facility (BPFF) or any electric plant intending to sell power directly to NPC grids and consistent with NPC development plans.
- Private Sector Generating Facility (PSGF) intended primarily for the internal use of the owner, which also plans to sell excess production to the grids; and
- PSGFs outside the NPC grids intending to sell directly or indirectly to the end-users.

Classification of PSGFs

EO215 IRR included:

- ❑ Renewable Resource Power Production Facilities (RRPFs) such as those using biomass, solar, wind, geothermal, hydro or wastes as the primary source of energy; and

- ❑ PSGF using indigenous energy as primary fuel for power generation.

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Economic Criteria for PSGF Qualification

PSGFs should be able to provide net foreign exchange savings to the country by virtue of :

- Using indigenous or renewable energy sources as primary fuel for power generation,
- Generating electricity more efficiently than can otherwise be done through operation of existing power plants, or
- Accessing lower-cost capital or lower plant investment.

Other Salient Provisions of EO 215

- The maximum size of a PSGF generating unit shall be limited to the size of the largest generating unit, or 10% of the maximum coincident demand of the affected grid, unless otherwise allowed by NPC;

- Interconnection costs for Mini-PSGFs shall be borne by NPC; in the case of PSGFs with capacities greater that 1,000 kilowatts, the cost of inter-connection, if necessary, shall be advanced by the owner of the PSGF.

Other Salient Provisions of EO 215

- Private entities seeking to enter into power generation activities shall be governed by applicable Philippine laws on corporations or similar associations, except in cases where said entities are directly engaged in the distribution of electriciy.

  In cases of the latter, these entities shall be governed by electric utility regulations concerning rates, financial limitations, etc. Foreign equity ownership shall be allowed to the extent provided by existing investment laws.

Rates for Purchases of PSGF Power

- Purchase rates for PSGF generation shall be mutually agreed upon by the concerned electric utility and owners of PSGFs. These rates, however, should not exceed the utility's "avoided cost".

  "Avoided Cost" means the incremental investment and/or operating, maintenance, and overhead costs that the electric utility would incur if such utility does not buy electric energy or capacity from a PSGF.

- Rates for purchases of PSGF power shall be just and reasonable to the electric customers of NPC or the concerned electric utilities ; and

- Said rates should be in accordance with guidelines set by the Energy Regulatory Board for PSGFs where full or excess energy production shall be sold to systems of concerned electric utilities.

Investment Incentives for Private Power Producers

- Granting of Pioneer Status to certain private power projects to allow 100 percent foreign ownership and operation of private generation facilities

- Availment of other incentives offered to pioneering firms for projects of at least 50 MW, and for projects which will utilize indigenous and renewable fuels

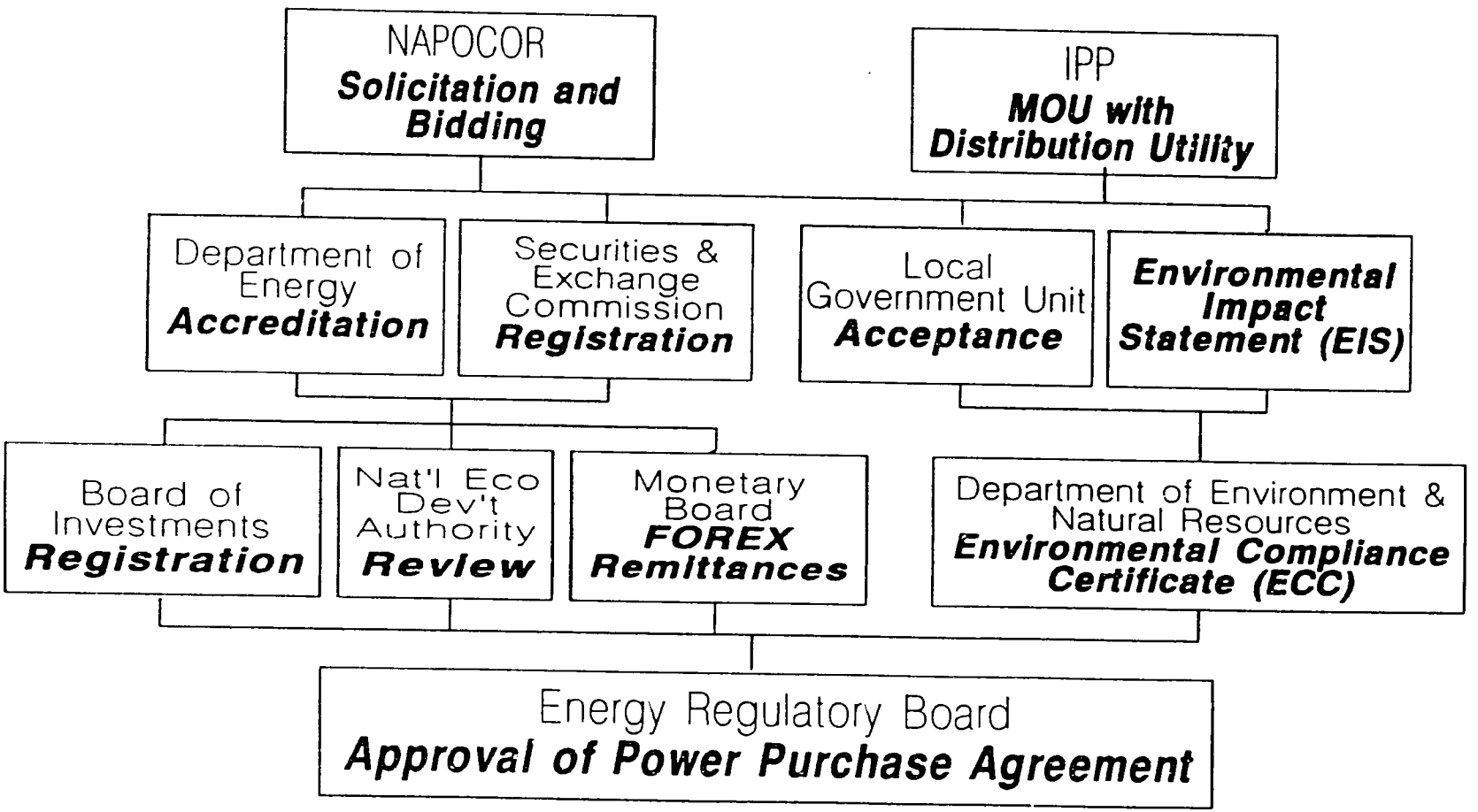
  - Additional deductions for labor expenses
  - Tax and duty exemption on imported equipment
  - Tax credit on domestic capital equipment
  - Exemption from contractor's Tax

Investment Incentives for Private Power Producers

- Pre-determined buyback rates for power produced by small PSGFs (less than 20 MW) to facilitate development of small power projects by eliminating price negotiations

- Financing for nonconventional and mini-hydro power projects which can provide 1 to 25 megawatts of capacity by 1996

IPP APPROVAL PROCESS



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IPP MOTIVATION FOR SELLING TO DISTRIBUTION UTILITIES

- Higher selling price
- Less bureaucracy in dealing with private companies
- Presence of the grid rate as a recognized benchmark
- Trend of government policy is to encourage distribution companies to contract power from IPPs
- NAPOCOR is less interested in smaller capacities (i.e. less than 100 MW)
- Extension of electric distribution (applicable to current distribution utilities)

Areas of Evaluation in Accrediting Private Power Project Proposals

I. Technical Features

A. Mode of operation (base or peaking, internal use, all production to be sold)
B. Primary energy source (fuel)
C. Installed capacity
D. Annual generation
E. Forced outage rate
F. Heat rate
G. Maintenance days
H. Dependable capacity
I. Station use
J. Economic life

II. Equity Ownership

III. Dates of Construction, Installation and Commissioning

IV. Financial Strength

Areas of Monitoring for Accredited Private Power Projects

I. Power Sales Agreement

II. Environmental Impact Assessment Studies / ECC

III. Financial Negotiations

IV. Project Milestone Schedule

- A. Equipment delivery and installation
- B. Plant construction
- C. Plant commissioning
- D. Fuel Supply
- E. Transmission / Interconnection

COMPLETED PRIVATE POWER PROJECTS

PROJECT PROFILE	CAP MW	PROPONENT/ FINANCING	TYPE	COMMERCIAL OPERATION DATE
HOPEWELL GT 1-3 Gas Turbine Plant	210	Hopewell Holdings Ltd. (Hong Kong)	BOT	January 1991
MINI-HYDRO Hydro Electric Plant	22	Hydro Electric Development (Philippines)	BOO	June 1992
SUBIC DIESEL I Diesel Power Plant	28	Enron Power Corporation (USA)	ROL	January 1993
ATLAS MINING Coal Thermal Plant	55	Atlas Cons. Mining and Dev't. Corp. (Philippines)	Energy Purchase	February 1993
CLARK DIESEL Diesel Power Plant	50	Electrobus (Philippines)	ROM	March 1993
HOPEWELL GT 4 Gas Turbine Plant	100	Hopewell Holdings Ltd. (Hong Kong)	BOT	March 1993
BATAAN CC BLOCK A Combined-Cycle Plant	300	ABB/Marubeni/Kawasaki (Swiss/Japan)	BTO	SC-May 1993 CC-October 1994
ENRON I Diesel Plant	105	Enron Power Dev't. Corp (USA)	BOT	July 1993

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COMPLETED PRIVATE POWER PROJECTS

PROJECT PROFILE	CAP MW	PROPONENT/ FINANCING	TYPE	COMMERCIAL OPERATION DATE
TOMEN I Diesel Plant	58	Alson/Tomen (Philippines/Japan)	BOT	July 1993
BINGA HYDRO PLANT Hydro Electric Plant	100	Chiang Jiang Energy Corp. (China)	ROL	August 1993
FELS POWER BARGE Power Barge Diesel Plant	90	Far East Livingston Shipbuilding (Singapore)	BOL	September 1993
BATAAN CC BLOCK B Combined-Cycle Plant	300	ABB/Marubeni/Kawasaki (Swiss/Japan)	BTO	SC U1-October 1993 SC U2/U3-November 1993 CC-December 1994
TOMEN II Diesel Plant	40	Alson/Tomen (Philippines/Japan)	BOT	December 1993
MAK-BAN BINARY	16	Ormat Incorporated	BTO	March 1994

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ON-GOING PRIVATE POWER PROJECTS

PROJECT	CAP MW	PROPONENT	COMMERCIAL OPERATION DATE
A. under BTO scheme			
BAC-MAN BINARY Geothermal Power Plant	15.73	Ormat Inc. (USA)	March 1994 (missed target)
MINDANAO Diesel Power Plant	200	MITSUI/BWES (Japan/Denmark)	July 1994
BATAAN COMBINED-CYCLE (Combined-cycle Phase)		ABB/Marubeni/ Kawasaki consortium (Swiss/Japan)	August 1994
Block A	90		August 1994
Block B	90		September 1994
B. under BOT scheme			
SUBIC DIESEL Power Plant	108	Enron Power (USA)	February 1994 (missed target)
LA UNION DIESEL Power Plant	215	First Private Power Corp. (Philippines)	October 1994
PAGBILAO COAL Thermal Power Plant	700	Hopewell Energy Int'l. (Hong Kong)	U1 - June 1995 U2 - January 1996

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DOE ACCREDITED PROJECTS

NAME OF PROJECT	CAPACITY (MW)	BUYER OF GENERATED ELECTRICITY	STATUS
Angeles Diesel Power Plant	30	Angeles Electric (BOO)	Construction on-going Engines available, ready for installation
CELCOR Diesel Power Plant	11	Cabanatuan Electric (own-use)	Construction started November 1993
Luzon Power Associates Combined-Cycle Power Plant	400	Meralco (BOO)	Awaiting release of ECC; on-going financial negotiations
MUDC Coal-Fired Power Plant	600	Meralco (BOO)	ECC issued 01/19/93 Construction to start second quarter 1994
Mangatarem Wood-Fueled Power Plant	20	Napocor (BOO)	On-going feasibility Study

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DOE ACCREDITED PROJECTS

NAME OF PROJECT	CAPACITY (MW)	BUYER OF GENERATED ELECTRICITY	STATUS
Misamis Bunker-Fired Power Plant	18.9	CEPALCO	Planning Stage
Tarlac Bunker-Fired Power Plant	12	Tarlac Electric (own-use)	Planning Stage
San Fernando Bunker-Fired Diesel Power Plant	30	San Fernando Electric (own-use)	Planning Stage
INDECO Waste-Fired Power Plant	94	NAPOCOR (BOO)	Planning Stage
NPC-PHILNICO Cogeneration Project	273.8	NAPOCOR (BOO)	Planning Stage
Edison Bataan Diesel Power Plant	58	NAPOCOR/ Bataan EPZA	Construction of engine foundation on-going
OMECO-IPC Bunker-Fired Diesel Power Plant	7	NAPOCOR	Planning Stage

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DOE ACCREDITED PROJECTS

NAME OF PROJECT	CAPACITY (MW)	BUYER OF GENERATED ELECTRICITY	STATUS
Nagtipunan Wood-Fueled Power Plant	20	Napocor	On-going feasibility Study
MCI Diesel Power Plant	50	Mactan EPZA/VECO	ECC issued Oct. 1993 Feasibility and engineering studies completed
Rosario Cogen Power Plant	48	Rosario EPZA/ NAPOCOR	ECC issued Power house and engine foundation in progress
Caltex Batangas Refinery Cogen Project	165.9	Napocor & Caltex	Engineering evaluation and design in progress

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ON-GOING PRIVATE POWER PROJECTS

PROJECT	CAP MW	PROPONENT	COMMERCIAL OPERATION DATE
C. under BOO scheme			
MALAYA SKID-MOUNTED Diesel Plant	50	Pro-Tech (USA)	January 1994 (missed target)
BATAAN EPZA Diesel Plant	58	Edison Global (Hong Kong)	March 1994 (missed target)
ENG'G. ISLAND Power Barge	100	Sabah Shipyard (Malaysia)	March 1994 (missed target)
NAVOTAS DIESEL Power Barge	120	Van Der Horst Ltd. (Singapore)	March 1994 (missed target)
CAVITE EPZA Diesel Plant	63	Magellan Utilities (Philippines)	March 1994 (missed target)
NORTH HARBOR Diesel Barge	50	FELS (Singapore)	March 1994 (missed target)
TONGONAN, LEYTE Geothermal Power Plant	600	PNOC-EDC (Philippines)	200 MW - 1996 400 MW - 1997
D. under ROM/ROL scheme			
NAGA THERMAL PLANT	203	Under negotiation w/ SALCON (Phil.)	1st Quarter 1994
AMBUKLAO HYDRO Power Plant	75	MIESCOR (Philippines)	2nd Semester 1994

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PROJECTS UNDER BIDDING PROCESS

PROJECT NAME	STATUS	TYPE	CAPACITY	COMM'L OPERATION
APLAYA DIESEL POWER PLANT	BIDDING COMPLETED Under negotiation with KPS	ROM	95	1ST QTR 1994
MINDANAO COAL-FIRED THERMAL POWER PLANT	BIDDING COMPLETED Results: Bids rejected Waiting results of review of the Power Expansion Program Mgt.	BOT	200	1998
SUAL COAL-FIRED THERMAL POWER PLANT	BIDDING COMPLETED Under negotiation with Hopewell Holdings Ltd.	BOT	1000	1999

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PROJECTS OPEN FOR PRIVATE PARTICIPATION

PROJECT PROFILE	CAP MW	PROJECT COST (M US$)	REMARKS	TYPE
KALAYAAN PUMPED-STORAGE 3&4 Pumped-Storage Power Plant	300	159	Year needed: 1999	BOT
BULANOG-BATANG HYDRO PLANT Hydro Electric Power Plant	150	168	Year needed: 2004	BOT
SAN ROQUE HYDRO POWER PLANT Hydro Electric Power Plant	390	586	Year Needed: 2005	BOT
KANAN B1 HYDRO PLANT Hydro Electric Power Plant	113	184	Year Needed: 2005	BOT
CONVERSION OF BATAAN GT TO COMBINED-CYCLE PLANT	180	40	Feasibility study on-going	BOT
CONVERSION OF MALAYA GT TO COMBINED-CYCLE PLANT	135	30	Feasibility study on-going	BOT
CALACA I COAL THERMAL PLANT Coal Fired-Thermal Power Plant	300			ROL/ROM
MALAYA THERMAL POWER PLANT Oil-Fired Thermal Power Plant	650			ROL/ROM
MANILA THERMAL POWER PLANT Oil-Fired Thermal Plant	200			ROL/ROM

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BASIC CHANGES IN EO 215 RULES AND REGULATIONS

- Transfer of the accreditation powers from NAPOCOR and the NEA to EIAB/DOE.
- Incorporation of technical and financial qualifications as one of the criteria for accreditation as a qualified PSGF.
- Formal adoption of the 60% thermal efficiency standard for cogeneration projects, earlier promulgated by the DOE in June 1993.
- Mandatory wheeling of power generated by any qualified PSGF thru the concerned electric utility's transmission or distribution line to any third party utility purchasing PSGF power.

BASIC CHANGES IN E0 215 RULES AND REGULATIONS

- Formulation and adoption of a standard methodology for the calculation of an electric utility's avoided-cost by the EIAB.
- Redefinition of mini-PSGFs to include facilities up to 10,000 kilowatts, consistent with the size classification of mini-hydro facilities.
- Removal of restrictions on BPPF sale of power solely to NAPOCOR.
- Compliance with competitive solicitation procedures for BPPF projects.

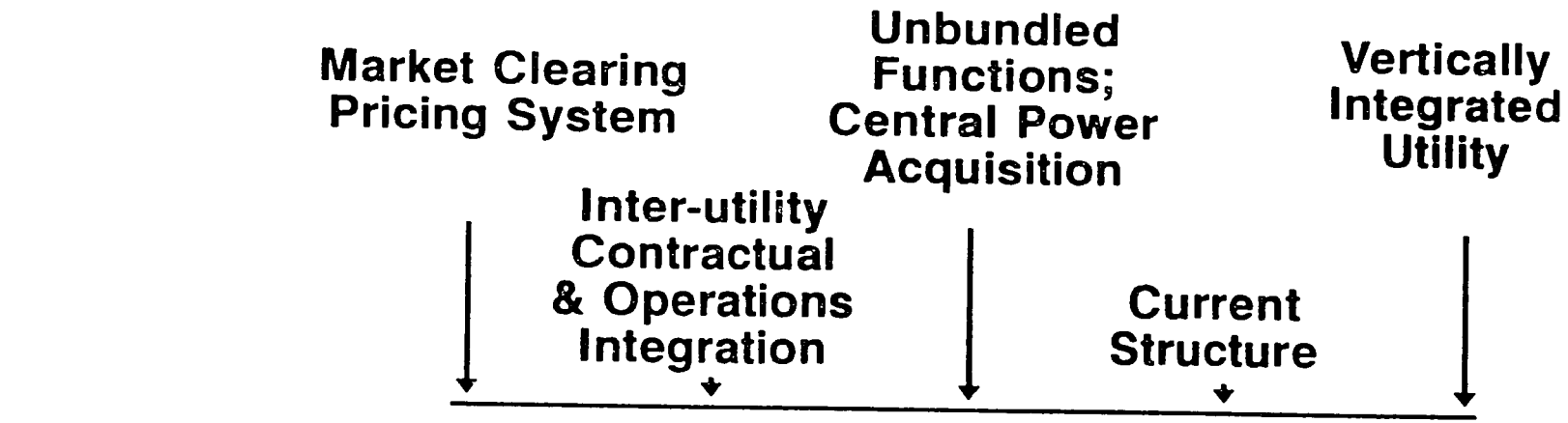
Objectives of Power Sector Restructuring:

- Enhance capital formation for power development,
- create an environment of competition and accountability towards achieving greater operational and economic efficiency, and
- rationalize prices and social subsidies, while maintaining certain socially-desirable policies such as Rural Electrification and low income "lifeline" rates.

Restructuring efforts should consider and address issues such as:

- the affordability and reliability of power to consumers,
- sustained development of indigenous energy resources where economically feasible, and
- the strategic development of the Philippine power system.

Continuum of Industry Structure Approaches



Degree of Vertical Integration	Unbundled	Bundled
Reliance on Competitive Forces	High	Low
Focus of Regulation	Precluding monopoly power	Controlling monopoly power

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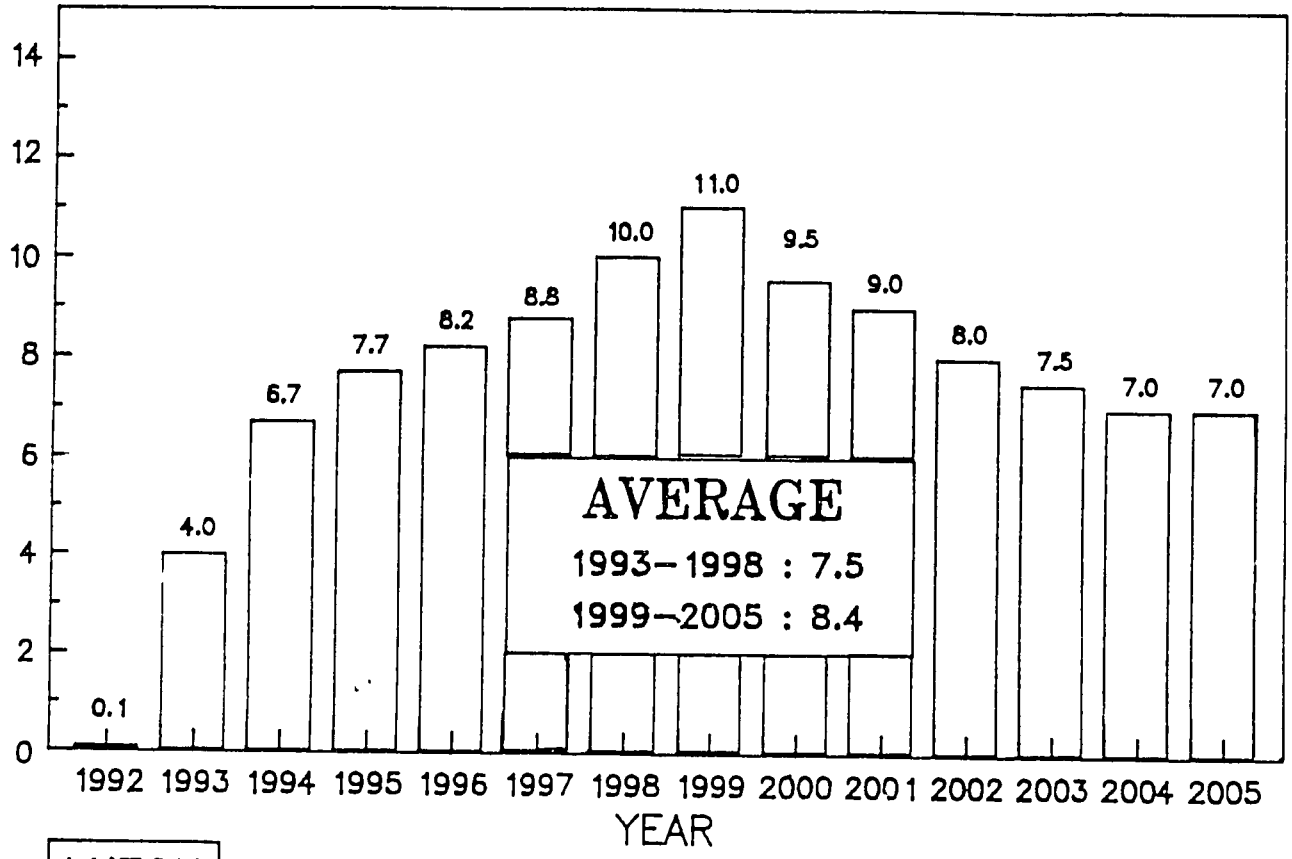
AVERAGE GROWTH RATE (%)
ENERGY SALES

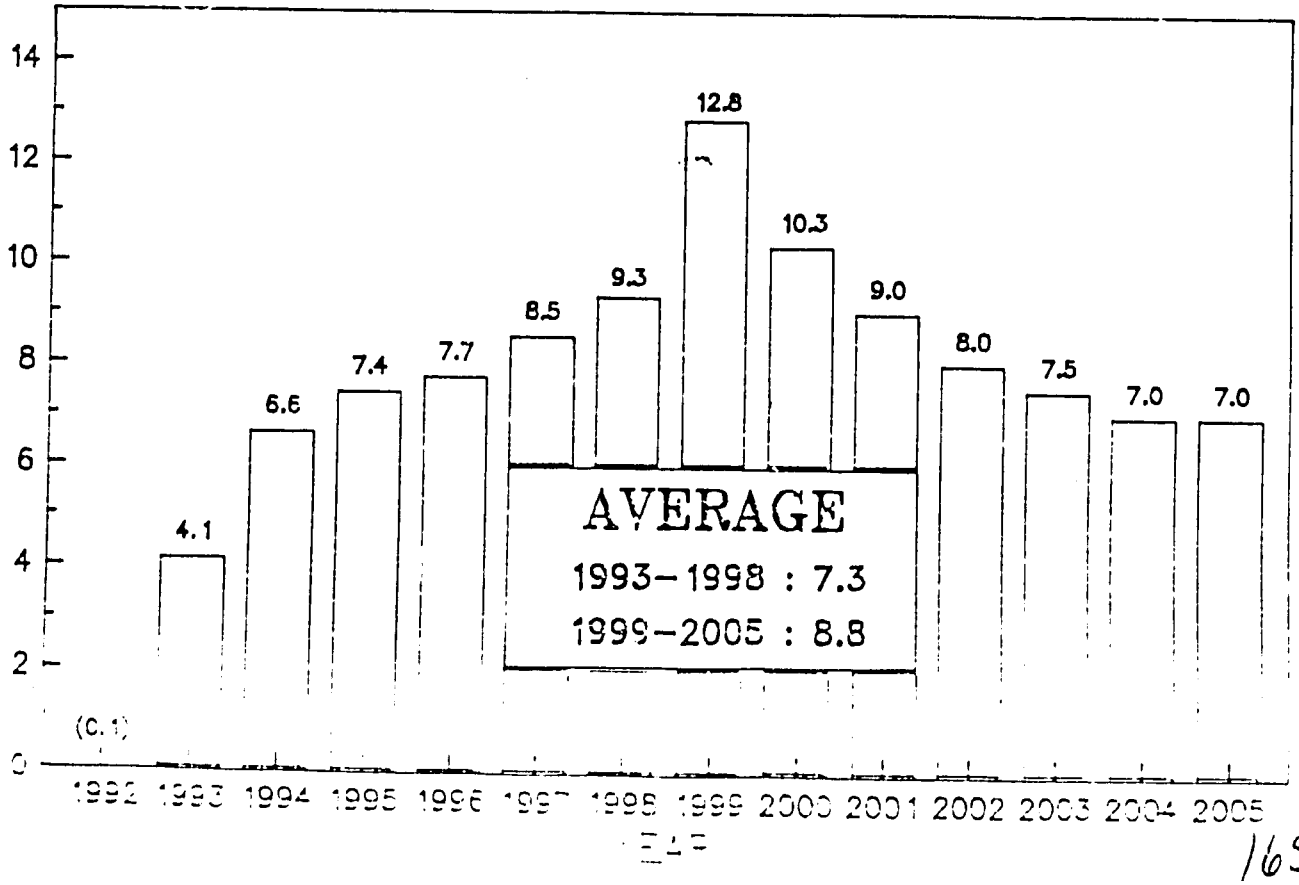
	HISTORICAL	FORECAST
	1987–1992	1993–2005
LUZON	5.7	10.0
VISAYAS	9.3	13.0
MINDANAO	6.2	14.6
PHILIPPINES	6.1	11.3

NEDA GDP TARGETS (%)
(1992–2005)

PHILIPPINES



LUZON



SALES FORECAST PARAMETERS

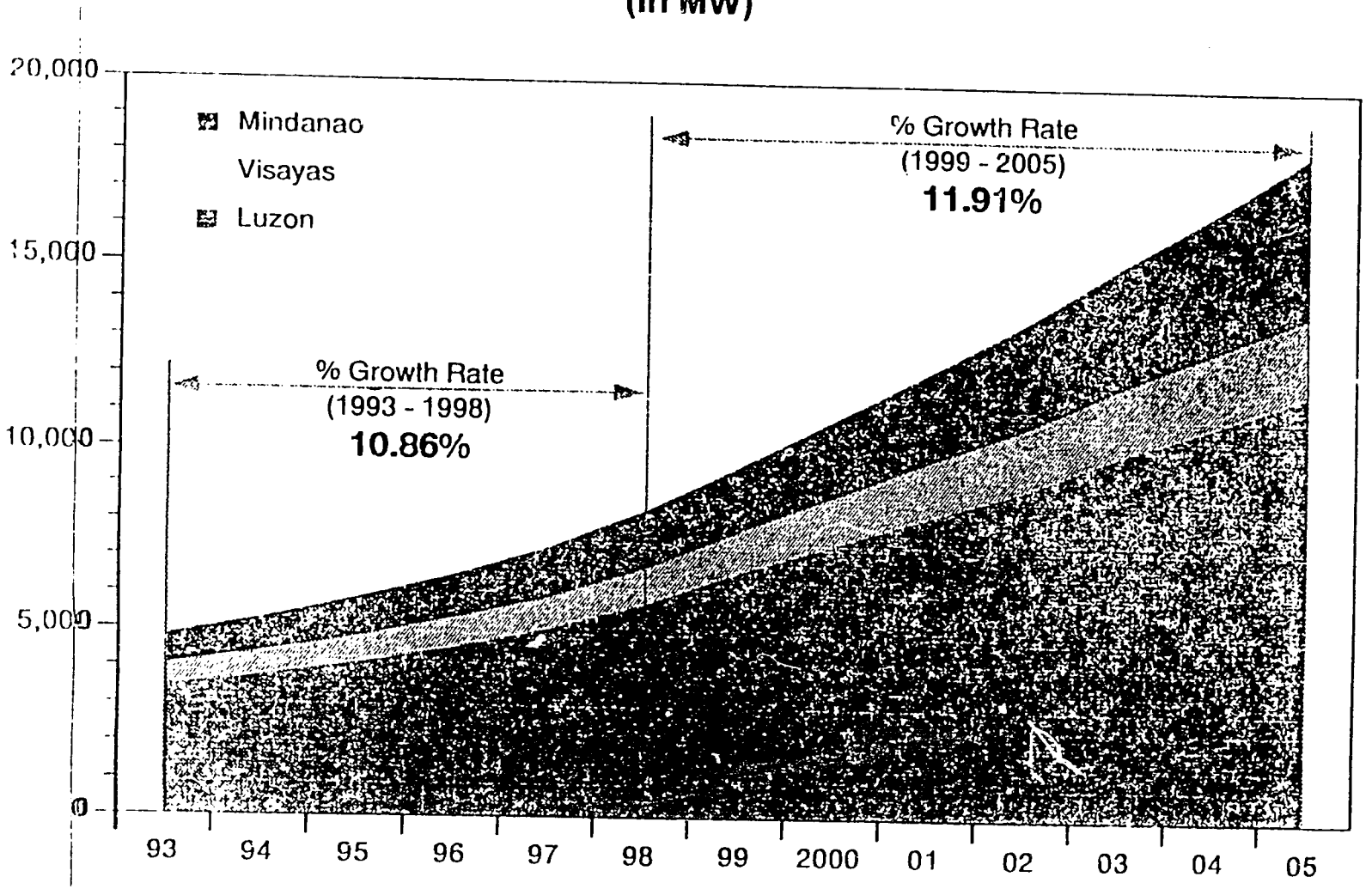
- GROSS DOMESTIC PRODUCT (GDP)
- DEMAND ELASTICITY

DEMAND ELASTICITY

	1993–1998	1999–2005
LUZON	1.3	1.2
PHILIPPINES	1.5	1.4

DELASTICY.DRW/F:/ARMAN/PLOT

Load Demand Forecast
(In MW)



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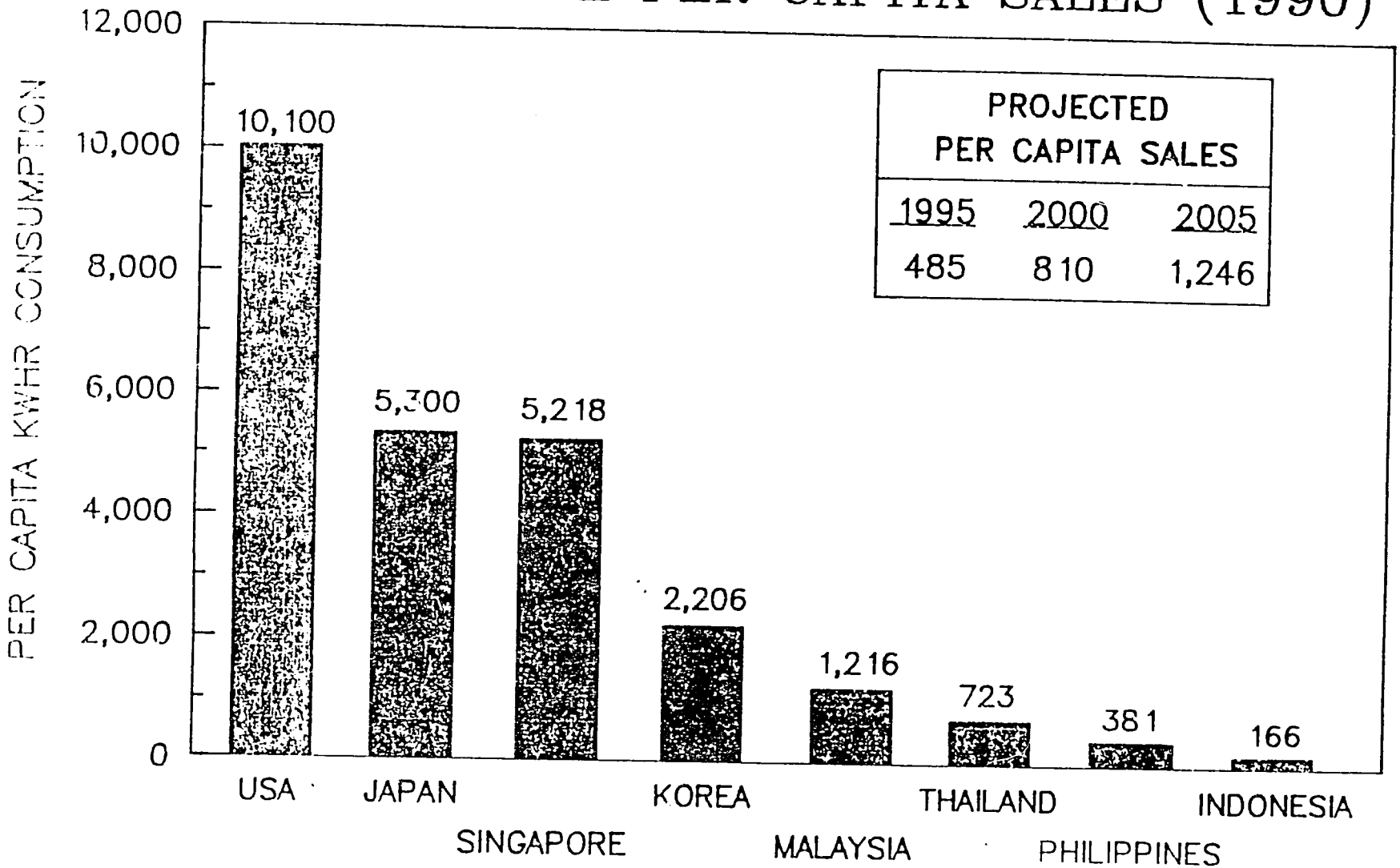
COMPARATIVE PER CAPITA SALES (1990)



PROJECTED PER CAPITA SALES		
1995	2000	2005
485	810	1,246

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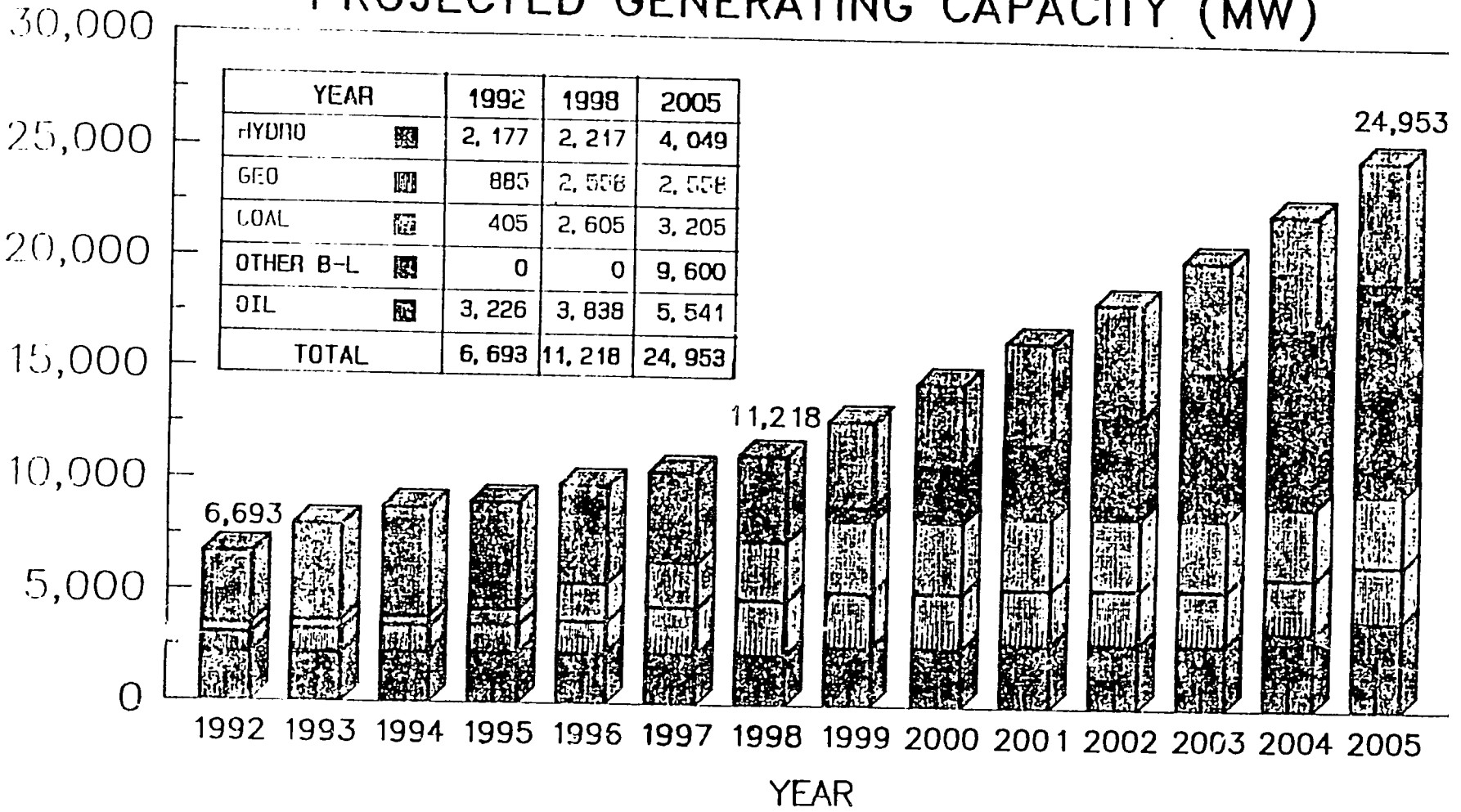
COMPCS.DRW/F: /ARMAN/PLOT

PHILIPPINES

PROJECTED GENERATING CAPACITY (MW)



YEAR	1992	1998	2005
HYDRO	2, 177	2, 217	4, 049
GEO	885	2, 558	2, 558
COAL	405	2, 605	3, 205
OTHER B-L	0	0	9, 600
OIL	3, 226	3, 838	5, 541
TOTAL	6, 693	11, 218	24, 953

PGCPLOT.DAT/F: /ARMAN/PLOT

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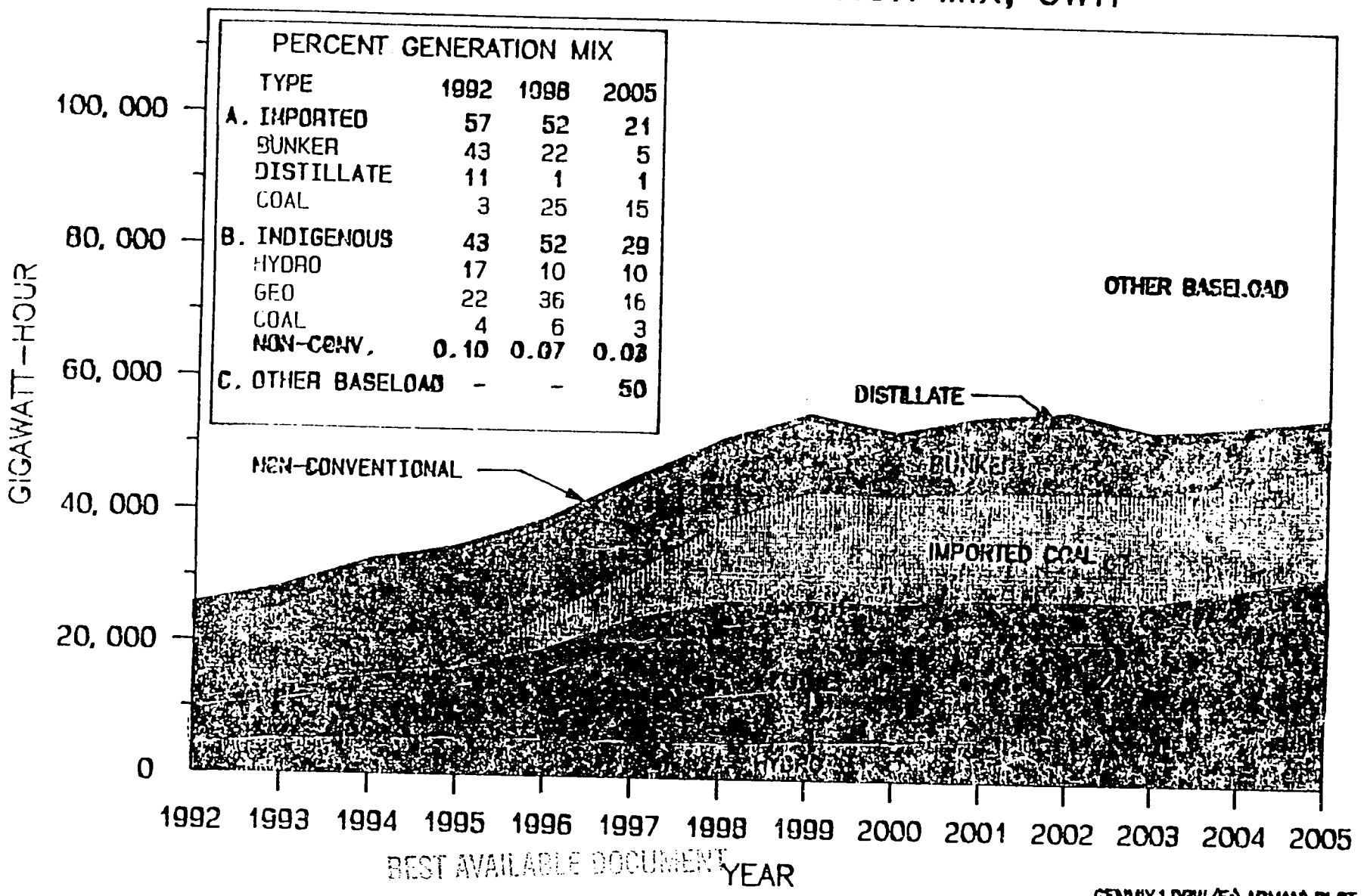
PHILIPPINES

ENERGY GENERATION MIX, GWH



PERCENT GENERATION MIX

TYPE	1992	1998	2005
A. IMPORTED	57	52	21
BUNKER	43	22	5
DISTILLATE	11	1	1
COAL	3	25	15
B. INDIGENOUS	43	52	29
HYDRO	17	10	10
GEO	22	36	16
COAL	4	6	3
NON-CONV.	0.10	0.07	0.03
C. OTHER BASELOAD	-	-	50

GENMIX1.DRW/F:\ARMAN\PLOT

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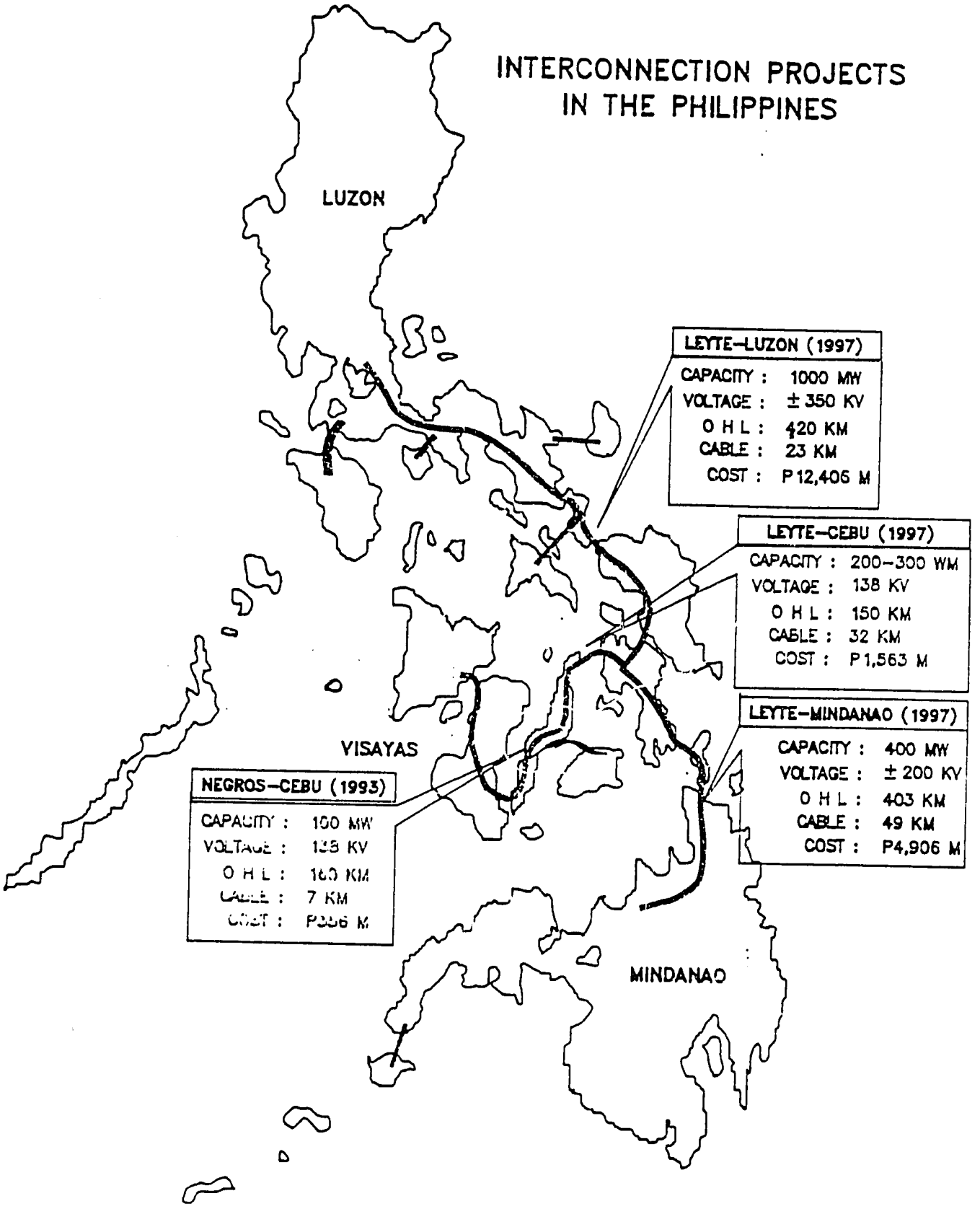
INTERCONNECTION PROJECTS IN THE PHILIPPINES



F–MAN/INTERCON

TOTAL CAPITAL EXPENDITURE REQUIREMENTS

P 850 BILLION
(1993-2005)

P 65 BILLION
(ANNUAL AVERAGE)

THE PHILIPPINE PRIVATE POWER EXPERIENCE AND POWER SECTOR RESTRUCTURING EFFORTS [1]

A. Motivations for the Philippine Private Power Program

Radical policy reforms in the Philippine energy sector were introduced when the Aquino government took over in 1986. Whereas during the Marcos regime energy security was equated with government control of the major energy infrastructures, the Aquino leadership vowed to disengage in areas that can adequately be handled by the private sector. More than just a philosophy, the free-enterprise policy was hoped to relieve the financially-distressed government of investment burden and further debts for power infrastructures and reallocate meager resources to other socio-economic development projects.

Private sector participation in power generation was officially declared through the issuance of Executive Order 215 in July 1987, as part of a Cabinet-initiated package of policy reforms for the power sector. The law allowed the private sector to participate in power generation, thus breaking the monopoly of power generation by the state-owned National Power Corporation (NPC) since the issuance of its founding charter, Presidential Decree No. 40, in 1972. E.O. 215, however, retained NPC's responsibility for the strategic planning of the country's power grids, including the setting up of transmission lines and the construction of associated generating facilities.

The implementing rules and regulations (IRR) for E.O. 215 was prepared by the NPC and the National Electrification Administration (NEA) and submitted to the OEA in August 1988. The then Office of Energy Affairs (OEA) conducted a series of public hearings on the IRR and thereafter approved it in May 1989.

In January 1991, the country's first private power plant started commercial operation. A 210-MW gas trubine facility, the plant was built by the Philippine subsidiary of the Hongkong-based Hopewell Holdings, Ltd. under the Build-Operate-Transfer (BOT) scheme with NPC.

Meanwhile, starting 1989, the country started to experience power shortages. The initial expectations for a stable energy situation proved to be shortlived. World crude oil prices began to recover in 1987, after continously declining since 1981. At the same time, indications of a renewed business sector confidence led the country to a surge in economic growth, chalking up an average

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[1] Paper presented by Flordeliza M. Andres, Acting Assistant Secretary for Policy and Programs, Philippine Department of Energy, at the USAID-sponsored *International Forum on Private Sector Participation in the Bangladesh Power Sector*, held on 8-12 May 1994, at the Sheraton Hotel in Dhaka, Bangladesh.

GDP increase of 6 percent between 1986 and 1989 after successively posting negative to minimal figures in the previous years.

Correspondingly, power demand also rose significantly to an average of 6.1 percent between 1986 and 1989 after a long period of sluggish growth in the early eighties. Thus, power demand caught up with available capacity which hardly increased since 1986. None of the baseload plants intended to replace the 620-MW nuclear plant were constructed and NPC's old thermal plants have become more unreliable. NPC had no choice but to install quick-gestating diesel-fed gas turbines to avert power shortages. With prolongued droughts since 1989 that hampered hydropower availability, the gas turbines designed to be peaking units had to be operated beyond normal running hours.

The return to oil-based generation reversed whatever fuel substitution gains were achieved in the seventies. NPC's operating costs escalated, while raising tariffs in the midst of detriorating power situation was politically untenable. This situation aggravated NPC's already distressed financial condition, and seriously impaired its ability to finance the generating capacity expansion requirements of its power grids.

Notwithstanding the natural calamities and political instability that brought the country back to economic slowdown beginning 1990, the power situation continued to worsen. In an effort to solve the chronic power deficiency, the government approved the implementation of power projects on a fast-track basis in June 1992. With an aggregate capacity of 800 MW, these projects were targeted for commissioning by March 1993 to meet the typical surge in power demand during the summer months and in anticipation of the limited hydropower availability.

NPC obtained blanket approvals from appropriate government agencies concerning investment clearances, environmental compliance and foreign exchange remittances, among others. Performance undertakings were likewise issued by the Department of Finance, thus, providing some form of sovereign guarantee on NPC's performance of its obligations under the fast-track private power contracts. All in all, the whole solicitation, evaluation, permitting and selection process were undertaken within a very short span of only two (2) months.

Recognizing the benefits that can be derived through private sector participation, the Philippine Congress decided to extend application of private sector participation schemes to all infrastructure projects. In July 1990, Congress passed Republic Act No. 6957, otherwise known as the Build-Operate Transfer (BOT) Law, which authorized private sector construction, operation, and maintenance of infrastructure projects including transportation,

telecommunications, and energy projects, among others, under BOT, Build-Operate-Own (BOO), and other private financing schemes.

Anchored on the policy of strengthening the development of indigenous resources, Congress passed Republic Act 7156 or the Mini-Hydropower Incentives Act in September 1991. The law encourages entrepreneurs to develop potential sites for mini-hydro by granting incentives that can provide a reasonable rate of return on investments.

With the reestablishment of the Department of Energy under the Ramos government in December 1993, NPC's Private Power Program went into full swing as part of the DOE's strategy to address the power crisis which continued to worsen in 1993. The President personally took charge of overseeing the implementation of ongoing fast-track private power projects as well as the solicitation of additional projects.

In April 1993, in order to hasten further the implementation of power projects, Congress passed the Electric Power Crisis Act which, among other provisions, gave the President the authority to negotiate with private proponents for projects specified in the same law.

B. Overview of the Policy, Regulatory and Institutional Environment

Policy Framework

The terms and conditions for the operation of independent power producers (IPPs) in the country evolved from issuances intended to promote the private power program as well as general laws governing private sector investments in the country:

Technical and Economic Criteria

E.O. 215 identified the categories of power generating plants which private sector generation facilities (PSGF) may fall into: a) Cogeneration facilities meeting engineering, operating and efficiency standards; b) Block power producing facility (BPPF) or any electric plant intending to sell power directly to NPC grids and consistent with NPC development plans; c) Private Sector Generating Facility (PSGF) intended primarily for the internal use of the owner, which also plans to sell excess production to the grids; and d) PSGFs outside the NPC grids intending to sell directly or indirectly to he end-users.

The implementing rules and regulations (IRR) of E.O. 215 also included: e) Renewable Resource Power Production Facilities (RRPPFs) such as those using biomass, solar, wind, geothermal,

hydro or wastes as the primary source of energy; and f) PSGFs using indigenous energy as primary fuel for power generation.

The IRR also set the economic criteria for PSGFs, that is, that they should be able to provide net foreign exchange savings benefit to the country by virtue of: a) generating electric energy more efficiently or cheaper than can otherwise be generated by existig plants; b) using indigenous and/or renewable energy sources; and, c) accessing lower cost of capital and/or cheaper plant investments.

Independent power producers (IPPs) can sell either to NPC, a private electric utility, or an electric cooperative. They can enter into long-term sales and pricing agreements based on the avoided cost of the utility, i.e., the incremental investment and/or operation, maintenance and overhead costs incurred if the utility does not buy from the IPP. In these agreements, they have to define minimum off-take quantities and pass through pricing formulas together with the utility.

Incentives for Private Power Investments

As in other industrial ventures private investors in power generation are provided incentives upon accreditation by the Board of Investments. Private power projects of at least 50 MW or that will use indigenous or renewable energy sources are granted pioneer status and are allowed 100 percent foreign ownership and operation.

BOI-registered private power projects are also entitled to investment incentives under the 1987 Omnibus Investment Code which include: a) Income tax holiday for six (6) years from the date of commercial operation for firms that are granted "pioneer" status" and four (4) years for non-pioneer firms with yearly extensions as may be approved; b) Tax and duty exemption on imported capital equipment; c) Additional deductions for labor expenses; d) Exemption from contractor's tax; and e) Tax credits on domestic capital equipment.

To facilitate processing and approval of smaller power projects, IPPs less than 20 MW in size can skip price negotiations and enjoy pre-determined buyback rates. Under its Renewable Energy Power Program, the DOE has also developed guidelines for the financing of renewable projects which can deliver 1 to 25 MW of power by 1996.

Under R.A. 6957, the contractor operates the facility over a fixed term during which it is allowed to charge users appropriate fees that would enable it to recover its operating and maintenance expenses and its investment in the project plus a reasonable rate of return. The facility is transferred to the government agency or

local government unit at the end of the fixed term which shall not exceed fifty (50) years.

Project and Contractual Schemes

An independent power producer (IPP) may participate directly in the NPC's solicitations of contractor for BPPFs or projects under its Power Development Program. Alternatively, the proponent may wish to pursue a project with any of the private distribution utilities or electric cooperatives.

NPC Projects

Initial NPC private power projects were implemented under the Build-Operate-Transfer (BOT) scheme. As the program progressed, other variants such as Build-Transfer, Operate (BTO) and Rehabilitate-Operate-Transfer (ROT) were also found appropriate for specific situations.

The BOT scheme

The BOT scheme is intended to cover new generation capacities. Under this scheme, NPC supplies the site and fuel for the generation facilities. On the other hand, the private contractor arranges the financing, design and constructs the plant, and operates and maintains the facilities over a pre-defined cooperation period.

The fuel supply is separated from the main BOT contract because of price and supply uncertainties, particularly over a long contractual period. However, a separate agreement may be reached by the parties to integrate the fuel supply requirement of the facilities with BOT contract.

Payments to the BOT operator come in two forms: capacity fee and energy fee. The capacity fee covers operating profit and fixed cost items of the facility. On the other hand, the energy fee covers variable cost involved in the operation and maintenance of the generating facilities.

The BOT agreement is a performance-based contract. Specific provisions are defined for bonuses and penalties related to plant heat rate and actual energy generation. Failure to meet guaranteed output during the cooperation period will mean drastically reduced payments to the operator.

The Department of Finance issues a "Performance Undertaking" that affirms that the obligations of NPC under the BOT agreement carry the full faith and credit of the Philippine government and guarantees to ensure that NPC will discharge such obligations at all times as they fall due.

Likewise, risk allocation between the the NPC and the BOT operator is clearly defined. Construction delays and cost overruns are risks borne by the BOT operator. Liquidated damages for every day of delay in project completion are included in the contract. Country risks (e.g., political problems, revolution, foreign currency crisis, etc.) is the responsibility of NPC, which means that a BOT will be kept whole if a country risk event occurs.

The generating facility is fully dispatchable. The day-to-day generation is based on the request of NPC depending on the load variation for the day. In the event the facility is not dispatched due to NPC, the operator is paid the full amount of his capacity fee.

The implementation of BOT projects is a prolonged process. Its realization depends on the final agreement and closure of the financial package which sometimes takes months to complete. Invariably, in cases of urgent capacity needs, NPC implements the BTO scheme.

The Build-Transfer-Operate Scheme

The BTO scheme is similar to the conventional turnkey contract. NPC obtains a loan project financing and awards a turnkey contract to a proponent with mandatory operation contract becoming part of the supply agreement. Like BOT, the BTO agreement is a performance-based contract. It calls for heavy penalties in the event the facility is not able to deliver its guaranteed output. In general, the penalty for not meeting guarantees is tied to the debt service requirement of the facilities.

Rehabilitate-Operate-Transfer (ROT) Scheme

NPC also enters into contracts for the operation and maintenance of its existing generating plants. In the ROT scheme, NPC turns over the management and operation of an existing plant to a private company that could assure higher efficiency in plant operation and increase the plant available capacity to a pre-agreed level.

The contractual arangement for the ROT scheme has two phases: first, an assessment period where a management-services type of agreement is entered into; and, second a rehabilitate-operate-and-maintain period.

Performance targets are also set, but all are on a best-effort basis. However, the proponent is obligated to identify improvement in the systems and procedures of NPC. At the same time, the period will be utilized towards the formulation of a repair and upgrade

program intended to prolong economic life, improve operational flexibility, recover lost capacity and enhance plant efficiency.

Two months before the expiration of the assessment period, the proponents submit a proposal to cover the second period. Should the parties reach an agreement, the proponent implements the rehabilitation program using his own financial resources. Afterwards, provisions similar to BOT uperation and maintenance apply.

Payment to ROT proponent come in the form of capacityand energy fees based on actual performance. Failure to meet guaranteed operating heat rate and output guarantee will mean reduced revenue stream for the operator.

IPP Projects with Distribution Utilities

The DOE adopted an interim policy of allowing electric distributors to implement generation projects, either through construction of utility-owned generation facilities or through contracts with independent power producers. This policy was in recognition of the limitations presented by the implementing rules of EO 215, as well as the critical need for new generation capacities to augment existing supplies from NAPOCOR.

Aside from being able to negotiate higher selling price and less bureaucracy, some IPPs found other advantages of dealing with distributors such as the presence of the grid rate as recognizeed benchmark and suitability of smaller capcities which NPC is less interested in.

The DOE has also required electric distributors entering into contracts with independent power producers to enter into long-term power purchase agreements with NAPOCOR towards institutionalizing system planning at the distribution level, and towards transfering a significant portion of the market risks borne by NAPOCOR to private electric distributors.

Regulatory Process and Institutional Mechanism

The IPP approval process involves a number of government agencies including the Department of Energy (DOE), the Securities and Exchange Commission (SEC), the Local Government Unit, the Department of Environment and Natural Resources (DENR), the Board of Investments (BOI), the National Economic and Development Authority (NEDA) and the Energy Regulatory Board ERB).

DOE Accreditation

E. O. 215 originally vested in the NPC and NEA the authority for the accreditation of private power proponents in their

respective areas. However, as NPC continued to build power plants, there was a growing perception that it could not be impartial against a private proponent. To diffuse this perception, NPC recommended to the then Energy Coordinating Council which had the policy oversight functions for the energy sector that accreditation of private proponents be undertaken by the then Office of Energy Affairs.

Upon the creation of the DOE, accreditation of IPPs officially became the role of the DOE through its Energy Industry Administration Bureau. However, due to some reorganization constraints, the IPP accreditation function is being handled by the Energy Planning and Monitoring Bureau. DOE established a One-Stop Action Center for purposes of facilitating service to private power related inquiries as well as facilitating receipt and processing of applications for financial assistance, incentives, and accreditation of proposals on private power and energy development projects.

The DOE criteria for accreditation are essentially those laid out in E.O. 215. Aside from the project's conformity to the implementing rules as to the types of projects and economic criteria, the DOE also evaluates the technical and financial qualifications of the proponent. A performance bond is not required during the DOE accreditation, however, if the proponent requires an excessive number of extensions beyond the given accreditation period, the DOE may require a performance bond in the amount of US$15 per kw to ensure completion of the project. BPPFs are given 9 months to break ground from issuance of accreditation before an extension is allowed.

The DOE accreditation is not required for BPPFs which NPC solicits through a bidding process. NPC reviews the technical and financial capability of the proponent for these projects. NPC has a standardized contract pre-approved by NEDA for different types of power plants. In some cases, BPPF proponents are allowed to sell directly to distribution utilities upon securing a waiver from NPC of its right to purchase power from IPPs.

To date, DOE has accredited twenty-one (21) private power proposals, most of which are for bunker-fired diesel engine generators for small electric utility systems.

DENR Environmental Clearance

Power projects are classified among environmentally-critical projects and must have an Environmental Clearance Certificate (ECC) before it can proceed. The process of evaluation varies depending on the size of the project. Smaller projects (thermal projects of less than 10 MW, and hydro projects of less than 50 MW with poundage of less than 50 cubic meters) need only submit a Project

Description while larger ones are required of a comprehensive Environmental Impact Study or EIS.

Board of Investment Incentives

An IPP project proponent may register with the BOI to seek investment incentives. The BOI has a one stop action center where a proponent submits its accreditation from the DOE, SEC registration, feasibility study, power purchase agreement, and capital cost of the project.

NEDA Review of Projects with Government Guarantees

The NEDA becomes involved in an IPP project when and if the Government provides any guarantees to the project, such as a government-guaranteed loan or when the project contract is with NPC. NEDA reviews the project concept, power purchase contract, and compares the levelized cost of power from the project excluding tax effects to the NPC's avoided cost, which is just based on recently-approved contracts.

ERB Review of Purchase Price Agreements

The ERB reviews the purchase price agreements between IPPs and the distribution utilities. With NPC having been subject to ERB regulation since the passage of the DOE Law, NPC contracts with IPPs must also be reviewed by ERB.

The ERB reviews the distribution utility's Memorandum of Agreement and power supply agreement with the IPPs. Public hearings are conducted prior to the Board deliberation and approval of the agreement.

C. Accomplishments of the Private Power Program

Since the inauguration of the first private power plant in 1991, the Philippines has made significant strides in its private power program. With respect to NPC projects, to-date some 1,474 MW of private capacity has been installed and another 2,738 MW are undergoing construction. The bidding process for three more projects with 1,295 MW total capacity has been completed while still another 2, 418, are open for private proponents. All told, about 8,000 MW of private power projects are envisioned to be installed until the completion of the Power Development Program by the year 2005.

On the other hand, of the 16 DOE-accredited IPP projects for distribution utilities of about 1,840 MW, four (4) are already under construction (147 MW) while the rest are in various stages of project preparation.

Of the fourteen (14) completed projects, five (5) projects with aggregate capacity of 513 MW were undertaken under the BOT scheme; one (1) under BOO (22); three under BTO (616 MW); and two(2) under ROM/ROL (178 MW).

More than the physical indicators, however, the private power program has made a significant accomplishment in the development of institutional capability and increased confidence of investors in the program. If it is any indication, it is worth noting that the levelized cost of generation and purchase power price for the BOT projects has been declining.

D. Efforts to Rationalize Policy and Institutional Structure

The significant results notwithstanding, the implementation of the private power program encountered some issues and problems that must be addressed if the program is to be more effective and truly responsive to the concerns of all players involved.

Amendment of E.O. 215 Guidelines

While EO 215 opened up power generation to the private sector, the implementing rules issued in 1989 limited opportunities for private sector participation in power generation ventures. Specifically, Block Power Production Facilities (BPPFs), or generation projects included in NAPOCOR's Power Development Program, were required to sell power only to NAPOCOR, thus, limiting distributor-contracted projects to relatively unproven and small renewable and cogeneration technologies.

Recognizing the need for some reforms in the rules and regulations on private power generation, the DOE has recently formulated amendments to the implementing rules of EO 215 following multi-sectoral and inter-agency consultations on relevant and specific sector issues.

Changes in the general provisions in the existing rules include:

a. *The transfer of the accreditation powers from NPC and the NEA NEA to the Energy Industry Administration Bureau (EIAB) of the DOE.*

The EIAB shall have the authority to grant or deny requests for accreditation on the basis of compliance with set qualifications criteria for private power generation. The EIAB may also require compliance with certain performance milestones as conditions for accreditations, including the posting of performance bonds and payment of penalties for delays in project implementation;

b. *Incorporation of technical and financial qualifications as one of the criteria for accreditation as a qualified PSGF.*

Primarily geared towards weeding out power "brokers", this will be in addition to the economic criteria for PSGF projects regarding the provision of net foreign exchange savings to the country.

c. *Formal adoption of the 60% thermal efficiency standard for cogeneration projects, earlier promulgated by the DOE in June 1993.*

Todate, the DOE has accredited two cogeneration facilities with an aggregate capacity of 445 MW which have complied with the DOE's thermal efficiency standard for cogeneration projects. The DOE therefore believes that cogeneration should be encouraged because of the high levels of efficiency which could be attained through this mode of electricity generation.

d. *Mandatory wheeling of power generated by any qualified PSGF through the concerned electric utility's transmission or distribution line to any third party utility purchasing PSGF power.*

Wheeling tariffs should promote efficient power generation and transmission, and should not be unduly discriminatory or preferential. Such tariffs must ensure that costs incurred from wheeling are recovered from the PSGF and not from existing customers. As such, wheeling costs may include the cost of required transmission expansion, as well as legitimate, verifiable economic costs and benefits derived by the utility from wheeling; and

e. *Formulation and adoption of a standard methodology for the calculation of an electric utility's avoided-cost by the EIAB.*

The EIAB, in consultation with the other Bureaus of the DOE, may also set or fix power purchase rates for certain technologies or fuel sources towards promoting the economic exploitation of available resources.

In addition to these general provisions, specific rules on mini-PSGFs, Block Power Production Facilities or BPPFs, and electric utility-owned generation facilities, have been amended.

As regards mini-PSGFs, its definition has been revised to include facilities up to 10,000 kilowatts, consistent with the size classification for mini-hydro facilities under Republic Act No. 7156.

For BPPFs, or facilities forming part of the Power Development Program of NAPOCOR, restrictions on the sale of power solely to NAPOCOR have been removed, thereby allowing private distribution utilities to contract for BPPF power, in addition to renewable and cogeneration facilities. All BPPF projects shall, however, be subject to strict compliance with competitive solicitation

procedures, and preferably to power purchase rate ceilings based on the utility's avoided-cost.

Private electric distributors seeking to implement specific blocks of power included in the list, either on BOO, BOT, or simple turnkey arrangements, may then apply for such blocks of capacity from the EIAB. These utilities must have first entered into long-term power purchase agreements with NAPOCOR to absorb NAPOCOR's presently contracted power projects, from which shall be deducted the amount of BPPF capacity which the utilities shall be implementing.

The EIAB shall then issue an accreditation to winning BPPF proponents, whether NAPOCOR or distributor-contracted, only after conducting a review of the records of solicitation and awards as to compliance with the technical and financial qualifications, required competitive procedures, and avoided-cost ceilings.

Power Sector Restructuring and NPC Privatization

The IPP regulatory framework just discussed hopes to introduce a more systematic development of private power in the country. The DOE, however, recognizes that a lot has yet to be done in terms of restructuring the Philippine power sector towards addressing inherent institutional and structural deficiencies of the sector.

One of the central programs of the DOE in this regard is the development of an appropriate restructuring strategy for the power sector, focusing primarily on the privatization of NAPOCOR. While the DOE believes that there exists a rationale for NAPOCOR's privatization, the DOE also feels that privatization should be used as a means towards the broader objectives of Philippine energy policy.

Any restructuring effort should therefore address or at least consider, among others, issues such as: (i) the affordability and reliability of power to consumers, (ii) sustained development of indigenous energy resources where economically feasible, and (iii) the strategic development of the Philippine power system.

In addition, the restructuring program must likewise be focused on: (i) enhancing capital formation for power development, (ii) creating an environment of competition and accountability towards achieving greater operational and economic efficiency, and (iii) rationalizing prices and social subsidies, while maintaining certain socially-desirable policies such as Rural Electrification and low-income "lifeline" rates.

The transformation of the power sector into a truly privatized, competitive electricity industry will be an evolutionary process occurring over a number of years. The Department of Energy (DOE) envisions certain transitory phases that would divide the structural reforms into manageable steps that will yield immediate benefits and improve the prospects for long-term success.

The DOE believes that the first of these transitory phases should be the implementation of long-term power purchase agreements between NAPOCOR and the various electric distribution utilities nationwide. This will result in greater accountability on the part of distributors in conducting more accurate and comprehensive evaluation of load growth potentials within their franchise areas, together with an evaluation of their supply-side and their demand-side options in meeting these requirements. For utilities implementing generation projects, long-term agreements will also serve to delineate the responsibilities of NAPOCOR and IPPs in providing future capacity requirements of the distribution utility.

A ten-year power supply agreement is currently being worked out by NAPOCOR and the Manila Electric Company, the largest electric distributor in the country which has retail sales equivalent to 70% of NAPOCOR's entire generation for the island of Luzon. Once finalized, this long-term supply agreement can serve as a model for NAPOCOR's ten-year contracts with other distribution utilities.

With the implementation of NAPOCOR's long-term power supply agreements with all electric distributors, generation expansion programs of NAPOCOR will only be dictated by the incremental requirements of distribution utilities as provided in the long-term agreements. Achievement of this end will effectively transfer significant planning and market risks associated with generation projects to the private sector. NAPOCOR will eventually become a power supplier of last resort, buying or building new generation if the private sector is unwilling to do so.

A parallel transitory phase may focus on continuing to improve the operational efficiency of NAPOCOR. This should form part of a long-term program for the company's reorganization and corporatization of its various operating units into distinct and autonomous profit centers. It is envisioned that privatization of selected NAPOCOR units will follow as soon as these become commercially viable ventures.

Over the long-term, it is envisioned that power transmission shall remain with NAPOCOR in view of its strategic importance in the optimal provision of system reserves, as well as in stimulating the development of site-specific indigenous energy sources. Development and operation of resource-based facilities,

particularly hydropower stations, is expected to remain under government control as the operation of hydro plants considers more than the economic merit order of load dispatch. This is also in consideration of the heavy front-end investments required for hydro projects which will be difficult to finance through import financing due to the low proportion of imported equipment component in hydro projects.

As the Philippine power sector moves closer to a more private sector dominated and market-oriented structure, private but regulated power distribution utilities shall increasingly have greater responsibilities in providing reliable and reasonably-priced electric service to ultimate consumers, together with socially-desirable subsidized services for financially disadvantaged customers.

While it may be necessary to maintain certain cross-subsidies in the transition, government should consider the direction of paying direct subsidies to private utilities for the provision of otherwise non-economic services, such as rural electrification. These subsidies may be sourced from electricity-related taxes.

Finally, the regulatory environment should encourage electric distributors to minimize operating costs. The current Return-on-Rate-Base regulation being applied to electric utilities, for example, can be modified to peg controllable utility operating costs within reasonable cost ranges. Costs incurred in excess of such levels shall not be recoverable from tariffs. Cost savings, on the other hand, may be allowed to accrue to the electric utility.

E. Concluding Remarks

The ultimate structure and operation of the restructured Philippine power sector will be determined by a number of factors that will develop thru the next few years. These will more properly be addressed by the key players in the Philippine power sector as the industry moves through various transitory phases.

The Department of Energy is now working towards a regulatory and institutional framework which establishes an environment of competition and transparency, conditions which are believed to be necessary for greater and more effective private sector participation in the sector.

Admittedly, much remains to be done, and all parties, government and private, will have to work together if the country is to succeed in achieving the desired sector structure which will help the country bridge its growing need for electricity over the decades to come.

TAB 10

Spain:

- **Law 82/1980 of December 30 Regarding Energy Conservation (Excerpts)**
- **Royal Decree 872/1982 of March 5 Regarding Proceedings to Apply for Benefits Granted by Law 82/1980 of December 30 Regarding Energy Conservation (Excerpts)**
- **Royal Decree 907/1982 of April 2 Regarding Development of Electric Energy Self-Generation**
- **Order of 7 July 1982 by Which the Technical and Economic Relationships Between Self-Generation and Electrical Companies or Entities Are Regulated**
- **Order of April 8, 1983 to Establish Rules for Existing Self-Generation Facilities to Obtain Status as an Electrical Energy Self-Generator According to the Provisions Set Forth in Royal Decree 907/1982 of April 2 Regarding the Development of Electrical Energy Self-Generation**

LAW 82/1980 OF DECEMBER 30, REGARDING ENERGY CONSERVATION
(BOE Number 23, of January 27 of 1981)

TITLE ONE

Article 1.

The purpose of this Law is to establish basic rules and principles as well as incentives to strengthen activities with the following objectives:

a) Optimize productivity of energy transformation processes, resulting from production or consumption systems.
b) Increase adoption of renewable energy resources, reducing as much as possible petroleum and natural gas consumption and, in general, dependency on imported fuels.
c) Promote the use of the residual energy produced by industrial processes, as well as the reduction of losses, usage and investment in energy transmission.
d) Analyze and manage projects to develop energy-intensive industrial plants, according to energy utilization at the national level.
e) Regulate relations between selfgenerators and distributing electrical enterprises.
f) Foster technical and economic actions leading to reducing foreign energy dependency.

CHAPTER ONE

Development of Actions Aimed at Achieving the Purposes of this Law

Article 2.

1. Individuals or organizations who engage in activities included in any of the following paragraphs of this article may avail themselves of the benefits contemplated under this law:....

f) to establish or expand private [electric] generation installations...

Article 3.1[1]

1. Persons mentioned in the previous article should sign an agreement with the Administration about declarations set forth in Article Two, Number seven, of the Law on Contracts of the State; with the purpose of assisting with the energy savings policy which shall, as a minimum, have the following specifications:

   a) Establishments or installations referred by the Agreement.
   b) Description of technical investment or research project.

   c) Energy savings estimates.
   d) Investment description and schedule.
   e) Determining production or activity levels, current or estimated, as well as energy consumption per unit of output or activity.
   f) Benefits granted by the Administration.
   g) Obligation to notify possible third parties acquiring the facility or installation included in same that their rights and duties shall be automatically subrogated under the Agreement.
   h) Duration of the Agreement.
   i) Specify the impact of energy savings on the cost of production.

2. Provisions set forth in this article shall not be applicable for paragraphs g) and h) of number one, abovementioned article.

Article 4.

1. The Administration shall be able to unilaterally dissolve the Agreement when the other party does not fulfill its duties. The cancellation of the Agreement due to the above-mentioned cause shall entail the loss of granted benefits and the immediate return of all assistance, plus any related interests accrued, without voiding any sanctions which may be levied according to provisions of the Law.

2. Any other cancellation process shall follow, in general, contract legislation of the State.

Article 5.

The Administration may demand that high-energy consumption sectors or enterprises or those which could improve their production or fuel substitution according to the nation's interest, formulate an energy savings and conservation plan. Once approved

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[1] Article 3.1: Article 2, No. 7 of the Contract Law of the State states that "Notwithstanding provisions set forth in the previous article, the following contraxts and legal operations of the Administration are not covered by this current Law: Cooperation Agreements authorized by the Government to be entered into by this Administration and individuals with the purpose of promoting economic activities, private in nature and in the public interest."

by the Administration, this plan would be the basis for the Agreement mentioned in Article 3 of this Law.

Article 6.[2]

The Ministry of Industry and Energy, through the work of the Office of Energy shall be the entity in charge of:

a) The statutory execution of this Law.
b) Studying and approving technical-energy aspects included in the applications for benefits related to this Law.
c) Reporting fiscal benefits and allowances created by this Law to those submitting applications.
d) Studying and approving technical projects and their authorizations stated by this Law as well as inspection of projects and works in the regulatory manner so determined.
e) Promulgating technological policies to achieve rational energy utilization.
f) Coordinating technical and scientific research policies related to objectives pursuant to this Law and carried out by any entity or enterprise of this Administration or benefitting from the State.

CHAPTER TWO

Promotion of Electric Energy Selfgeneration and Hydroelectric Production[3]

Article 7.

Individual or groups of installations of any type are considered selfgenerators of electrical energy when they meet the following criteria:

a) The main purpose of their activities is not producing electrical energy, but that they may obtain electrical energy from their own means by utilizing residual energy or by-products resulting from their production process or, in general, by

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[2] Article 6: Article 1 of R.D. 3578/1982 of December 15 (BOE of December 16) states: "The Office of Energy and Mineral Resources is hereby abolished and its mission and responsibilities shall be handled by the General Secretariat of Energy and Mineral Resources."

[3] This chapter was developed by R.D. 907/1982 of April 2 (BOE of May 10), Ministerial Orders of July 7, 1982 (BOE of July 17), of April 8, 1983 (BOE of April 16) and of September 5, 1985 (BOE of September 12). In 1988, the Order of February 9, establishing electrical rates in Title III, regulating independent production and billing procedures of energy provided by the electrical enterprise to the selfgenerator.

See also R.D. 872/182, of March 5 (BOE of May 6), and D. 2617/1966 of October 20 (BOE of October 24).

any means which represents an improvement of their energy use.

b) The electrical energy production mentioned in the above paragraph produces energy savings according to the general energy policy priorities.

Article 8.

Selfgenerators when dealing with distributing electrical energy enterprises as well as non-distributing hydroelectric companies shall enjoy the following rights:

a) Interconnection in parallel of their generating set or sets to the distributing electrical grid.
b) Joint or alternative use in their premises of selfgenerating electric energy and energy supplied by the electrical enterprise.
c) Provide a portion of its premises with energy coming from their generators, independent of network supplies.
d) Transfer of energy surplus to the enterprise supplying electricity as long as its absorption is technically feasible, and receipt of payment in the amount determined by regulations. In the event of disagreements the above-mentioned technical issues shall be decided by those entities of the Administration which are competent in electrical installations.
e) In the event of selfgenerating system failures, the electrical supplying enterprise shall provide not only the energy previously agreed but also whatever amount is needed to continue normal operations of the selfgeneration facilities according to the terms and conditions established by statute.
f) Determine with the electrical supplying enterprise a production schedule agreed upon and follow corresponding rates, pursuant to Article Nine.

Article 9.

1. Selfgenerators and non-distributing hydroelectric enterprises are responsible to the electrical supplying enterprises in accordance with statutory provisions to:

a) Deliver and receive energy according to adequate technical parameters, and to avoid problems in the normal operation of the system.
b) Follow the schedule determined in the production agreement.
c) Avoid providing excess power to third parties.

2. The consideration of release to third parties will not apply when it is carried out on lines that are the property of selfgenerating companies or their affiliates or companies that have associated for the ownership of selfgeneration facilities as established in Article 2, paragraph 2 of this Law.

Article 10.

1. The agreed production schedule shall establish terms regarding the guarantee of agreed services between the electrical supplying enterprise and the selfgenerator. These terms shall follow general statutory criteria.

2. Payments for energy deliveries made by the selfgenerator according to an agreed production schedule shall take place at an agreed price, at a rate lower than the base rate.

3. When the energy delivered by the selfgenerator to the electrical company does not comply with the levels agreed in the production schedule, an additional reduction in price as determined by statute shall be applied.

TITLE TWO
Schedule of Benefits...

Article 12.

Also, those individuals mentioned in Article One and Six shall enjoy the following benefits:

1. Subsidies on the following terms:

   a) Up to 30 percent of the investment for research related to the objectives of this law, as long as they can be generalized to other industries or companies and the dissemination of the results obtained is guaranteed.
   b) The General State Budgets Law will set the conditions for concession of said subsidies annually.

2. Preferential access to official credits, all of which shall be used exclusively for financing the investments provided for in this law.

3. Inclusion in the mandatory investment ratio set forth in the Additional Provisions Four of Law 13/1971, of June 19, regarding credits to be granted by Banks to establish, expand or retrofit installations devoted to electrical energy selfgeneration, utilization of alternative energy sources, or reduction of energy consumption.

4. Involuntary expropriation of assets and rights necessary to establish or expand installations mentioned in Article 13 of this Law, for a public purpose, effective from the moment of signing an agreement with the Administration or the approval by the latter of the corresponding selfgenerator installation project....

Article 14.

Benefits shall only be applicable to those installations or portions of plants which are essential for electrical selfgeneration, reduction of energy consumption, utilization of alternative energy resources and hydroelectric production with maximum power of Five Thousand Kva.....

Article 16.

Failure to comply with regulations of this Law regarding fiscal benefits offered in said Law will follow provisions pursuant to the General Tax Law and Law 50/1977 of November 17.

Article 17.

The following are failures to comply with energy conservation measures:

a) Failure to observe obligations arising from the agreement mentioned in Article 3.
b) Breech of rights and failure to observe obligations arising from Articles 8 and 9, respectively.
c) Use of the assistance and credits granted as part of these provisions for other ends.
d) Receiving benefits without making the investment for which they were granted.
e) Failure to invest within the specified period.
f) Forgery or alteration of invoices, contracts or documents with the purpose of inflating the value of the investment and forgery of energy efficiency and consumption information, regardless of any criminal liability which these acts may also incur.

Article 18.

The violation of energy conservation regulations mentioned in the above article shall be penalized by the Administration by levying fines, in amounts according to the seriousness of the breach and of benefits granted by this law, to a maximum amount of ten million pesetas.

ROYAL DECREE 872/1982 OF MARCH 5 REGARDING PROCEEDINGS TO APPLY FOR BENEFITS GRANTED BY LAW 82/1980 OF DECEMBER 30, REGARDING ENERGY CONSERVATION

(BOE Number 108, May 6)

Law Eighty-Two/One Thousand Nine Hundred Eighty, of December 30 regarding Energy Conservation provides in Articles Eleven, Twelve, Thirteen and Additional Provision One, paragraph One, a series of fiscal, financial and economic benefits for those individuals and legal entities who carry out activities stated in those paragraphs of Article Two and have the objective of achieving some of the goals stated in Article One.

Our country is going through a serious energy crisis, resulting from our heavy dependency on oil as the principal energy resource as well as the high price this commodity has reached; therefore, it is essential to take all actions which may help carry out the provisions of the Law. To this end, it is necessary to establish regulations to facilitate and allow whoever wishes to take advantage of the benefits stated as soon as possible.

Article Fifteen grants the Ministry of Economy and Trade and the Treasury jurisdiction to process applications for benefits, while Article Six grants the Ministry of Industry and Energy jurisdiction to determine technical energy matters.

Taking into account provisions set forth in the additional Provision Two, at the request of the Ministries of Economy and Trade; Treasury; Industry and Energy; and Agriculture, Fisheries and Food, in agreement with the State Council and prior deliberation of the Cabinet Council during the meeting held on March 5 of the year One Thousand Nine Hundred Eighty-two:

PROVIDES THAT:

Article 1.

Benefits which may be granted to individuals and legal entities undertaking any of the activities stated in Article Two of Law Eighty-Two/One Thousand Nine Hundred Eighty, shall be as follows:

A. Fiscal.

a) Reduction of fifty percent of the base in the acts and contracts relative to the loans which Spanish companies issue or with financial banks or institutions, when the funds so obtained are destined to finance real new investments for purposes of saving energy or of selfgeneration of electricity.

b) Under the provisions of Article 25 c) one of the Law sixty-one/nineteen hundred seventy-eight, of December 27, of the Tax on Corporations, an allowance of ninety-five percent of the

installment which corresponds to the yield from the loans which they issue and of the loans they arrange with international institutions or with foreign financial institutions or banks which do not have permanent establishments in Spain, when the funds so obtained are destined to exclusively finance investments for the purpose of energy saving or of selfgeneration of electricity.

c) Under the provisions of Article 13, f), two of Law sixty-one/nineteen hundred seventy-eight, of December 27, of the Tax on Corporations, it will be understood that the payments of debts of the installations substituted or of the losses sustained in their amortization, according to a plan freely formulated by the beneficiary company, do comply with the requirement of effectiveness.

d) The investments made by the companies included in the second article of Law 82/1980, the objectives of which fall within what is expressed in the first article of the law cited, will have equal treatment with those [companies] covered in Article 27 of the Law of the Tax on Corporations as far as it applies to them. This deduction will be adjusted in all details of its application to the regulations of the Law of the Tax on Corporations.

e) Exemption from the fiscal license of the Industrial Tax to which activities included in the Law 82/1980 may give rise during the first five years of the tax liability.

f) Reduction of up to ninety-five percent of the General Tax on Company Traffic, customs duties and Tax on Compensation of Internal Obligations which are imposed upon the importation of equipment and tools necessary for the construction of the installations and activities provided in Law 82/1980, after verification by the Ministry of Industry and Energy that such goods are not manufactured in Spain.

B. Financial.

a) Preferential access to official credits, in the amount to be devoted exclusively to financing investments covered in Law 82/1980.

b) Inclusion in the mandatory investment ratio set forth in the Additional Provisions Four of Law Thirteen/One Thousand Nine Hundred Seventy-One, of June Nineteenth, of credits granted by Banks to establish, expand or remodel installations devoted to electrical energy selfgeneration, utilization of alternative energy sources or reduction of energy consumption.

C. Subsidies.

a) Subsidy of up to thirty percent of the investments which involve

research related to the objectives of Law 82/1980, as long as the research can be generalized to other industries or companies and the dissemination of the results is guaranteed.....

...D. Involuntary Expropriation

Involuntary expropriation of assets and rights necessary to establish or expand installations mentioned in Article Fourteen of Law Eighty-Two/One Thousand Nine Hundred Eighty, for a public purpose, depending on the case, from the moment of signing of the agreement with the Administration or the approval by the latter of the corresponding selfgenerator installation project.

2. Benefits shall only apply for those installations or sections of the same which are strictly essential for electrical selfgeneration, reduction of energy consumption, utilization of alternative energy resources and production of hydroelectric energy with maximum capacity of five thousand kVa....

Article 2.....

...2. The Ministry of Industry and Energy is also responsible for:

a) Establishing the price of the electricity that the selfgenerators and, perhaps, non-distributing hydroelectric concession holders may transfer to supplying Enterprises.
b) Establishing terms and conditions for a selfgenerator to receive electricity if his system fails.
c) Determine the regulatory limits pursuant to Article Nine, paragraph one of Law Eighty-Two/One Thousand Nine Hundred Eighty, December 30th.
d) Determine general criteria to be adopted to settle agreements on production.
e) Establish an additional price reduction for the electricity delivered by the selfgenerator, as well as whatever is deemed necessary in the event that the electricity delivered does not meet the arranged levels agreed upon for production....

MINISTRY OF INDUSTRY AND ENERGY

10761 **Royal Decree 907/1982, April 2, regarding development of electric energy selfgeneration.**

Law Eighty-two/One Thousand Nine Hundred Eighty, of December Thirty, regarding Energy Conservation sets forth in Chapter Two measures to develop electric power selfgeneration in order to save energy and in its second additional Provision determines that the Government should promulgate specific regulations for its development and execution.

In virtue whereof, having been proposed by the Ministry of Industry and Energy and in accordance with the Council of State and prior deliberations of the Cabinet Council, during its meeting of April 2 of the year One Thousand Nine Hundred Eighty-Two,

PROVIDES THAT:

CHAPTER ONE

On Selfgeneration and its Relationships with
Electric Energy Enterprises

Article 1.

The status of electric energy selfgenerators may be obtained by those individuals or groups of producers who comply with the stipulations set forth in Article Seven of Law Eighty-Two/One Thousand Nine Hundred Eighty regarding Energy Conservation and who apply to the Ministry of Industry and Energy and who meet any of the following conditions:

a) That the production of heat combined with electric energy production using fossil fuels yields a total energy efficiency greater than that obtained by acquiring electric energy from the grid and producing heat separately. Industrial plants, mines, agribusinesses, utility facilities, housing facilities, municipal buildings, public or private waterworks facilities, and other activities are covered by the above-mentioned Law.

   In order that selfgenerators can calculate acceptable efficiencies, the Ministry of Industry and Energy shall establish regulations and basic data needed to determine energy efficiency, jointly or globally, as well as a minimum standard, according to the Energy Policy criteria.

b) That the heat used in their power generation comes from any facility or machinery, or industrial processes, such as baking, drying, exothermal reactions or any other. Those selfgenerators employing agricultural residues or who are producers of food products must have prior approval from the

Ministry of Agriculture, Fisheries and Food to use said residues as fuel. In these cases, no special efficiency conditions shall be demanded.

c) Those utilizing renewable energy resources such as solar, wind, hydropower, tidal energy and others, whatever their output and efficiency.

d) Groups of facilities, constituted according to the Law, shall also be able to obtain the status of selfgenerator, if they comply as an association with all the requirements of a single entity.

The Ministry of Industry and Energy shall establish implementing regulations for obtaining the status of self-generator.

Article 2.

With respect to relations with electric utilities, the following types of selfgenerators are considered:

1. Isolated selfgenerators. Those which are not interconnected to any electric company grid. Stipulations set forth in this chapter do not apply to the latter.

2. Assisted selfgenerators. Those whose generators are not part of the grid of an Electric Company but from which they could receive a certain amount of electricity named "Support Energy" and in the event of damage to their installations they could receive "Relief Energy." These are subdivided into two types:

   a) Selfgenerators that do not require emergency backup power from the Electric Company.
   b) Selfgenerators that do require emergency backup power from the Electric Company.

3. Interconnected selfgenerators. Those which have their generation units fully interconnected with the Electric Company grid; therefore, aside from their "Support Energy" and "Relief Energy" services they also have a "Regulated Energy" service.

The owner of the facility shall freely choose the type of selfgeneration.

The minimum duration for classification as a specific type of selfgenerator shall be twelve months.

Article 3.

Electric energy delivered to the Electric Enterprises grid by interconnected selfgenerators is classified as follows:

1. Committed power. To acquire this classification, contracts must be entered into between the selfgenerator and the electric utility for a duration of at least two years, guaranteeing delivery of power by means of pre-established yearly contracts, indicating maximum and minimum capacity of monthly deliveries at peak, intermediate and low consumption hours. Differences between power deliveries of the same type over the two years shall be less than forty per cent of the highest value.

2. Programmed energy. When the selfgenerator establishes a weekly schedule with a notification on the Friday prior to the beginning of the next week. Such programs may establish delivery options with variations during the day, and even at certain hours of the day. Maximum and minimum power shall also be established in the program for peak, intermediate and low hours.

3. Occasional Energy. The selfgenerator delivers unscheduled power which was not programmed and resulted from variations in its own electric energy demand.

Article 4.

An agreement on power deliveries shall be made between a selfgenerator and an Electric Energy Enterprise. The agreement shall establish the terms for the power to be supplied by the selfgenerator and the purchase of excess power by the electric enterprise from said selfgenerator.

Supply schedules may be established for those selfgenerators in the committed and programmed categories. If no agreements are signed, the energy delivered by the selfgenerator to the electric enterprise shall be classified as occasional.

"Assisted" and "interconnected" selfgenerators shall enter into corresponding agreements with electric energy enterprises. A copy of the contract shall be submitted to the Provincial Directorate of the Ministry of Industry and Energy, in the province where the power station is located. The registration of said contract does not mean approval by the Administration.

For agreements dealing with committed as well as programmed energy, clauses to determine indemnification for system failures may be established in accordance with general norms set forth in Article 11 of this Royal Decree.

The selfgenerators and the electric energy enterprises may determine other conditions by mutual agreement, as long as third parties are not harmed.

Article 5.

Electric energy provided by the electric energy enterprise to the selfgenerator shall be invoiced according to the established rates in force at the time and in accordance with the stipulations established in the following paragraphs:

a) When at the "assisted" or "interconnected" self-generator plant there are facilities which according to their use different rates apply, metering equipment shall be installed for each of these uses or consumption estimates for each use shall be agreed upon by the interested parties. The total energy consumption by each use shall be considered to be that provided between the selfgenerator and the enterprise at the rate of total energy produced by the selfgenerator for its own consumption and total energy provided by the electric enterprise during the billing period.

b) Determining the power in each billing period for "assisted" selfgenerators and for "interconnected" selfgenerators shall be done using one of the following methods, to be freely chosen by the selfgenerator:

1. According to stipulations for the applicable electrical rate.
2. According to the following equation (not to be used for "assisted" of a) type):

$$PF = PD + k\,(PM - PD)$$

Where:

PF = Power to be billed per month.

PD = Power determined by peak demand meter during the billing month, taking into account the differences in times agreed upon by the selfgenerator.

PM = Maximum power that a selfgenerator may take from the network according to stipulations agreed upon previously by contract which may be changed every twelve months and whenever rates are modified. In the event that maximum power registered by the peak demand meter during the billing period exceeds the agreed level, the power for the billing period, monthly or bi-monthly, shall be the power shown by the meter increased by 200% of the amount in excess of the agreed upon value. Sugar industries may fix the maximum power by processing season, subject to notifying the electric enterprise one month in advance.

k = Parameter to be determined to cover support and emergency services.

The k value shall be determined by the General Director of Energy of the Ministry of Industry and Energy and readjusted whenever it is deemed necessary.

Selection of the second method of determining the power demand for billing purposes

shall require that the power produced by selfgeneration shall be 15 percent above the maximum power that the selfgenerator may take from the grid, according to stipulations set forth in the contract.

c) Interconnected selfgenerators shall pay a monthly connection charge per KWh of selfproduced power per month. Said rate shall be fixed by the Ministry of Industry and Energy.

Article 6.

Selfgenerators with asynchronicly interconnected equipment to the grid shall pay for the synchronization service rendered by the electric enterprise or entities for the operation of said equipment, a monthly charge per KW of active nominal power of the equipment, to be determined by the Ministry of Industry and Energy.

Article 7.

Connections of selfgenerator groups to the grids of electric enterprises shall comply with regulations set forth for this type of installation by the Ministry of Industry and Energy.

Article 8.

Energy Sale prices by the selfgenerators to the electric enterprises, measured at the interconnection point to the grid shall be determined by the Ministry of Industry and Energy based on the corresponding electricity prices for electric distributors registered at OFICO in force at the time, modified by a correcting rate (C) to take into account the quality of supply, according to whether the energy is committed, programmed or occasional. This rate shall also be established by the above-mentioned Department. Surcharges or allowances based on changes in times may be applied to this price, according to the triple variable time discrimination provided for in the general rate schedule in force, upon the request of the electric enterprise or the selfgenerator. Also surcharges or allowances may be applied for reactive power but with the opposite sign than the corresponding rate.

The Ministry of Industry and Energy shall also establish for the power supplied by the water treatment facilities at the Canary Islands which at present deliver electric energy to the national Enterprise UNELCO, a supplemental price which cannot in any case be higher than the approved rate for the electricity produced by this enterprise during the same period of time.

CHAPTER TWO

Delivery Status for Electric Energy

Article 9.

Energy provided by the selfgenerators to the network of the electric enterprise shall

have a cosine Y of oscillation range from 0.80 to 1.00, ahead or delayed. Selfgenerators connected in parallel to the network shall take steps to comply with this standard or come to agreement with the receiving enterprises on this matter.

Article 10.

The electric enterprise shall be required to accept all excess power of selfgenerators using hydropower and renewable energy, cumulative, except when it is not technically possible. This impossibility arises when there is spilled water at the hydropower facilities, when thermal power stations are working at technical minimum output, or when excess power is being exported to other areas due to full supply to the grid.

If the self-produced power exceeds the output from thermal power stations it will be technically impossible to absorb it under the conditions stated above and also during the low hours not more than 70% of said excess energy can be absorbed if it is committed or programmed and not more than 50% if it is occasional energy.

Delivery of power to the grid from thermal selfgenerator power stations shall follow directions from the Directorate General of Energy pertaining to other power stations, in order to optimize the use of the National Electric System.

Article 11.

In the event of failure to maintain energy deliveries as stated in the program of production agreed upon by the selfgenerator, the following steps shall be taken:

1. When the selfgenerator during a programmed term delivers energy below the amounts determined, five per cent of the value of the energy which was not delivered shall be deducted.

2. Deliveries to the grid of excess energy over the programmed amounts shall be paid at all times by the electric enterprises at the rate of occasional energy, unless there was a previous agreement on the part of the electric enterprise to buy it at a higher price.

CHAPTER THREE
Technical Stipulations

Article 12.

The Ministry of Industry and Energy shall establish complementary instructions in order to achieve:

a) Correct operation of installations to avoid transferring problems to the public distribution grid.

b) Correct operations and metering, and whenever necessary the installation of

telecontrol and telesignaling equipment.

c) Standardization of equipment and installations.

d) Promotion of national research and production of selfgeneration equipment.

Article 13.

The "assisted" selfgenerators shall have all receiving installations or only a portion of them connected to the switching system, whether to the grid of the enterprise or to the generating sets. The switching system shall be such that under no circumstances may its generating sets be connected to the electric enterprise grid.

Article 14.

Selfgenerators with sets interconnected in parallel to the enterprise grid may use:

a) Synchronic generators equipped with adequate regulatory or synchronization systems.

b) Asynchronic generators. In this event, equipment capable of providing reactive energy demanded by the asynchronic generator which also has a cosine Y of supplied energy between 1.00 and 0.80 lagging.

Article 15.

The selfgenerator substation must be equipped with automatic disconnection systems in the event that the installations may produce tension variations higher than 0 $\pm$ seven per cent of the nominal tension of 0 $\pm$ five per cent for the frequency according to stipulations set forth in the Rules of Electrical Standards and Energy Supply Uniformity.

Article 16.

The selfgenerator interconnected in parallel to the grid must comply with the following rules to avoid damage, disconnections or alterations:

a) The selfgenerator installation must have only one interconnection point with the electric enterprises grid, except for special circumstances duly justified and authorized.

b) Switch-off the connection with the electric enterprise grid in the event of force majeure, duly justified, at the request of the distributing enterprise. Normal service shall be reestablished by the electric enterprises as soon as possible. When this event occurs, the Provincial Directorate of the Ministry of Industry and Energy must be notified.

Article 17.

The Ministry of Industry and Energy shall establish uniform rules for the installations and equipment of interconnection of selfgenerator power stations to the grid. To this end, consultations shall be carried out among electric enterprises, selfgenerators and manufacturers of goods and equipment. Modifications are not required for existing selfgeneration installations, unless required for reasons of safety, and with the prior approval of the corresponding department of the Administration.

Article 18.

The interconnection point of selfgenerators delivering energy to the general grid shall be established in agreement with the corresponding selfgenerator and electric enterprise. In the event of disagreement, the Provincial Directorate of the Ministry of Industry and Energy shall decide.

CHAPTER FOUR
Other Provisions

Article 19.

Selfgenerators may be eligible for benefits set forth in the Law of Energy Conservation. Applications must be submitted in accordance with Royal Decree Eight Hundred Seventy-Two/Nine Hundred Eighty-Two regarding the processing of applications for benefits included in Law Eighty-two/One Thousand Nine Hundred Eighty.

Electric selfgenerators employing natural resources and wishing to be eligible for the benefits included in Article Five of Decree One Hundred Seventy-Five/One Thousand Nine Hundred Seventy-Five regarding electrical energy as established in Article Nine of the same Decree, shall request it in separate procedures.

Investments for installation of selfgeneration power stations of solar energy and low-temperature turbines or eolic (wind) energy shall also be eligible for the allowances of paragraph one, Article Twelve of the Energy Conservation Law as long as they take place before the thirty-first of December of the year One Thousand Nine Hundred Eighty-five.

Existing installations that upgrade and retrofit their installations to increase selfgenerating capacity, and improve overall thermal efficiency, shall also be eligible for the selfgenerators' benefits.

Article 20.

Registration of the selfgenerators in the Industrial Register shall take place in a section where technical characteristics of the installations may be recorded.

To this effect, selfgenerating power stations shall be required to provide the Ministry

of Industry and Energy with whatever data may be legally required. Also, they shall periodically report on power production levels and use, fuel or energy utilized and energy efficiency.

Article 21.

The Ministry of Industry and Energy shall execute this Royal Decree by promulgating the necessary complementary Orders, according to stipulations set forth in the articles.

Article 22.

The corresponding Provincial Offices of the Ministry of Industry and Energy shall inspect selfgenerating installations for safety and output levels, whenever it deems it necessary, and at least once every three years. They may delegate this inspection to a collaborating entity. In the event of failure to comply with established rules, they may determine or propose sanctions according to stipulations set forth in the Rules of Electrical Standards and Uniformity in the Electrical Energy Supply.

ADDITIONAL PROVISION

Within the territories of the Autonomous Communities where they may have jurisdiction, according to its By-Laws in terms of legislative planning and execution of energy policies, the granting of selfgenerator status and authorizations and inspections contemplated in this Decree shall belong to the corresponding competent services of said communities.

PROVISIONAL TERM

Current valid contracts between selfgenerators and electrical enterprises may be extended by mutual agreement or be subject to the provisions of this Royal Decree, at the end of the life of the contract, except for the circumstances stated in paragraph two of this provisional term.

All current valid contracts which do not contemplate the use of excess energy of selfgenerators and payment of same, at least as stipulated in this Royal Decree, must be amended within a maximum term of one year, in accordance with the provisions set forth in said decree.

Signed in Madrid on the second day of April of the year One Thousand Nine Hundred Eighty-Two.

Juan Carlos R.

The Minister of Industry and Energy
IGNACIO BAYON MARINE

MINISTRY OF INDUSTRY AND ENERGY

17776

ORDER OF 7 JULY 1982 BY WHICH RULES ARE ESTABLISHED FOR OBTAINING CLASSIFICATION AS A SELFGENERATOR OF ELECTRICITY

Illustrious Sir:

Royal Decree 907/1982 of 2 April on the development of selfgeneration of electrical energy states in its first article that the Ministry of Industry and Energy will establish the supplementary regulations for obtaining classification as a selfgenerator.

By virtue thereof, I am pleased to provide:

1. In order to obtain classification as a selfgenerator of electricity and thereby obtain the benefits provided in Royal Decree 872/1982, the owner of the facility must submit to the competent agency of the Administration an application that will include:

   a) Preliminary design of the installation in accordance with the requirements of Decree 2817/1966 on authorization of electrical installations.

   b) A study of the potential national-level energy savings to be achieved by the installation as included in the first article of Royal Decree 907/1982. The corresponding calculations will be made utilizing the information provided in the second article.

   c) A permit from the Ministry of Agriculture, Fisheries and Food Products when the intent is to utilize agricultural residues as fuel.

Granting of the classification will be subject to the granting of an electrical installation authorization in accordance with the terms of Decree 2817/1966. The two applications may be submitted simultaneously.

The private electrical generating stations classified as selfgenerators will be regulated by the Central Administration or independent agencies according to their generating capacity and the provisions of the statutes regarding generating stations of the same capacity.

2. In order to calculate the overall or cogeneration efficiency potential for selfgenerator facilities, according to the first article of the Royal Decree on Development of Private Electrical Energy Generation, the following values and standards will be used:

   2.1. Energy yield data for conventional stations at the busbar

	Kcal/kwh.
heavy fuel oil (in stations with boilers)	2,550
gasoil (with Diesel generators)	2,600
soft coal and anthracite	2,800
black lignites	2,900
brown lignites	3,180
natural gas	2,500

These values refer to the higher heating value.

2.2 Transmission losses

In calculating overall energy efficiency, transmission losses will be considered to be 10.2 percent from the busbar of the station as far as the service connection of the selfgenerator.

2.3 Selfgenerators using natural gas or gasoil

When, in an selfgenerator plant using cogeneration it may be necessary to use gasoil or any other type of gas in a turbine or Diesel or gas engine, when the additional energy consumption required by the selfgeneration installation represents at least a saving of 45 percent with respect to the primary energy needed to produce the same amount of electricity by conventional systems, it will be authorized.

3. Once the classification of selfgenerator is granted, and in accordance with the provisions of the third article of the Royal Decree 872/1982, of 5 March, on the granting of benefits, the selfgenerators must sign an agreement with the Ministry of Industry and Energy in which is recorded, besides the general data required in the said Royal Decree, the following specifics: the fuels that will be used; energy efficiency; and the projected national-level energy savings if conventional fuels were used.

Also, in the agreement the owner of the selfgeneration facility will undertake to submit annually the required selfgeneration statistical data.

Which I communicate to you for your information and use. God keep you for many years.

Madrid, 7 July 1982.

BAYON MARINE

To the Illustrious Director General of Energy.

17777

ORDER OF 7 JULY 1982 BY WHICH THE TECHNICAL AND ECONOMIC RELATIONSHIPS BETWEEN SELFGENERATORS AND ELECTRICAL COMPANIES OR ENTITIES ARE REGULATED.

Illustrious Sir:

Royal Decree 907/1982, of 2 April concerning development of the selfgeneration of electric energy, based on the relevant provisions of Law 82/1980 on energy conservation, establishes the basic directives for regulating the technical and economic relationships between selfgenerators and electric companies or entities and in its twenty-first article directs the Ministry of Industry and Energy to promulgate the specific supplementary rules. By virtue of which I am pleased to provide:

1. The parameter k which is cited in the fifth article of the Royal Decree on development of selfgeneration of electrical energy to be used in calculating the power factor to bill monthly to the selfgenerator is:

   - for assisted selfgenerators, class b) and those that are interconnected: 0.18.

   The selfgenerators may shut down their generators in either July or August provided they have given two months' prior notice, and at those times the parameter k will be zero. Other shut down periods may be agreed between both parties.

   The General Energy Office may at regular intervals adjust the value of the parameter cited -- as allowed in the Royal Decree 907/1982.

2. The rate C. established in the fifth article, paragraph C) of the same Royal Decree, will be 0.05 pesetas/kwh., which will increase by the same percentage as the average increase in electric rates.

3. The synchronization charge that is established in the sixth article of the same Royal Decree will be 10 percent of the capacity charge of the E3.1 rate. For installations of less than 500 kw, that rate will be zero.

4. In accordance with the eighth article of the Royal Decree, regarding the sale of energy by selfgenerators to the electric companies or entities, the KWh should be paid at a price derived from the energy charge of the step in tariff E3.1 affected by an adjustment multiplier having the following values:

   - for guaranteed power Ce = 1.10
   - for programmed power Ce = 1.00
   - for contingent power Ce = 0.90

In addition it will be possible to apply the coefficients of hourly discrimination and reactive power from the E3.1 rate as indicated in the eighth article of the Royal Decree on development of selfgeneration of electrical energy.

5. Pursuant to the eighth article of the Royal Decree regarding selection of the point of connection of the selfgenerators to the electrical company system, the following rules are established:

a) It will be considered, in the case of interconnected selfgenerators that could demand from the electric utility a higher capacity than the maximum capacity that could be delivered to the grid by their selfgeneration facility, that the power supply facilities will be used also for the delivery of power surplus with the technical modifications to the protection equipment necessary for the safety of the grid. In these cases the existing legal standards on power supply facilities will apply.

b) In other cases the point of connection will be selected in such a way that the cost to the selfgenerator is minimized by using the closest electrical lines for the connection, provided it is technically feasible.

Which I communicate to you for your information and use. God keep you for many years.

Madrid, 7 July 1982.

BAYON MARINE

To the Illustrious Director General of Energy

10530

ORDER OF APRIL 8, 1983 TO ESTABLISH RULES FOR EXISTING SELFGENERATION FACILITIES TO ABTAIN STATUS AS AN ELECTRICAL ENERGY SELFGENERATOR ACCORDING TO PROVISIONS SET FORTH IN ROYAL DECREE 907/1982, OF APRIL 2, REGARDING THE DEVELOPMENT OF ELECTRICAL ENERGY SELFGENERATION.

Your Excellency:

The Royal Decree 907/1982 of April 2 regarding development of Electrical Energy Selfgeneration provides in Article One that the Ministry of Industry and Energy must establish regulations for obtaining the status of Electrical Energy Selfgenerator.

The Ministerial Order of July 7, 1982 establishes the procedures for granting selfgenerator status to new power stations, but those cases where there is an existing power station must also be regulated so that their excess electrical energy may also be made available for use by the grid, under the technical-economic stipulations provided in Royal Decree 907/1982.

In virtue whereof, I shall order:

1. To obtain the status of electric selfgenerator according to the provisions set forth by Royal Decree 907/1982 of April 10 and the Order of July 7 1982, existing selfgeneration facilities must submit all of the documentation stipulated in subsections b) and c) of Paragraph One of the Order and a copy of the current authorization of electric power station status.

2. In the event of expansion of an existing selfgeneration installation of electrical energy and according to provisions set forth in Article Second of Law 82/1980, of December 30th, regarding energy conservation and Royal Decree 872/1982 of March 5 regarding procedures for applying for benefits established by Law 82/1980 of December 30th, regarding energy conservation and obtaining the status of electrical selfgenerator, the above-mentioned selfgenerators must sign an agreement with the Administration according to provisions set forth in Article Three of the Royal Decree 872/1982.

So be it informed and reported to your Excellency.
Madrid, April 8, 1983.

SOLCHAGA CATALAN

(Her Excellency, General Director of Energy.

311

TAB 11

Thailand:

- **Article Regarding Independent Power Producer Bids**
- **Memorandum Regarding the Electricity Generating Authority of Thailand's Independent Power Producers Plan**
- **Materials from Presentation Regarding Natural Gas in Thailand (August 23, 1994)**
- **Electricity Generating Authority of Thailand Summary of Independent Power Producer Policies (August 1994)**
- **Materials Regarding Independent Power Producer Seminar (August 17, 1994)**
- **USAID Draft of Proposed Modifications to Regulations on the Purchase of Electricity from Independent Power Producers (Not Adopted) and Model Power Purchase Agreement**

FACSIMILE TRANSMISSION

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This facsimile transmission is solicitor/client privileged and contains confidential information intended only for the person(s) named below. Any other distribution, copying or disclosure is strictly prohibited.

Date: 9/12/94 Your Ref.: IPP Bids (General Information)

Attention: Roger B. Wagner Company: McDermott, Will & Emery

Fax No: 202 - 778 - 8087 Country: U.S.A.

Copy To: Fax No.: Country:
: Fax No.: Country:

From: REBECCA RUNGSANG Our File No.: M993-1G

FOR YOUR INFORMATION :

Post, 8/12/94

IPP amendments completed soon

THE government will complete amendments to the terms for the independent power producer (IPP) bids and is ready to make a bid invitation by December 15, according to Prime Minister's Office Minister Suvit Bhotivihok.

Mr Suvit said the last check was undergone yesterday on the revised purchasing agreement and technical-related information for the IPP programme.

He said the private sector was required to submit operational plans to the Electricity Generating Authority of Thailand (EGAT) within six months of the terms of reference (TOR) being available.

EGAT's general manager Somboon Maneenava said 100 copies of the terms will be available to investors on December 13. Each will be sold at 100,000 baht.

If any investor is not ready to submit the bids in time, relaxation will be given at the decision of the bidding committee.

BEST AVAILABLE DOCUMENT.

24/81

B/Selme

Tilleke & Gibbins R.O.P.

Memorandum

TO:	DL	Date:	August 23, 1994
FROM:	Thanes	**Please complete, where applicable.**	
COPY:	RBP, K. Anne, K. Becky	File No:	T310-962M
SUBJECT:	EGAT's Plan of the purchase of power from independent power producers (IPP)	Client:	Tilleke & Gibbins
		Case:	Mineral Resources / Energy Work and Marketing

Last week on 17-18 August 1994 EGAT organized a conference on the purchase of power from independent power producers (IPP). The IPP plan is considered one of major steps for privatization of electricity generating industry. EGAT also has a plan to be listed in the future.

The IPP Plan contents are as follows:

1. EGAT will change role from the electricity generator to the supervisor of electricity generating industry in the country and the constructor of the main electricity supply line connecting system to the Country electricity system.

2. EGAT by the Power Purchase Committee will issue the notification to formally declare to purchase electricity from the 1st of September 1994.

3. (a) In A.D. 1996 - 2000 EGAT will purchase 1,000 MW.

   (b) In A.D. 2001 EGAT will purchase 1,400 MW.

   (c) In A.D. 2002 and thereafter EGAT will purchase 1,400 MW.

4. (a) For the Project from A.D. 1996 - 2002, the proposals must be submitted to EGAT for consideration not later than 23 February 1995.

(b) For the Project from A.D. 2003 and thereafter, the bids must be submitted to EGAT before 31 December 1995.

5. Power producers are divided into 2 categories:

(a) Small Power Producers (SPP) produce from 60 MW.

(b) Major Power Producers produce from 700 - 1,400 MW.

6. Each IPP project will produce electricity not more than 1,400 MW. during A.D. 1996 - 2002.

7. Private IPP projects investment is estimated to be about 200,000 Million Baht.

I think we should circulate the information of EGAT's IPP Plan to our associates in Lex Mundi and other Law Firms with expertise on energy matter in case they have energy Clients base which can be recommended to us. We should also work closely with our associates law firms with energy legal expertise in order that we can learn their experience in this kind of IPP Project which is new in Thailand.

Thank you.

GAS AND FUEL CORPORATION (VIC) - THAILAND BRANCH
GAFCOR CONSULTING INTERNATIONAL DIVISION

Presentation to ATCC on 23 August 1994
Natural Gas in Thailand

Thailand

Energy Picture

In 1995 it is predicted :

63% of all energy will be imported
30% indigenous

The import level will grow to 68% by yr. 2,000

Energy Supply

Imported Coal	0.4	%
Imported Oil	63.0	%
Indigenous Oil	4.4	%
Natural Gas	17.6	%
Lignite	12.0	%
Hydro	2.6	%

Consumption

Transportation	39.3	%
Industry	30.3	%
Commerce	24.2	%
Agriculture	6.2	%

Natural Gas

Supply 910 MMSCFD.

use: GSP/Chemical feed stock	128	MMSCFD	14%
Industries	117		13%
EGAT	666		73%

1609, 16th Fl. Vanit Bldg. 1126/1 New Petchburi Rd.,
Phayathai, Bangkok 10400. Thailand Tel. 255-8703 Fax. 255-8704

TABLE 5: GAS FIELD RESOURCES, PRODUCTION AND LIFE

FIELD	RESERVES BCF			AVERAGE DAILY DELIVERY MMSCFD	CALCULATED LIFE YEARS(1)	
	PROVEN	PROBABLE	TOTAL		PROVEN RESERVES	TOTAL RESERVES
THAILAND						
UNOCAL I, II, III	3,050.00	1,619.00	4669.00	700.00	11.90	18.30
BONGKOT	1,500.00	6,000.00	7500.00	350.00	11.74	58.70
J.D.A.	1,275.00	5,100.00	6375.00	300.00	11.60	58.20
~~NAM PONG~~	~~450.00~~	~~1,050.00~~	~~1500.00~~	~~250.00~~ 60.	~~4.90~~	~~16.40~~
SIRIKIT	176.60	-	176.60	40.00	4.40	4.40
TOTAL THAILAND	6451.60	13769.00	20220.60			
MALAYSIA						
EAST COAST	23,600.00	-	23,600.00	(2) 1500	43.10	43.10
MYANMAR						
MATA BAN		6,300.00	6,300.00	500.00	34.50	34.50
VIETNAM	-	-	-	-	-	-
TOTAL REGION	30051.6	20069	50120.6			

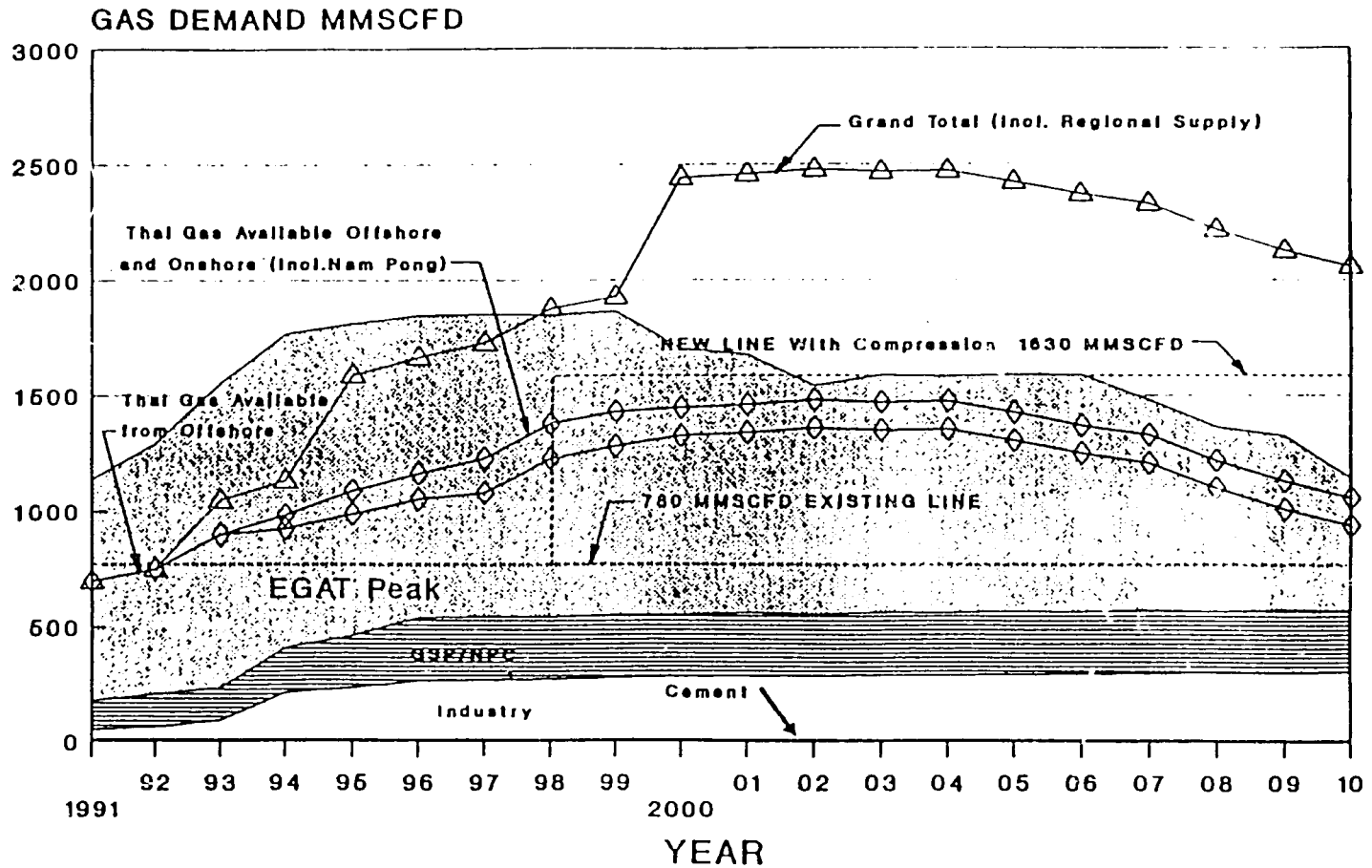
(1) Based on average daily delivery x 365 days/yr.
(2) Assumes 1000 MMSCFD own use 500 MMSCFD to Thailand.

BEST AVAILABLE DOCUMENT

FIGURE 11

NATURAL GAS DEMAND - PEAK DEMAND

Includes EGAT Dedicated Gas Stations and Thermal Oil/Gas Stations CENTRAL REGION



April 1991

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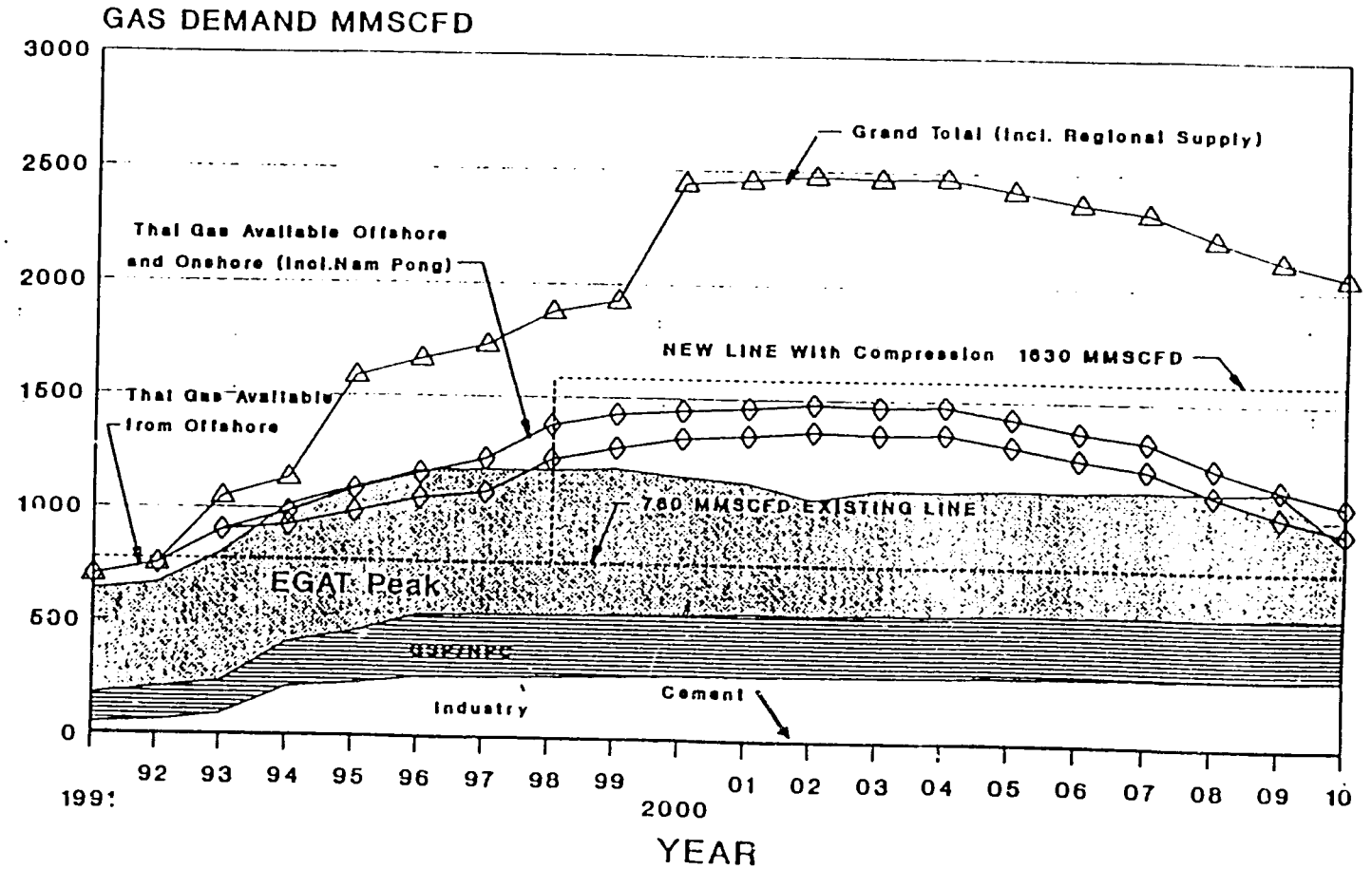
FIGURE 9

NATURAL GAS DEMAND - PEAK DEMAND

Includes EGAT Dedicated Gas Stations Only - CENTRAL REGION



April 1991

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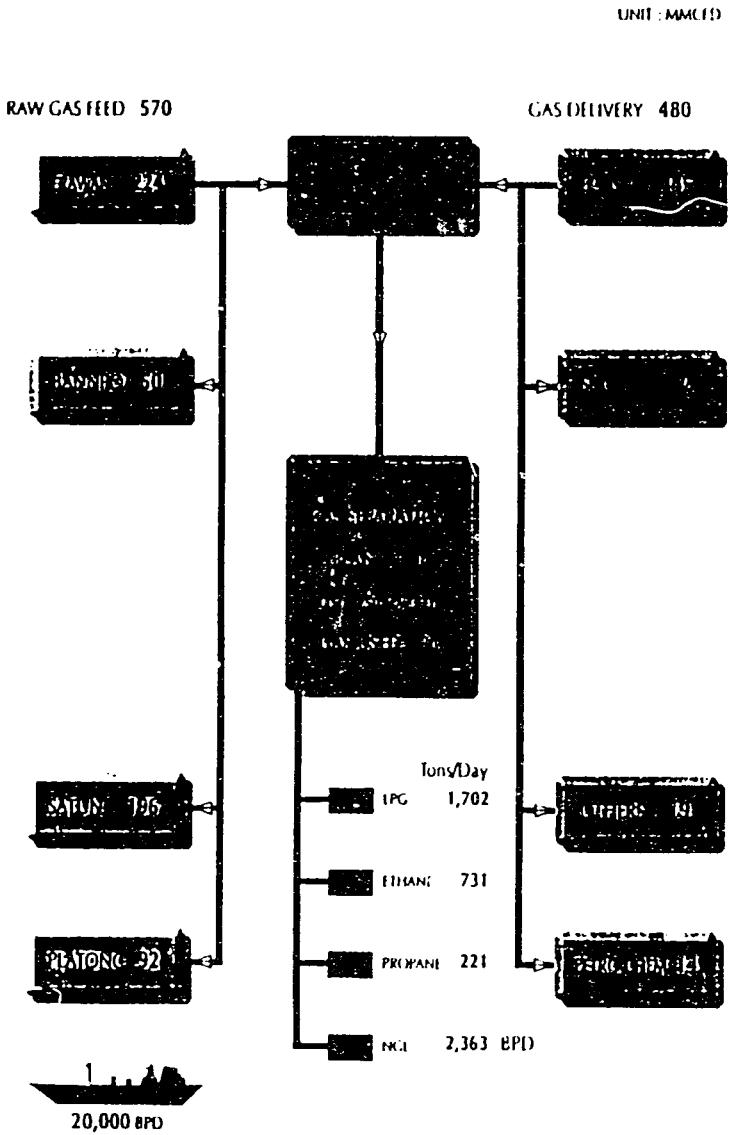
GAFFCO Consulting Gas and Fuel Corporation

NATURAL GAS OPERATION

1990



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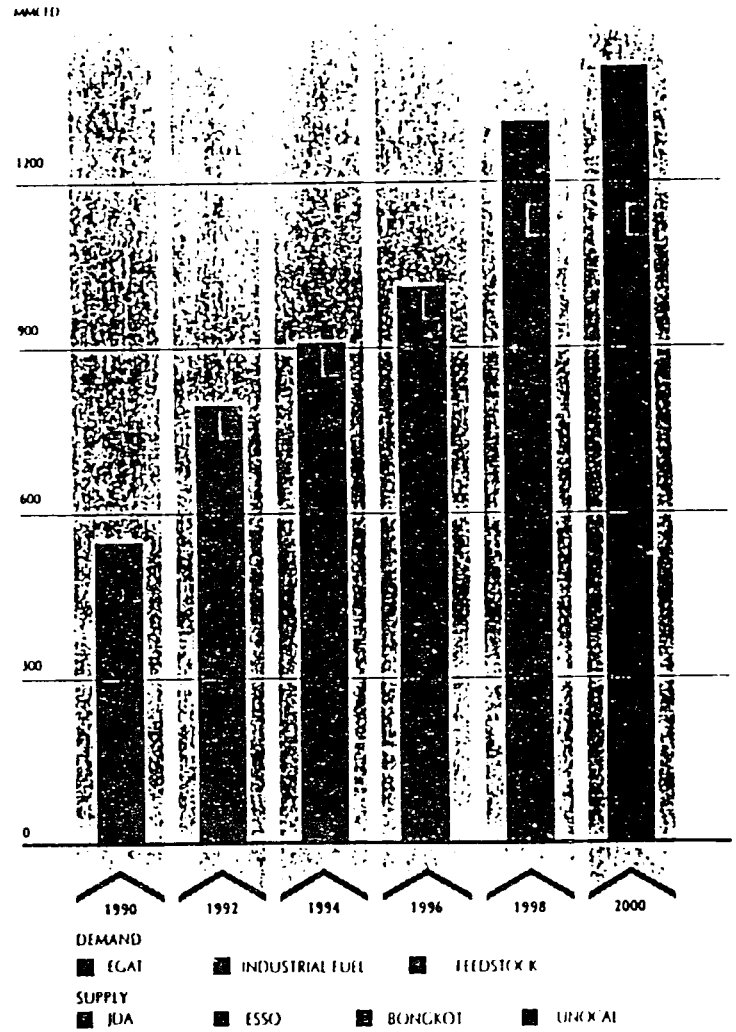
NATURAL GAS DEMAND / SUPPLY PROFILES

1990 - 2000



	1990	1992	1994	1996	1998	2000	
DEMAND	550	798	910	1010	1310	1410	MMCFD
FEEDSTOCK	79	128	128	190	215	215	MMCFD
INDUSTRIAL FUEL	29	63	117	210	360	454	MMCFD
EGAT	442	608	666	611	715	741	MMCFD
SUPPLY	550	798	910	1010	1310	1410	MMCFD
UNOCAL	550	738	700	700	850	850	MMCFD
BONGKOT	0	0	150	250	250	250	MMCFD
ESSO	0	60	60	60	60	60	MMCFD
JDA	0	0	0	0	150	250	MMCFD

120

FIGURE 3 LIGNITE THERMAL POWER STATIONS
POWER COST (REAL DCR 10%)
WITH AND WITHOUT FG DESULPHERISATION

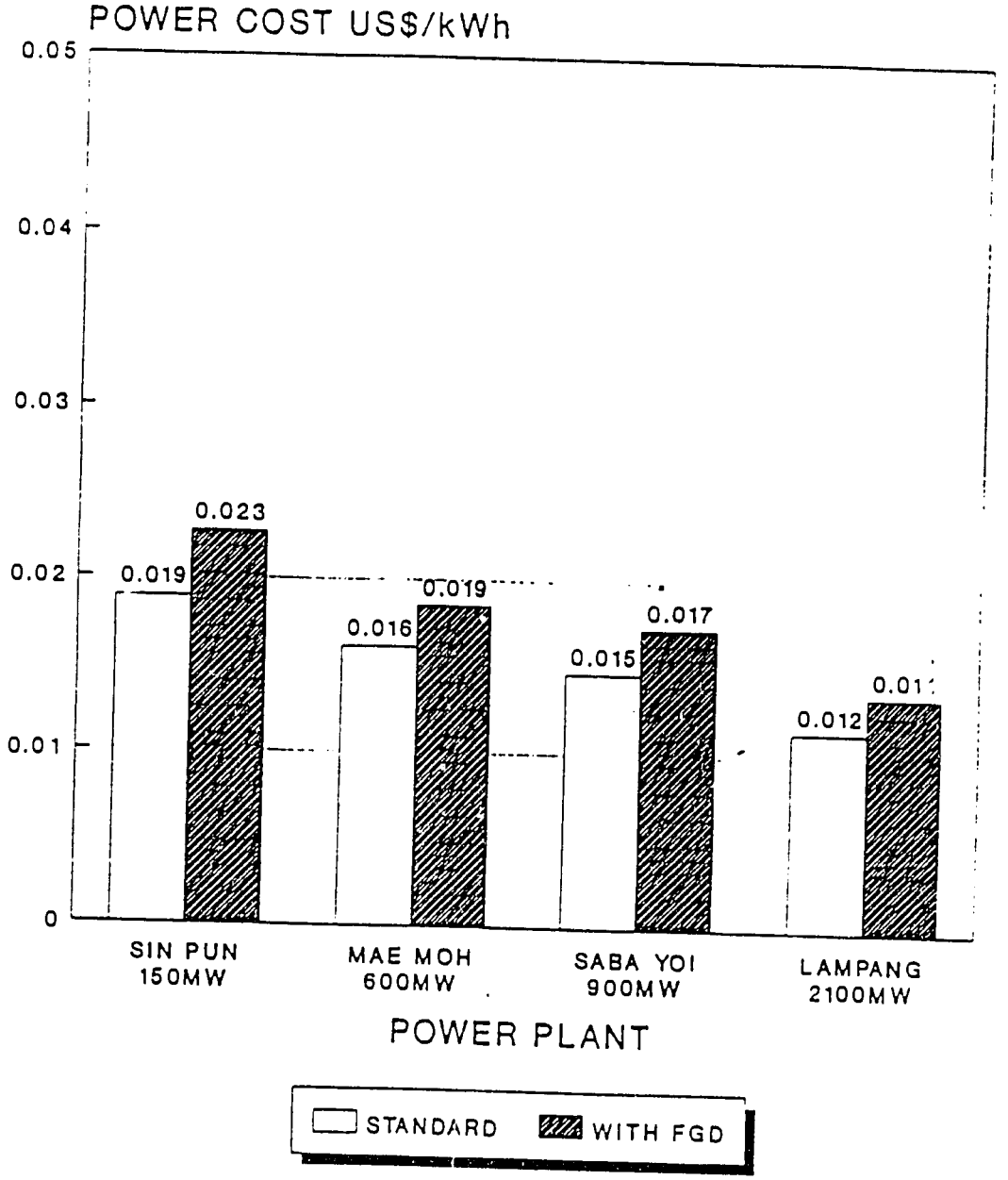


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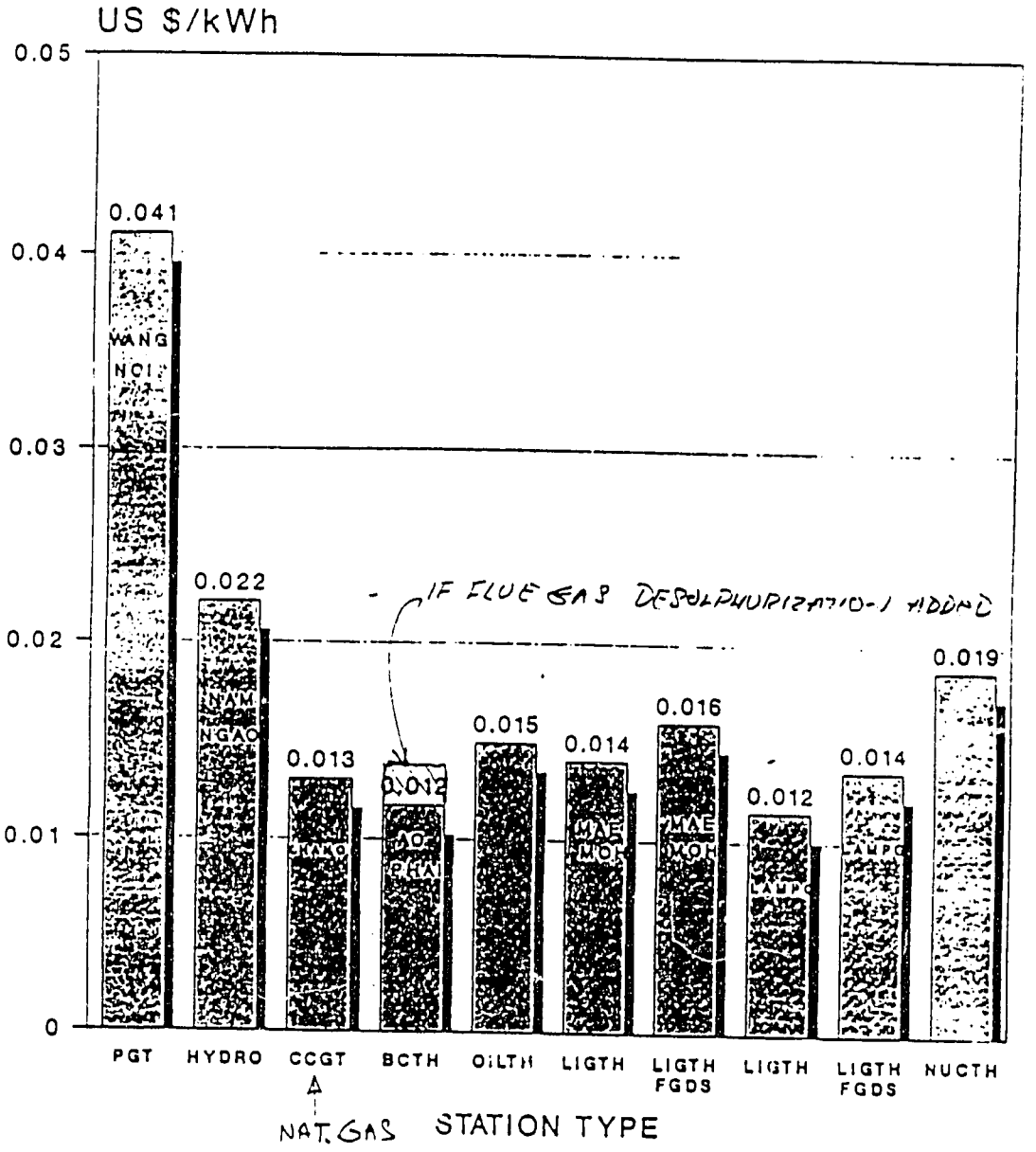
FIGURE 4

POWER GENERATION SEND OUT COSTS (REAL) (DCR=10%)



March 1991
All Cost Data from EGAT PDP 90/03

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AGENDA
CONFERENCE ON
THE PURCHASE OF POWER FROM
INDEPENDENT POWER PRODUCERS (IPP's)
18 AUGUST 1994
AT BANGKOK CONVENTION CENTER
THE CENTRAL PLAZA HOTEL, LADPRAO, BANGKOK, THAILAND

Presentation and Discussion

18 August 1994

08.30-09:30 hrs.	Registration
09:30-10:15 hrs.	Presentation on RFP and Solicitation Process by Peter Mc Partlin, Partner, Price Waterhouse Urwick-Canberra
10:15-10:30 hrs.	Coffee break
10:30-11:30 hrs.	Discussion on RFP
11:30-12:15 hrs.	Presentation on Grid Code (Details) by David Clarke, Associate Director, Price Waterhouse-London
12:15-13.15 hrs.	Lunch
13:15-14:00 hrs.	Discussion on Grid Code
14:00-15:00 hrs.	Presentation on PPA (Details) by Mark Hughes, Partner, Price Waterhouse-London
15:00-15:15 hrs.	Coffee break
15.15-16:30 hrs.	Discussion on PPA
16:30 hrs.	Closing Remarks

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AGENDA
CONFERENCE ON
THE PURCHASE OF POWER FROM
INDEPENDENT POWER PRODUCERS (IPP's)
ORGANIZED BY
ELECTRICITY GENERATING AUTHORITY OF THAILAND
AND
NATIONAL ENERGY POLICY OFFICE
17-18 AUGUST 1994
AT BANGKOK CONVENTION CENTER
THE CENTRAL PLAZA HOTEL, LADPRAO, BANGKOK, THAILAND

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17 August 1994

09:00-10.00 hrs. Registration and Refreshments

10:00-10:30 hrs. Opening Ceremony :
Introduction
by **Mr.Somboon Manenava**
General Manager
Electricity Generating Authority of Thailand
Opening Address
by **H.E. Dr.Savit Bhotiwihok**
Minister of the Office of the
Prime Minister

10:30-11:15 hrs. Presentation on "Privatization of the Electricity Supply Industry"
by **Dr.Piyasvasti Amranand**
Secretary General
National Energy Policy Council
- Small Power producers
- EGCO
- IPP's
- Power Purchase from Neighboring Countries
- Future Structure of Electricity Supply Industry
- Regulatory Framework
- Fuel Pricing Policy and Taxation
- Electricity Tariff and Automatic Adjustment Clause
- Role of PTT

11:15-12.00 hrs. Presentation on "BOI Privileges for IPPs"
by Representative from
Office of the Board of Investment

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12.00-13:15 hrs. Lunch

13:15-14:15 hrs. Presentation on "Request for Proposals"
by Mr.Peter Mc Partlin
Partner, Price Waterhouse
Urwick-Canberra
- Capacity Requirement
- Choice of Fuel
- Choice of Location
- Other Requirements
- Submission of Proposals and Guarantees
- Evaluation Criteria
- Negotiating Process

14:15-15:15 hrs. Presentation of "Grid Code"
by Mr.David Clarke
Associate Director
Price Waternouse-London
- Planning Procedure
- Connection Conditions
- Operational Procedure
- Scheduling and Dispatch Procedure
- General provision

15:15-15:30 hrs. Cofee Break

15:30-16:45 hrs. Presentation on "Model Power Purchase Agreements"
by Mr.Mark Hughes
Partner, Price Waterhouse-London
- Model for Coal-fired Thermal Plant
- Model for Gas-Fired Thermal Plant

16:45-17:30 hrs. Panel Discussion and Closing Remarks

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Opening Address
by
H.E. Dr. Savit Bhotiwihok
Minister to the Prime Minister's Office
at the Conference on
The Purchase of Power from Independent Power Producers (IPPs)
On August 17, 1994
at the Central Plaza Hotel, Bangkok

• •

General Manager of EGAT,
Secretary General of the National Energy Policy Council,
Distinguished Participants, Ladies, and Gentlemen:

It is indeed a pleasure and a privilege for me to preside over this opening ceremony and to deliver the opening address at a conference on a matter that is directly in line with a policy on national development which relies on the private sector as the engine for economic growth. As you may well appreciate, the government is truly committed to the policy of privatization. This explains my enthusiasm in welcoming all of you today to this "Conference on the Purchase of Power from Independent Power Producers (IPPs)". As the meeting is intended to serve as an Investors' Conference for the implementation of our IPP Program, it is very satisfying to have over 400 interested developers and experts present here today. The program is another measure that will supplement all previous efforts of the government to include the private sector in the development of the power system.

It is clear that the provision of electric power by way of generation, transmission, and distribution has a direct bearing on the well-being of the people. But as it was also thought that such a provision would enjoy economies of scale, power provision was regarded as an activity in which the state should have a monopoly. Consequently, EGAT, MEA, and PEA have been run as public utilities, unchallenged within their own jurisdiction, and accorded the privileges of a state enterprise.

Managing the 3 state enterprises in the form of public utilities has had a considerable degree of success. The power supply has expanded repidly to meet consumers' demand. In fact, 96 percent of all villages around the country now have electricity. The achievement is unparalleled by any other public utility in this country, which have yet to meet the demands of their respective clientele.

The actual implementation of such a policy has appeared in many forms. To begin with, the Regulation for the Purchase of Power from Small Power Producers (SPPs) was drawn up to encourage private power production and greater energy efficiency, particularly as regards cogeneration and renewable energy. The regulation has undergone revisions in an effort to remove obstacles in its application. Another step in the same direction is the careful creation of the Electricity Generating Company (EGCO). EGCO is a wholly owned subsidiary of EGAT, to purchase the Rayong combined cycle power station of EGAT, and subsequently to be listed on the Stock Exchange of Thailand, when EGAT's shareholding will be diluted to no more than 49 percent, at which time EGCO will have acquired the status of a private power company and therefore will serve as a forerunner for IPPs in Thailand.

In addition, we have been negotiating in earnest with IPP developers across the border to purchase electricity from the Lao People's Democratic Republic. Many important milestones have been achieved in that regard, especially relating to tariff matters. Furthermore, Thailand has also expressed its readiness to negotiate power purchases from and has responded positively to power sales approaches made by Malaysia.

The process towards increased privatization of Thailand's power sector has shown various forms of private sector participation. While it has at times run into problems, the government has done its utmost to resolve those problems so that the process may continue to advance and eventually bring succes. We now find ourselves at the juncture in our implementation path to privatizing the power sector where the stage has been well set for the launching of our IPP program itself. We are determined to forge ahead in that direction. In this connection, I would also like to point out that, reflecting our wholehearted support for the IPP Program, all approved IPP projects will be granted the full investment promotional privileges currently available under the relevant Board of Investment rules. The government will also ensure that the conditions to be agreed upon between EGAT and the IPP developers will be fair in order that the program may succeed. Impartiality is also to be observed in the evaluation process as well as in the negotiation process. In an effort to avoid repeating the experience we have had in our development of the mass transit system, we have depoliticized the selection and negotiation mechanisms.

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I should perhaps also mention that what has been achieved thus far is only privatization in power generation. We have not as yet dealt with power Transmission and distribution to the same extent. Transmission planning in particular would require added attention as the development of the electricity supply industry may well go beyond national boundaries into other parts of the Southeast Asian region.

Along the journey on which we are about to embark into the future, I see a "New Era." I envision a system of private power generation in Thailand in which IPPs play an instrumental role. I see a system in which competition prevails with a multiplicity of IPPs as well as SPPs. The grid system will be interconnected to those of our neighboring countries with exchanges of electricity and fuels taking place over national boundaries with Myanmar, Malaysia, Laos, Vietnam, and others. I also see a decentralized power distribution network. I hope this "New Era" will prove to be gratifying for all of us concerned.

Finally, this conference is to this end an ideal forum for all of us to provide guidance and feedback for the purpose of finalizing our IPP solicitation documentation. We thus ask that you kindly take advantage of this opportunity by actively taking part in this conference as well as in the future development of the Thai power system.

It is now the auspicious moment. I therefore would like to wish this conference every success in its deliberations, and hope that we will together make the conference as fruitful as possible. I hereby declare this conference open.

Thank you very much.

PRIVATIZATION OF THE ELECTRICITY SUPPLY INDUSTRY IN THAILAND

BY

PIYASVASTI AMRANAND
NATIONAL ENERGY POLICY OFFICE
ROYAL THAI GOVERNMENT

PAPER PRESENTED

AT

THAILAND INDEPENDENT POWER PRODUCTION
LAUNCH SEMINAR

17 AUGUST 1994

BANGKOK CONVENTION CENTER, CENTRAL PLAZA HOTEL
BANGKOK

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PRIVATIZATION OF THE ELECTRICITY SUPPLY INDUSTRY

- SMALL POWER PRODUCER (SPP) < 60 MW
- EGCO, SUBSIDIARY OF EGAT, DIVESTED IN STOCK EXCHANGE
- PURCHASE OF POWER FROM LAO PDR UNDER MOU
- INDEPENDENT POWER PRODUCER (IPP) - SALES OF POWER TO EGAT THROUGH OPEN INVITATION

;r of GAT Act

- IPP SPECIFIC INVITATION - MAE KHAM
- CORPORATIZATION OF EGAT AND REORGANIZATION INTO BUSINESS UNITS
- EGAT LISTED IN STOCK MARKET WITH GOVT. RETAINING CONTROL

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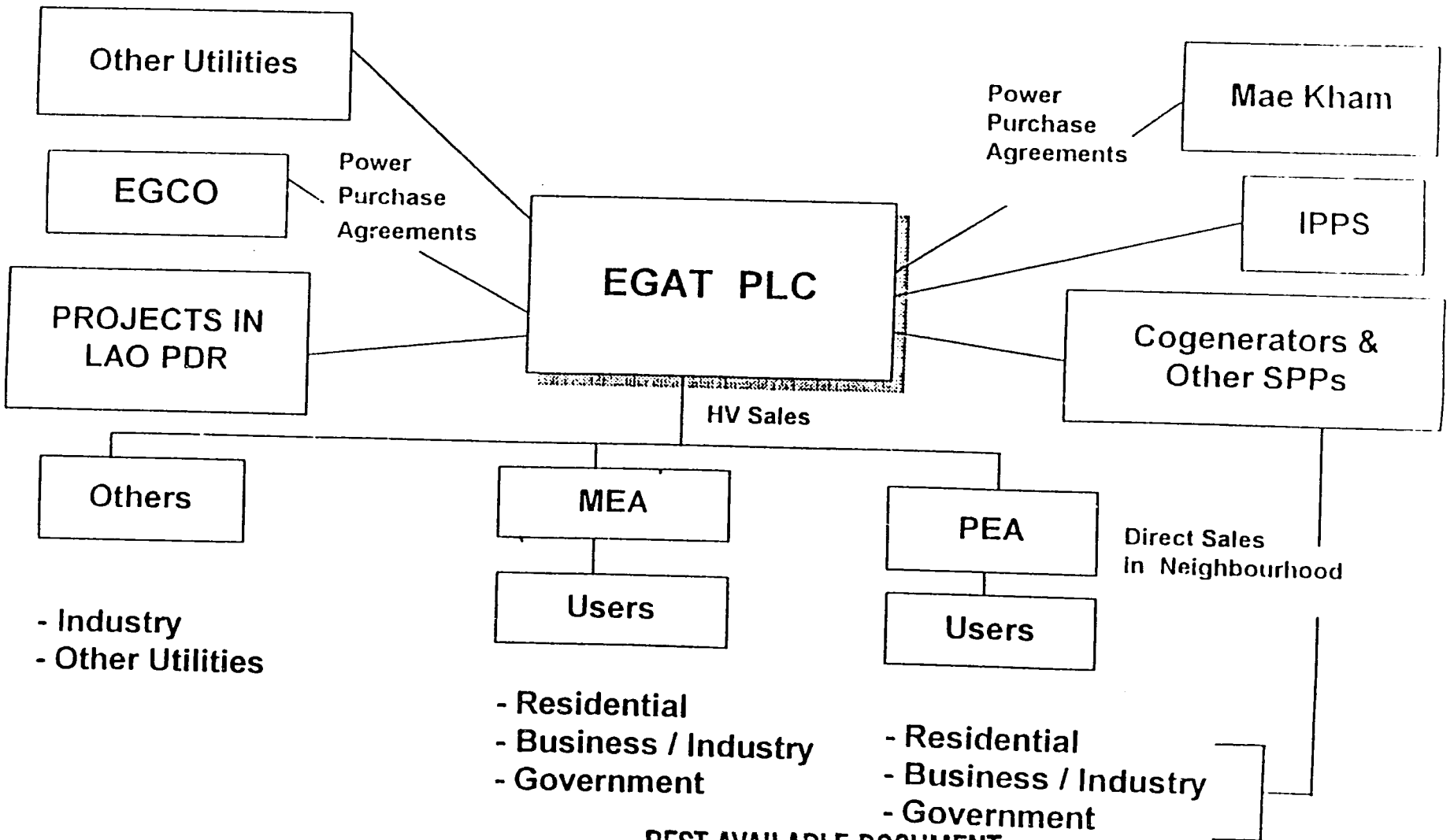
FUTURE ELECTRICITY SUPPLY INDUSTRY STRUCTURE



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REGULATIONS TO PURCHASE POWER FROM SPP

. SPP : COGENERATION & RENEWABLE

. COGEN : EFFICIENCY > 45% AND STEAM > 10%

. RENEWABLE : MAY USE UP TO 25% COMMERCIAL ENERGY

. DIRECT SALE TO THIRD PARTY OUTSIDE REGULATIONS

. EACH SALE INTO UTILITY TRANSMISSION SYSTEM < 60 MW

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SPP PURCHASE PRICE

. PRICE BASED ON AVOIDED COST OF UTILITY

. FIRM CONTRACT - PRICE BASED ON LR AVOIDED COST

. NON-FIRM CONTRACT

- NO CAPACITY PAYMENT
- CONTRACT < 5 YEARS
- NO CONTRACTED DEMAND

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FIRM CONTRACT

FIRM CONTRACT - CAN OBTAIN CAPACITY PAYMENT

- CONTRACT > 5 YEARS
- CONTRACTED DEMAND SPECIFIED
- MUST GENERATE IN SYSTEM PEAK MONTHS (APR - JUNE, SEP, OCT)
- ANNUAL GENERATION > 7,008 HOURS (4,672 FOR RENEWABLE)
- FULL DISPATCHABILITY
- MUST ABIDE BY CONDITIONS RELATED TO SHUTDOWN AND MAINTENANCE

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SPP PURCHASE PRICE

NON FIRM

ENERGY 0.87 B/KWH [3.41 US c/KWH]

FIRM

ENERGY 0.85 B/KWH [3.33 US c/KWH]

CAPACITY

	B/KW/MONTH	or US $/KW/MONTH
5 - 10 YR	164	6.43
10 - 15 YR	204	8.00
15 - 20 YR	227	8.90
20 - 25 YR	302	11.84

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CALCULATION OF CAPACITY PAYMENT

ACTUAL CAPACITY = 0.8 * AVERAGE KWH SALES PER HOUR DURING PEAK PERIOD
+ 0.2 * AVERAGE KWH SALES PER HOUR DURING PARTIAL PEAK PERIOD

BILLING CAPACITY = ACTUAL CAPACITY
- 0.2 * MAX (CONTRACTED-ACTUAL CAPACITY, 0)

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GUARANTEE

. CONTRACT PERFORMANCE GUARANTEE

* 5% OR PV OF TOTAL DEMAND CHARGE RECEIVABLE DURING CONTRACT TERM
* GUARANTEE TO BE PAID UPON SIGNING OF PPA
* GUARANTEE RETURNED UPON SALES OF POWER TO EGAT

. CONTRACT TERMINATION GUARANTEE

* CAPACITY PAYMENT RECEIVABLE DURING FIRST 5 YEARS OF CONTRACT PLUS INTEREST
* RETURN OF GUARANTEE IN PHASES EVERY 5 YEARS

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[redacted]

- CONTRACT TERMINATION GUARANTEE TOO HIGH

  - 21600 BAHT/KW (US $ 865 /KW)
    FOR CONTRACT> 20 YEARS

- FULL DISPATCHABILITY INCONSISTENT WITH CALCULATION OF CAPACITY PAYMENT AND OTHER OPERATIONAL REQUIREMENTS

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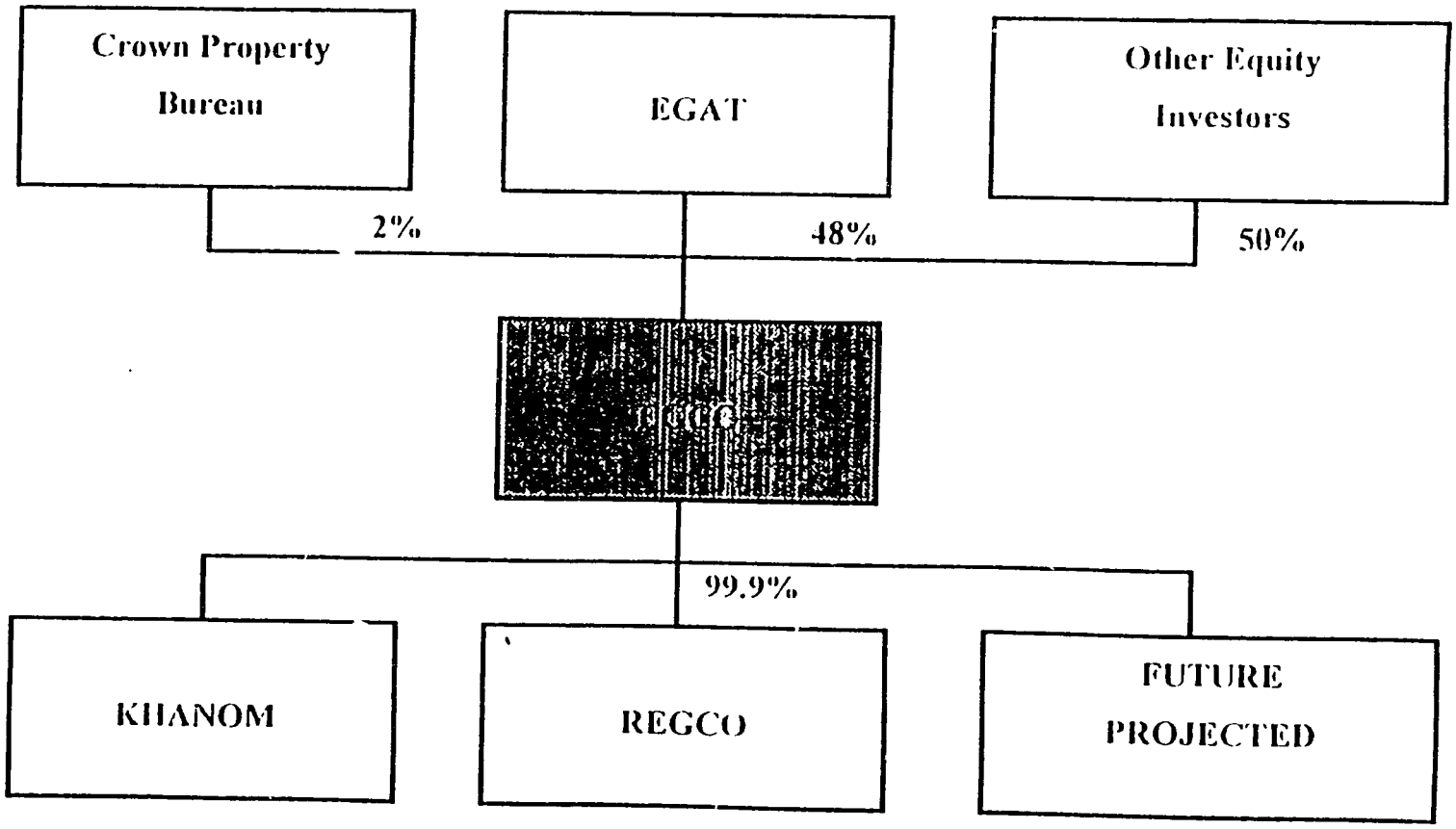
PROPOSED SHAREHOLDING STRUCTURE OF EGCO/REGCO



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PURCHASE OF POWER FROM LAO PDR

MOU : 1,500 MW TO BE PURCHASED BY THAILAND

PROJECTS UNDER NEGOTIATION

- NAM THEUN HINBOUN — 210 MW
  (LAO PDR, NORDIC, MDX)
- NAM THEUN 2 — 600 MW
  (TRANSFIELD, EDF, ITALTHAI, JASMINE, PHATRA)
- HOUAY HO — 126 MW
  (DAEWOO, LOXLEY)
- HONGSA — 600 MW
  (THAI LAO LIGNITE)

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INVITATION FOR PURCHASE OF POWER FROM IPP

- POLICY GUIDELINES APPROVED BY NEPC ON 13 MAY 1994
- DRAFT INVITATION WITH MODEL PPA AND GRID CODE TO BE PRESENTED AT INVESTORS CONFERENCE FOR DISCUSSION
- INVITATION ANNOUNCED BEFORE SEP. 1994
- TIMING FOR SUBMISSION OF PROPOSALS

DATE OF COMMISSIONING	PROPOSAL SUBMITTED NOT LATER THAN
1996-2002	28 FEB. 1995
2003	31 DEC. 1995
2004	31 DEC. 1996
2005	31 DEC. 1997
2006	31 DEC. 1998

- BID SECURITY : 500 BAHT / KW AT SUBMISSION OF PROPOSAL
- NON REFUNDABLE EVALUATION FEE : 250,000 BAHT PLUS 500 BAHT / MW FOR EACH MW > 400 MW PER PROJECT
- EVALUATION UNDERTAKEN BY EGAT AND NEPO

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- CAPACITY REQUIREMENT

FY	MW
1996-2000	1,000
2001-2002	2,800
2003	1,700
2004	1,700
2005	1,700
2006	1,700

- BASE LOAD / INTERMEDIATE LOAD
- SIZE OF EACH PROJECT TO BE COMMISSIONED DURING 1996 - 2002 < 1,400 MW
- ENVIRONMENT : IF OFFICIAL STANDARDS DO NOT EXIST THEN THEY WILL BE SPECIFIED

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IPP GUIDELINES APPROVED BY NEPC (CONT)

EVALUATION BASE ON FOLLOWING FACTORS

. PRICE
- TWO PART TARIFF
- INVESTOR TO PROPOSE TARIFF AND ADJUSTMENT CLAUSE

. DISPATCHABILITY

. FUEL
- NON CONVENTIONAL
- DOMESTIC NATURAL GAS
- NATURAL GAS IMPORT / LNG
- DOMESTIC COAL
- IMPORTED COAL
- ORIMULSION

(NUCLEAR AND FUEL OIL NOT ALLOWED)

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IPP GUIDELINES APPROVED BY NEPC (CONT)

EVALUATION (CONTINUED)

LOCATION

- CENTRAL REGION
- WESTERN COAST
- EASTERN COAST
- OTHERS & NEIGHBOURING COUNTRIES

. PROJECT VIABILITY

- LEVEL OF DEVELOPMENT
- FINANCIAL STATUS
- EXPERIENCE

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BOI PROMOTION PRIVILEGES

BOI PRIVILEGES AS STATED IN BOI ANNOUNCEMENT NO 1/2536

. ZONE 1 & 2

- REDUCTION OF IMPORT DUTIES BY 50% FOR ITEMS NOT UNDER MOF ANNOUNCEMENT NO. 13/2533 EXCEPT THOSE WITH DUTIES < 10%
- EXEMPTION OF INCOME TAX FOR 8 YEARS

. ZONE 3

- EXEMPTION OF IMPORT DUTIES
- EXEMPTION OF INCOME TAX FOR 8 YEARS
- REDUCTION OF INCOME TAX BY 50% FOR ADDITIONAL 5 YEARS

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REGULATORY CONTROLS

- EXISTING REGULATORY CONTROLS ADEQUATE
  - NATIONAL ENERGY POLICY COUNCIL ACT 1992
  - ENERGY DEVELOPMENT & PROMOTION ACT 1992
  - EGAT ACT (WITH AMENDED SECTION 37)
  - NATIONAL EXECUTIVE COUNCIL ANNOUNCEMENT NO. 58
- AUTOMATIC ADJUSTMENT MECHANISM WILL GUARANTEE REASONABLE RETURN ON INVESTMENT FOR EGAT, MEA, PEA THEREBY REDUCING PRESSURE FOR CONTRACT RENEGOTIATION
- CURRENT TARIFF REFLECTS 90% MARGINAL COST

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CHANGE IN EGAT ACT

- SECTION 37 AUTHORISED EGAT TO APPROVE & SET ANY CONDITION ON SALE OF POWER TO THIRD PARTY EXCEEDING 500 KW

- NEW SECTION 37

  - DIRECT SALES TO THIRD PARTY ALLOWED IF NOT CONNECTED TO SYSTEM

  - IF CONNECTED TO SYSTEM AND IF THERE IS THIRD PARTY SALE, EGAT MAY SET REQUIREMENTS RELATED TO INTERCONNECTION IF GENERATION CAPACITY > 6 MW

  - IF CONNECTED TO SYSTEM AND THERE IS NO THIRD PARTY SALE, EGAT MAY SET REQUIREMENTS RELATED TO INTERCONNECTION IF GENERATION CAPACITY > 20 MW

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INVESTMENT IN ELECTRICITY SUPPLY INDUSTRY

* COGENERATION & SPP

  - SALES TO GRID

  - DIRECT SALES TO USERS IN INDUSTRIAL ESTATE

* EGCO (RAYONG /KHANOM)

* IPP (3800 MW DURING 1996-2002)

* EGAT PLC LTD.

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THE THAILAND INDEPENDENT POWER PRODUCER PROGRAMME LAUNCH - AN INFORMATION PAPER

This paper introduces the seminar delegate to the Thai electricity market place in 1994. The objectives in preparing this paper have been:-

- to introduce prospective investors and their advisers to the Thai electricity market place, the demands it has coped with in the recent past and the need for ongoing significant investments in additional generation capacity in order to meet the needs of this fast growing economy.

- to detail the IPP opportunities in Thailand with particular emphasis on the first solicitation process due to commence early September this year. The first Request for Proposals (RFP) will cover the period 1996-2002 and calls for additional generation capacity of 3,800 MW.

- to describe the contractual framework (at a high level) which has been developed to support the IPP programme in Thailand.

In order to set the scene correctly it is perhaps worthwhile to consider the recent past and progression to the current situation.

1 BACKGROUND

1.1 Establishment of EGAT

The Electricity Generating Authority of Thailand (EGAT) was established on May 1 1969, following the merger of the three state enterprises: The Yanhee Electricity Authority (YEA), the Lignite Authority (LA) and the North-East Electricity Authority (NEEA). Each of these enterprises was responsible for supplying electricity in the area specifically designated to it. The areas under the responsibility of YEA were in the North and Central Regions, while those of LA were in the far North and the South, and the areas in the Northeast fell under the responsibility of NEEA. The amalgamation was in response to the Government's policy to mobilise man power, material and management resources to meet the Kingdom's increasing demand for electricity.

Currently EGAT is supplying electricity to the Metropolitan Electricity Authority (MEA) - the distributor of the Greater Bangkok area and two neighbouring provinces, the Provincial Electricity Authority (PEA) - the distributor of all provinces except

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those in MEA areas, some industrial plants and other direct customers. EGAT also purchases surplus power from Lao PDR (EDL), and has a power exchange with Malaysia (TNB).

1.2 The Growth in Power Consumption in Thailand

Since the first National Economic and Social Development Board (NESDB) Plan (First Five-Year Plan), the electricity demand in Thailand has increased steadily. The records in the last ten years show that at the end of the Fifth Five Year Plan (1986), the power generation requirement was 4,180 Megawatts (with total energy production of 24,779 million KWh). Within just 5 years, the end of the 6th Plan period (1987-1991) revealed the requirement had increased to 8,045 MW. During this five year period the electricity requirements had almost doubled. This was basically due to the favourable economic growth of the country. Peak demand in 1993 was 9,730 MW.

In the Seventh Five-Year Plan (1992-1996), the forecast peak demand for electricity shows further increases in generation capacity to 13,075 MW in 1996. After 1996 the demand growth rate is expected to be less but will nevertheless still amount to 19,000 MW in the year 2001, and 25,525 MW in 2006. This represents the average growth rate of 10.2% in the 7th Plan and it will decline to 7.8% and 6.1% in the 8th Plan and the 9th Plan respectively. The EGAT Power Development Plan (PDP) shows the forecast of EGAT's generation requirements in order to meet this peak demand.

1.3 Additional Installation for the Growth of Demand

At the end of the fiscal year 1993 (30 September 1993), the installed capacity of the EGAT system was about 12,180 MW, comprising 2,416 MW (19.8%) hydro power; 6,101 MW (50.0% thermal; 3,423 MW (28.1%) combined cycle; 224 MW (1.8%) of gas turbine and other power plants of 0.3%.

The standard voltages for power transmission in the EGAT system are 500 kV, 230 kV, 115 kV, and 69 kV at system frequency of 50 Hertz. The length of the transmission lines were 1,200 circuit-km for 500 kV, 8,097 for 230 kV, 11,048 for 115 kV and 383 circuit-km for 69 kV lines.

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The system has a total of 163 substations three of which 500 kV substations. The total transformer capacity was 26,375 MVA. The RFP under discussion at the conference and EGAT's PDP contain maps of the EGAT electric power system.

2. GOVERNMENT'S PRIVATISATION POLICY AND OBJECTIVE

2.1 Government Directives - Four Steps

In September 1992, the Cabinet approved a directive that would substantially restructure the Thai electricity industry. The directive was organized into four steps (corresponding to fiscal years ending September 30, 1993 to September 30, 1996) with two or more tasks to be accomplished in each fiscal year. The cabinet directive established a framework for commercialisation of the electricity industry by facilitating private sector investment, formalisation of contractual relationships on commercial terms and planning for the restructuring and privatization of EGAT, MEA and PEA.

FIRST STEP: 1992/1993

The first step comprised six tasks to be undertaken and completed in fiscal year 1993 (October 1 1992 to September 20 1993)

1 Designation of EGAT as a "Good State Enterprise"

By Cabinet Resolution, the government has set criteria for selection of "good state-owned enterprises" which would be granted more management authority. Such enterprises have authority to set their own management system and regulations without approval of the Ministry of Finance. Good state enterprise status is seen as an initial step in relinquishing government control and enhancing management autonomy of state-owned enterprises. The Ministry of Finance administers the criteria to select good state enterprise for recommendation to the Cabinet. The four requirements for Good State Enterprise status are as follows:

- Annual remittance of 30% of net profit to the Government;

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- No more than 20% of production cost for salary and administrative expenses;
- Rate of return on total revalued asset excluding work in progress and sinking funds should exceed 6%; and
- Productivity increase of no less than 2% per annum.

EGAT expects to be designated a "Good State Enterprise" in August 1994.

2 Change the bulk price to MEA and PEA to correspond to long run marginal cost (LRMC) and eliminate the subsidy to PEA.

3 Introduce business principles for EGAT's fuel purchases from the Petroleum Authority of Thailand (PTT).

4 Introduce an automatic fuel clause into EGAT's tariff.

5 Establish EGAT's subsidiary company, EGCO and list its shares on the Securities Exchange of Thailand (SET).

6 Abolish the policy of uniform tariffs for the whole country.

SECOND STEP : 1993/1994

The second step comprises five tasks to be implemented and completed in fiscal year 1994 (October 1 1993 to September 30 1994). These are:

1 EGCO buys Rayong Combined Cycle power plant from EGAT, and further negotiates for the purchase of Khanom power plant.

2 EGAT prepares notification to encourage the private sector to participate in power generation investment following the steps specified in the Private Sector Participation in State-Owned Activities Act - 1992. The Mae Kham fluidised bed combustion (FBC) project will be the first pilot Independent Power Producer (IPP).

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3 Determine the functions of and prepare for private power producers (IPPS) to be responsible for some selected projects in the Power Development Plan.

4 Restructure EGAT into business units.

5 Designate Metropolitan Electricity Authority (MEA) and Provincial Electricity Authority (PEA) as good state enterprises and restructure PEA into Regional Business Units with separate bulk tariffs for purchases from EGAT.

THIRD AND FOURTH STEPS : 1995-1996

The tasks in the third and fourth steps are scheduled for completion in fiscal years 1995 and 1996. The activities involving EGAT include:

1 Amending the EGAT Act (Third Step).

2 Convert EGAT into a limited company (corporatization) (Third step).

3 To encourage private sector, invite private sector to IPP bidding. (This activity commences September 1, 1994 with the issue of the first RFP for international solicitation of IPPs.

4 Increase the share capital of EGAT and sell equity capital to private investors while keeping the majority of ownership with the government (Privatization).

2.2 Process of Privatization

Electricity consumption in Thailand has during the last 20 years increased rapidly, especially during the latest five-year period. EGAT has managed to build the necessary new power plants and transmission systems to supply this growing demand. Many new thermal power plants of high international standard have been taken into operation. The new plants have been operated successfully and with high availability. The whole power system has been operated with high reliability of supply.

The huge investment programme has been successfully financed, mainly on the international capital market and

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from official sources. The rapidly increasing volume of capital investments and of loans on the international capital market have contributed to the plans for a radically changed structure of Thai power supply industry with commercialisation and possible privatization of EGAT.

The continuously rapid increase in the use of electricity during EGAT's 25 years of existence has transformed the organization from a small regional power utility to a big organization even by international comparison. With an annual turnover of 2.5 billion USD, increasing by 10 to 15% per year, and annual capital investments of about one billion USD, considerably higher in coming years, EGAT can today be compared with large power utilities in Europe and America. It is natural that EGAT's financial activities are already of great importance for the organization.

2.3 Independent Power Producer (IPP)

In April 1992 the Act on Permission for Private Sector to Participate or Jointly Implement in Government Activities was issued. The Project Owner (the government agency or state enterprise) which would like to propose a project for private sector involvement must, conduct a feasibility study, and detailed analysis using the guidelines provided by the National Economic and Social Development Board (NESDB) provided to the Ministry-in-charge.

If the project has its financial line or assets exceeding 5 billion Thai Baht (USD 196 million), the Project Owner shall hire a consultant for advice. The consultant must independently prepare the report as described by NESDB which is then sent by the Project Owner to the Ministry for approval. The consultant shall possess all qualifications setforth by the Ministry of Finance.

The Ministry in-charge of the Project Owner shall consider the proposed project submitted by the government agency. If the project is a new initiative, it shall be submitted to NESDB for assessment. If NESDB concurs with the project proposal, it shall be submitted to the Cabinet for approval in principle. When the Cabinet has approved the project, the Project Owner shall draft the announcement inviting the private sector to participate in the project implementation of draft term of reference

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and main conditions which would be stated in the contract.

The invitation announcement document, terms of reference, method of invitation, method of selection for qualified private sector bidding, setting of bidding security and contract security which must satisfy all details required by the Government. The Office of the Highest Public Prosecutor must give an approval on the agreement prior to the signing of a contract.

POWER FROM LAO PDR

In June 1993, the Government of Lao People's Democratic Republic (GOL) and the Government of Thailand entered into a Memorandum of Understanding (MoU) under which the GOL has agreed to supply and the Government of Thailand has agreed to purchase, up to 1,500 Megawatts of electricity by the year 2000.

However, the Lao PDR Government has given mandates for four investment projects to private investors. These projects have a combined production of 1,560 MW from three hydro-electric plants, Nam Theun 2, Nam Theun-Hinboun and Huai Ho plus a lignite project at Hong Sa. They are all scheduled to be completed between the year 1998 and 2000.

The Laos Government has signed an MoU to award the Nam Theun 2 project to a foreign private investor. The project has a capacity of 600 MW with an annual production of 4,530 million kWh. It will commence full production in 1999.

Nam Theun-Hinboun project is designed as a joint venture. The Laos Government is expected to hold 55 percent of the equity. The project will have capacity of 210 MW with an annual production of 1,270 million kWh.

For the Huai Ho project, the Laos Government has signed an MOU with a private investor. The capacity of 150 MW with annual production of 657 million kWh. It is scheduled to be completed in 1998.

A Thai private investor has won a mandate to explore lignite deposits in a 60-square-kilometres area in Hong Sa. The company is conducting a feasibility study of the Hong Sa power project, which is expected to operate with

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a capacity of 600 MW once it is completed in the year 2000.

Five Thai companies have won separate mandates from the Government of Lao PDR to participate in these four electricity generating projects which will supply power to the Electricity Generating Authority of Thailand. The Laos supply potential will be included in EGAT's power development plan after the contracts are signed.

PROJECTS IN THE PIPE LINE

According to the recent preliminary revised power expansion plan, there will be approximately 4 new thermal power plant projects fuelled by natural gas, coal, LNG, or orimulsion, totalling 1,000 MW. These projects are planned to be IPP projects and will be on-line by December 2000. Another 2,800 MW of IPP supplied generation capacity is expected to be commissioned during 2001-2002 for the next stage.

Siting of the projects should be somewhere on the western coast of the Gulf of Thailand, Prachuab Khiri Khan, Phetchaburi, Ratchaburi, Samutsakhon, Samut Songkhram or eastern area such as Chonburi, Rayong and Chanthaburi.

More projects after the year 2002 will also be implemented by IPPs. These will be identified later.

However, the Government has determined that EGAT should remain responsible for power development planning (generation and transmission) and system operation. The power generated from IPPs must be under contract to sell to EGAT and also must be fully dispatched. In line with the integrated resource planning of the system needs, EGAT will also be responsible for the construction of the transmission lines and control of the national grid network.

INTEGRATION INTO EGAT SYSTEM

The Independent Power Producer (IPP) must sell the generated electricity to EGAT. EGAT remains responsible for the planning of the generation expansion and the transmission system expansion, system operation development, controlling the generation and the transmission system of the country, in line with the

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integrated resources planning.

The steps in the planning and the construction of the power plants are as follows:

1) EGAT prepares the power development plan and submits it to the National Energy Policy Council (NEPC) for approval before submission to the Cabinet.

2) NEPC will review the investment plan and indicate the projects for EGAT and for IPP.

3) The projects intended for IPP participation will be submitted by EGAT to the National Economic and Social Development Board (NESDB) and the steps given in the Act on Permission for Private Sector to Participate or Jointly Implement in Government Activities will be followed.

4) When a successful IPP is selected and has signed the contract with EGAT, this IPP will obtain all the necessary permits for construction of the power plant. The IPP must also obtain permission to sell the electricity from the Department of Energy Development and Promotion (DEDP), the Department of Civil Works, and obtain the permit from the Ministry of Industry.

3. CONTRACTUAL FRAMEWORK AND SOLICITATION FOR IPPS

EGAT has retained Price Waterhouse to assist in developing several model Power Purchase Agreements (PPAs), a Grid Code and the Request for Proposals (RFP).

The RFP for the supply of electricity will be by way of invitation. It addresses all of the issues contained in the model PPA and Grid Code in addition to seeking information about the financial strength and suitability of the bidder to operate a power plant to EGAT's satisfaction.

The Grid Code specifies how the transmission system is to be maintained and operated and interconnected with, and how power generation is to be scheduled and dispatched. This will be the standard used by EGAT and is referenced by the PPA. EGAT will also have a Connection Agreement with the IPP covering the terms under which the IPP is

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connected to the EGAT transmission system incorporated within the PPA. Under this agreement EGAT will recover the costs incurred in installing connecting equipment and any new line to serve the IPP. The IPP can be expected to have construction, fuel supply, financing, operation and maintenance contracts as well as a PPA with EGAT.

3.1 POWER PURCHASE AGREEMENT (PPA)

The provisions of the PPA include:

1) Definition of the generating capacity (MW) and other services to be made available to EGAT;

2) Definition of obligations on the IPP, generally including a requirement to make the plant available to generate, complying with dispatch instructions and co-operating with outage planning;

3) Definition of obligations on EGAT, generally including an obligation to dispatch the generating plant to produce energy in accordance with a set of industry standard rules (eg. a Grid Code);

4) Definition of the technical and operational rules to be observed by each party by way of reference to the Grid Code; and

5) Definition of payment terms. The PPA will provide for payments to be made by the system operator (EGAT) to generators (IPPs) for two discrete services: Availability and Energy. Availability is the provision at any time of the capability of the plant to generate in accordance with dispatch instructions issued by the system operator (EGAT). Energy is the output of electricity in accordance with a dispatch instruction to do so. A number of small IPPs such as Run-of-River hydro-electric plants might only be paid for energy produced.

3.2 GRID CODE

The Grid Code is a set of industry rules with which the IPP (and EGAT generators) must comply. A published code applicable to all ensures IPPs that they will be treated identically to other similar IPPs and not discriminated against in dispatch, outage scheduling or in any other

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ways.

The Grid Code includes technical provisions governing:

1) Connection (procedure and technical requirements), Scheduling and Dispatch, Operations, Planning, Metering, general responsibilities of both EGAT and the IPP.

2) Planning Code - The Planning Code describes the technical and design criteria and procedures to be applied in the planning and development of the EGAT system, including the preparation of the Generation Plan.

3) Connection Conditions - This code describes the technical compliance required before allowing connection to the EGAT system.

4) Operating Code - These codes cover the system operating rules, other than the scheduling and dispatch of generation.

5) Scheduling and Dispatch Code - These codes cover the daily scheduling and real-time dispatch of generation.

The Grid Code also include General Conditions which are designed to achieve three ends; a section covering general communications between users of the system; the rules covering "unforseen circumstances", and the rules controlling modification to the Grid Code.

Grid Code also includes General Conditions which are designed to achieve three ends; a section covering general communications between users of the system; the rules covering "unforseen circumstances", and the rules controlling modification to the Grid Code.

The Grid Code is sufficient in scope to satisfy any IPP intending to invest in Thailand.

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4. ANNOUNCEMENT OF THE RFP INVITATION TO IPPs

It is the Policy of the Government of Thailand to have the private sector participate, independently or jointly, to implement government planned projects. The Government has given a directive to EGAT for it to follow in the future. The Government's resolution of 12 September 1992 set the years 1994-1995 for the invitation announcement to the private sector for their participation in the construction of power plants scheduled to be online during 1996-2002 as independent power producers (IPPs).

To follow the policy of the Government, EGAT, as the purchaser, considered that the invitation should be announced during September 1994 so that the private sector have time to finish the projects as per EGAT's schedule.

The preliminary directives for the IPP are detailed in the RFP and, from a policy perspective, are as follows:

1) The locations of the power plants will be selected by EGAT so that they will be suitable for the connection with the EGAT power system. The IPP still has the chance to propose the site of the power plant.

2) The power plants will operate as base load plants with the generating capacity of 1,000 MW for the first period during 1996-2000 and 1,400 MW for both the years of 2001 and 2002. Total capacity sought by the first IPP solicitation will be for 3,800 MW.

3) The fuel for the power generation must be either domestic natural gas, imported gas/LNG, coal or orimulsion.

4) It is the responsibility of the IPP to ensure that he gets the necessary permits for the construction and operation of the power plant.

5) An environmental impact assessment (EIA) must be prepared by the IPP.

6) IPP will build, own and operate the power plant and also provide the fuel for the power generation.

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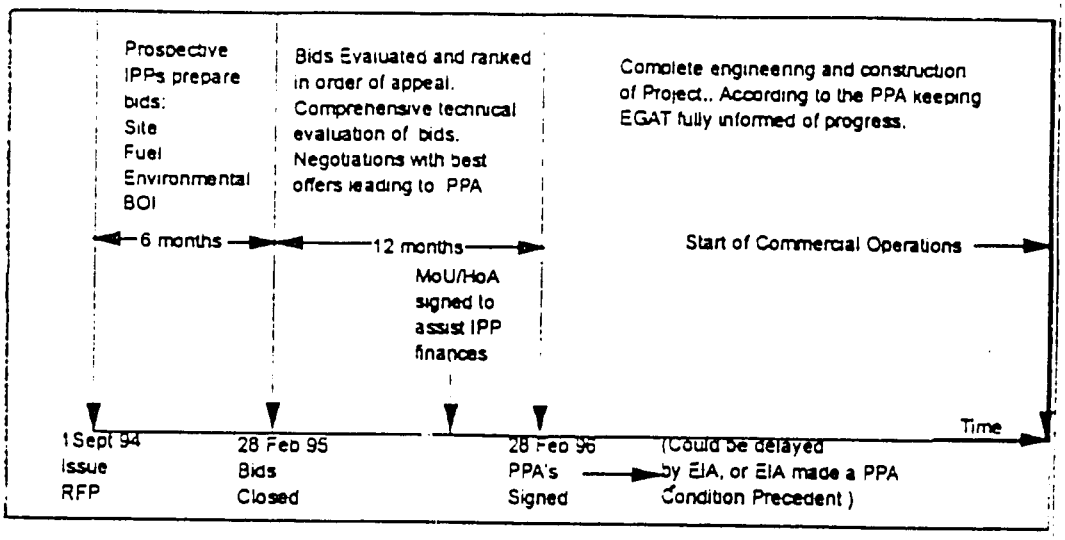
7) EGAT will set the technical conditions which are necessary in order to optimise the Thailand Electricity system and maintain generation security.

The tentative time schedule for the IPP process is as shown below:-



To support the above EGAT will establish an IPP Information Desk staffed by bi-lingual (Thai and English) professional staff able to provide assistance to prospective IPP Bidders thoughout the bidding period.

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IPP Launch Seminar
Bangkok, Thailand

17 August 1994

REQUESTS FOR PROPOSALS
"SOLICITATION"

NEEDS & PROCESS

IPP Launch

Background (1):

IPP Programme part of Govt. Initiative to partially privatise the industry.

Follows (1) SPP Programme and EGCo

IPP Launch

Background (2):

IPP Contractual framework and RFP developed February - May (4 months).

Joint Effort. PW/EGAT/Legal Advisers

IPP Documentation reviewed extensively by NEPO Advisers, EGAT and PW.

IPP Launch

Objectives:

Secure from the Private Sector

- Capacity and Energy at affordable prices
- Reliable Power available when required
- Power Plants suitably located
- Selected fuels in line with Govt Policy
- Dispatchable Generating Units

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IPP Launch

Capacity Requirements:

Year	Start date of Commercial Ops.	Amount (MW)	Cumulative Amount (MW)
1996-2000	December 2000	1,000	1,000
2001	April 2001	1,400	2,400
2002	April 2002	1,400	3,800

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IPP Launch

Choice of Fuel (In order of preference):

- Renewable Energy - examples include:-
  - **Waste/Residues from industrial/agricultural processes**
  - **Products derived from the above**
  - **Garbage (eg Municipal Waste)**
  - **Dendrothermal (eg tree plantations)**
- Natural Gas from Thai sources
- Natural Gas/LNG from outside Thailand
- Imported Coal
- Orimulsion

IPP Launch

Choice of Location (1) - As per Issued Guidelines: (In order of preference)

- Central Region (Upper Bangkok, Lopburi, Ang Thong, Singburi, Ayutthaya, Nakhon Nayok etc)
- West Coast of Thailand (Prachuap Kirikarn, Petchaburi, Ratchaburi, Samut Sakhon, Samut Songkram)
- East Coast of Thailand (Chonburi, Rayong, Chanthaburi, Prachin Buri)
- Other regions and neighbouring countries

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IPP Launch

Choice of Location (2) - For the first 1,000 MW due to time constraints:

Maximums w/o transmission system upgrades

- Western area: 600 MW in Ratchaburi or 800 MW in Sam Phran
- Eastern area: 300 MW in Khlong Mai or 700 MW in Ao Phai or 700 MW in Prachin Buri or 200 MW in Rayong

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IPP Launch

Choice of Location (3) - For the next 2,800 MW:

Preference given to a division of 1,400 MW in the eastern areas and 1,400 MW in the western areas. EGAT will reinforce the system to support this as follows:-

- new 500KV lines from Rayong to Nong Chok and from Tap Sakae to Sai Noi
- IPPs located near the new lines will be easily connected to the grid.

IPP Launch

Other Requirements (Other than capacity, fuel and location) (1)

- Prices for energy and capacity
- Compliance with Environmental Laws and Regulations (non-negotiable)
- Start of Commercial Operations not more than one year after required by EGAT

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IPP Launch

RFP Evaluation criteria (1)

Price Factors (60% weight in evaluation of Bid)

- Prices for energy and capacity
- Term of contract (20-25 years)
- Connection costs (As defined in PDP calculated and added to life cycle costs of proposed project). EGAT reserves the right to collect costs from successful bidder

IPP Launch

RFP Evaluation criteria (2)

Non-Price Factors (40% weight in evaluation)

Viability of Project (25%).

- Level of development (14%)
- Financial status of Bidder (4%)
- Experience of Bidder (7%)

Fuel and Fuel Diversity (4%)

IPP Launch

RFP Evaluation criteria (3)

Non-Price Factors (40% weight in evaluation)

Other Factors (11%)

- Dispatchability (2%)
- Location (2%)
- Exceptions to Model PPA (5%)
- Structure of Capacity Payments (2%) (An attempt to discourage front-end loading)

RFP Evaluation, Selection and Notification of Award (1)

- Agreements awarded will be those considered most advantageous and responsive to EGAT's needs.
- EGAT plans to keep all acceptable proposals open until it has contracted for sufficient capacity
- Successful and unsuccessful Bidders will be notified ASAP

IPP Costs

Bid requirements
RFP Bid Evaluation fee

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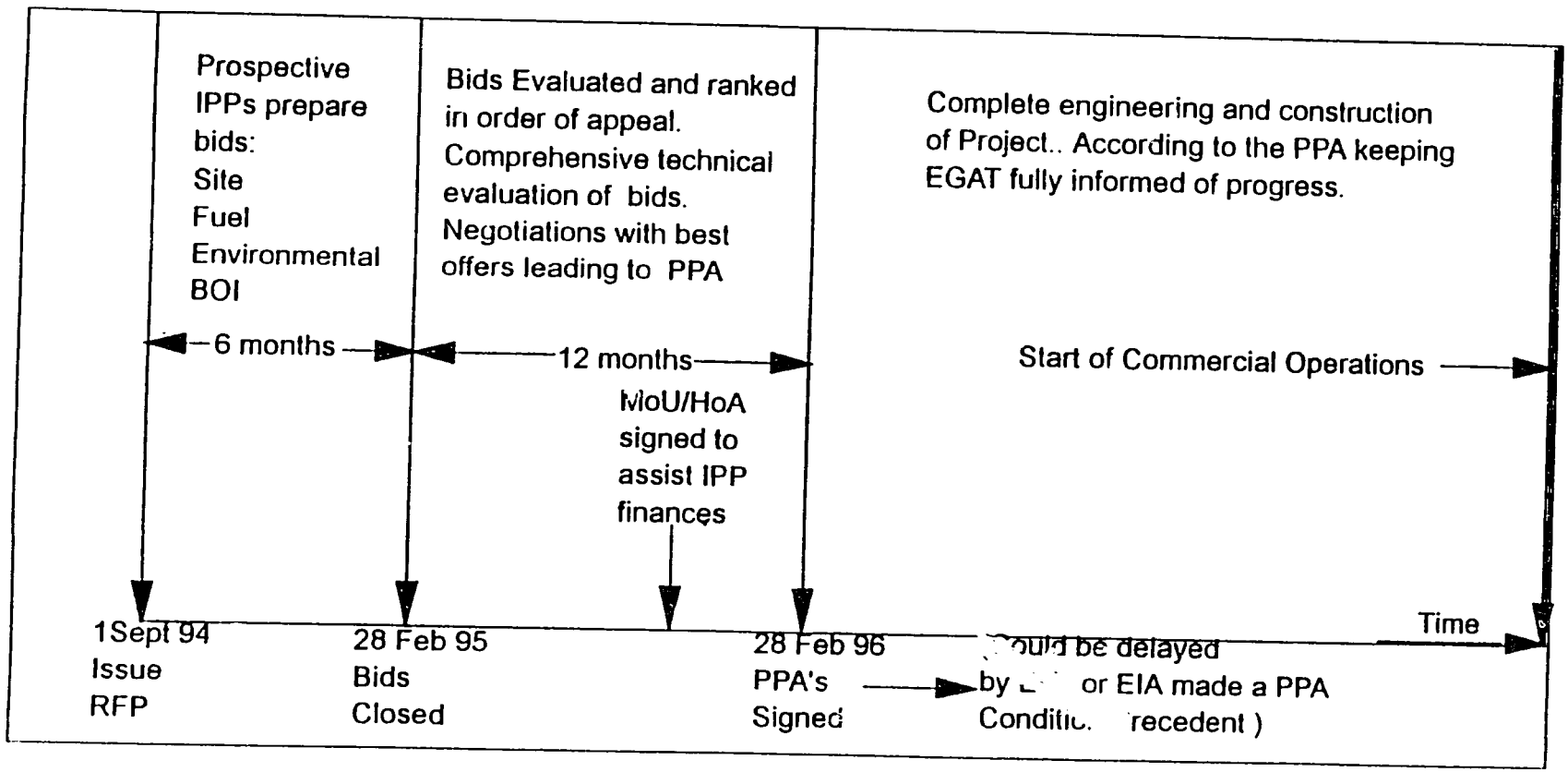
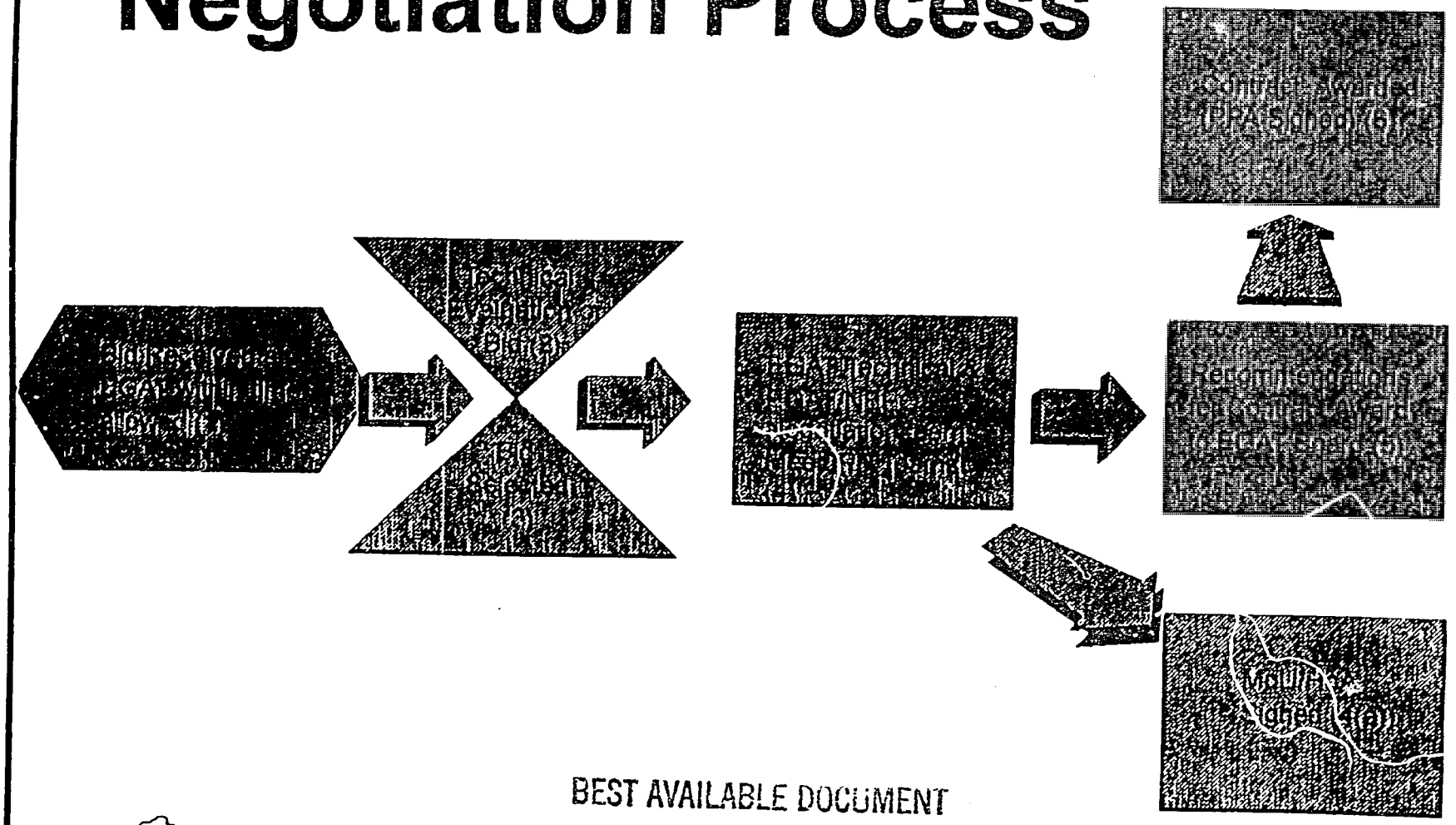
IPP Launch

Time Table



IPP Launch

Negotiation Process



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Electricity Generating Authority of Thailand

IPP Programme Launch

The Grid Code

Price Waterhouse
Corporate Finance

Rules for System Operation

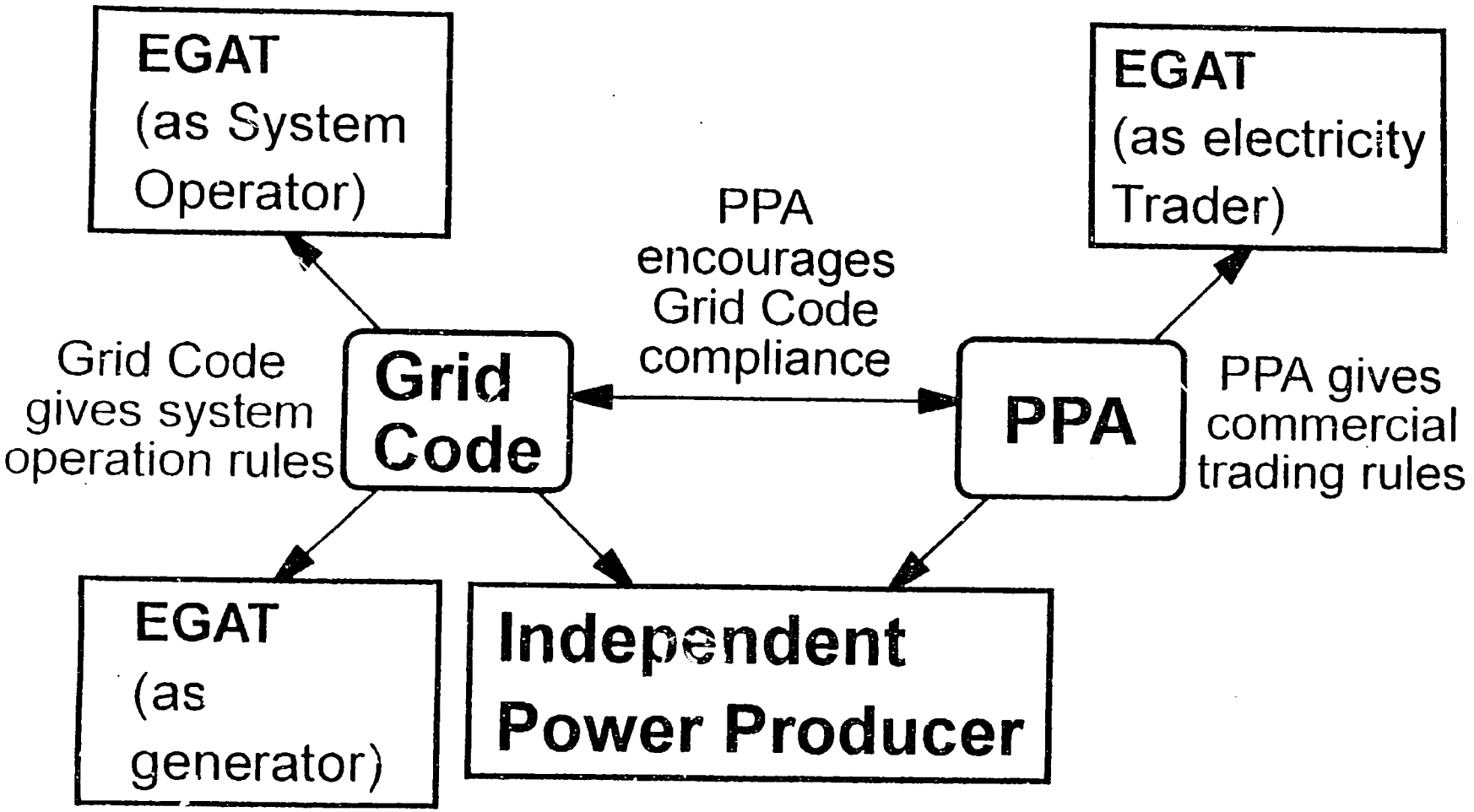
Fundamental rules required

- Planned system development
- Technical compliance before connection
- Central, economic, scheduling and dispatch
- Central outage planning
- Co-ordination of safety and system stability and security rules

Reasons for the Grid Code

- Benefits of integrated system only realised with central co-ordination and control
- EGAT's internal procedures require non-discrimination between EGAT generation and IPPs
- Rules must be transparent to IPPs

Overview of Arrangements



The GRID CODE

Individual Procedures (1)

- **Preface**
  - An introduction to the Grid Code
- **Glossary and Definitions**
  - List and definition of main terms used
- **Planning Procedure**
  - Preparation of Power Development Plan
- **Connection Conditions**
  - Rules for connecting to EGAT's System

The GRID CODE

Individual Procedures (2)

- Operating Procedures
  - Demand forecasts
  - Maintenance scheduling
  - Operational planning (the "Operating Programs")
  - Operating margin (allocation of Reserve)
  - Monitoring and Testing
  - Safety liaison
  - Contingency planning (what to do in emergencies)

The GRID CODE

Individual Procedures (3)

- **Scheduling and Dispatch Procedures**
  - Generation Scheduling
  - Generation Dispatch
  - Frequency and Voltage Control
- **General Conditions**
  - General Provisions (unforeseen circumstances)
  - Grid Code Review (how to change the Grid Code)

Planning Procedure

- Integrated planning of the development of the total system
- Requires generators to provide planning data for new Power Plants

Without these requirements EGAT would lack technical information on proposed Power Plants

Connection Conditions

- Ensures that only technically compliant plant can be connected
- Lays down the connection conditions to which compliance is required

These requirements protects the system from technically unsound plant being connected to the system

Operating Procedures

- System planning
  - Demand forecasts
  - Maintenance scheduling
  - Operational planning
  - Operating margin
- System safeguards
  - Monitoring and testing
  - Operational liaison
  - Safety liaison
  - Contingency planning

Required for system operation under normal and abnormal conditions

Operating Procedures

Maintenance scheduling (OP2)

- Seven year rolling programme
- Adequate opportunities for IPPs to argue for particular outage slots
- Final decision by EGAT (as system controller)

Operating Procedures
Monitoring and Testing (OP5)

- Gives EGAT the right to:
  - monitor a Generator's performance and
  - Call for a test of a generating unit
- Gives Generator a right to call for a test of its own unit

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Scheduling and Dispatch

- Optimum scheduling of all centrally dispatched generation (SDC1)
  - Requires daily generation declarations
  - EGAT required to schedule all generation
- Central dispatch of generation (SDC2)
  - Lays down rules for acceptance and rejection of Instructions
  - Defines form of Instruction

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Dispatch Instructions

- **Instruction must be accepted unless:**
  - There is danger to personnel or plant **OR**
  - It is not in line with Unit's characteristics **AND**
  - There is not a System Emergency
- **Generator is obliged to comply with Instruction** (although some tolerance is allowed)

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General Conditions

- General Provisions
  - Obligation on EGAT to make Grid Code available
  - Derogations from the Grid Code
  - Primacy of interconnector agreements
- Grid Code Review
  - Right of all parties to discuss Grid Code revisions
  - Regulatory oversight of decisions

IPP Programme Launch

Power Purchase Agreements (PPAs)

Model Power Purchase Agreement

Agenda

1. Why a model PPA
2. Basic principles
3. Development security
4. Operational security
5. Availability incentive
6. Energy incentive
7. Force majeure and changes in law
8. Conclusion

Model Power Purchase Agreement

Why a model PPA

- Facilitate success in EGAT's broad-based IPP initiative
  - PPAs - long term commitment
  - Competitive tendering to get the best
  - Attracting offers which meet EGAT's requirements

Model Power Purchase Agreement

Why a model PPA

- Facilitate success in EGAT's broad-based IPP initiative
  - Model PPAs to specify EGAT's basic needs and contracting philosophy
  - Lay out EGAT's preferred means of incentivising performance
  - Part of framework for evaluating bids
  - Structure for future negotiation

Model Power Purchase Agreement
Basic principles (1)

- Value for money
  - Allocating risk to Party most able to control it
    - reduce overall cost
  - Link to connection agreement; joint responsibility
  - In a broad-based IPP programme operational capability and flexibility cannot be sacrificed; system security is sovereign
    - Unit based PPAs subject to scheduling and dispatch

Model Power Purchase Agreement
Basic principles (2)

- Value for money
  - Comprehensive definition of what IPP is offering
  - Detailed description of pricing incentives
  - Use of service linked to operational need/value

Independent Power Producers (IPPs) Purchasing Generation Services

- Available MW
- Loading/ de-loading rates (MW/min)
- Frequency response (speed droop)
- MVAr capability
- Minimum generation
- Minimum on/off times
- Heat rates (fixed and incremental)

Model Power Purchase Agreement
Energy and Availability

- Separating availability and energy payments
  - Availability payments to cover fixed costs
  - Energy payments to cover variable costs
  - Availability payments shaped for contracted operating characteristics

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Model Power Purchase Agreement
Availability payments

- Dispatch independent
- Cover fixed costs of IPP
  - capital costs i.e. construct
  - fixed O & M
  - debt finance
  - return on equity
- Tied to MW availability in each settlement period for each unit

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Model Power Purchase Agreement
Energy payments

- Energy payments to reflect contracted unit heat rates
- Protection of IPP from dispatch risk
- Allows EGAT to optimise across plant via merit order dispatch.
- Allows EGAT to optimise practice of scheduling and reserve

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Model Power Purchase Agreement

Energy payments

- Related to MWh dispatched per unit
- Covers variable costs per unit:
  - fuel costs
  - variable O & M costs
- Calculated for MWh dispatched in each settlement period

Model Power Purchase Agreement
Development security (1)

- EGAT and Government want confident and experienced bidders
  - capable of sticking to commercial operation dates
  - standing by bid promises on contracted operating characteristics

Model Power Purchase Agreement

Development security (2)

- Development security fund
  - set up in tranches over course of development
  - returnable on successful development with relevant interest
  - available to EGAT in the event of default during development
  - an insurance policy
- Liquidated damages
  - insurance against delay in development completion
  - subject to ceiling

Conditions Precedent and Contracted Milestones

- Need to ensure commissioning on time
- Series of intermediate checks to ensure timely progress
- Delaying each event to latest prudent moment
- Example: Fuel contract
  - Heads of Agreement to be available at PP execution date
  - Fuel contract available at energising date

Default

- IPP must have a chance to rectify problems
- EGAT must be compensated for non-compliance with PPA
- EGAT must ultimately be able to take action
- Comprehensive system of:
  - Conditions precedent, contracted obligations and milestones
  - Liquidated damages and development security fund
  - Cure periods followed by termination rights
  - Step-in rights

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Step-in

- In the event of termination, EGAT can step-in
  - If lenders do not wish
  - Step-in is not obligatory
  - Step-in does not imply assumption of liabilities

Model Power Purchase Agreement
Operational security

- Unit based contracted operating characteristics
  - to facilitate efficient scheduling and dispatch
- Payment incentives to:
  - preserve unit capabilities
  - encourage outage programme matching
  - following of dispatch instructions
  - honest declarations
  - maximum notice of problems
- Strong link to monitoring and testing under Grid Code

Model Power Purchase Agreement

Availability incentives

- Payment on basis of BAHT per MWh available per Unit
- Higher payments for availability at peak times
- Some payment during outages if as planned
- Reduced payments if:
  - contracted operating characteristics impaired
  - impairments in capability declared with short notice

Model Power Purchase Agreement

Energy incentives

- Payment on basis of BAHT/MWh sent out per Unit
- Payments linked to:
  - basic cost of fuel (agreed or as per market indicator)
  - heat rates (GJ per hour, per MWh sent out, per operation
  - prior agreements on minimum take (if applicable)
- Focus of payments to:
  - sustain incentive to purchase efficiently
  - sustain unit/plant fuel efficiencies
  - if this, then to preserve indifference to dispatch
- EGAT wants IPPs which are happy to obey dispatch instructions

Model Power Purchase Agreement

Force majeure, changes in law and Termination (2)

- Force majeure events typical
- Change in law events pass risk to EGAT
- Termination events require defaulting party to allow other party to proceed sensibly to meet system needs

Main principles are that Thailand's electricity needs must be met and that risks are properly allocated between parties

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Model Power Purchase Agreement
Conclusions (1)

- Need for model PPA which facilitates success in EGAT's broad-based IPP initiative; bid comparison on clear level playing field
- Value for money includes need for enabling efficient dispatch
- IPPs offered 2-part tariff; availability and energy, no dispatch risk

...el Power Purchase Agreement
Conclusions (2)

- Unit specific payments for availability and energy to incentivise best IPP performance in structure of best value to system
- Development security, force majeure, change in law and termination clauses all designed to allocate risks to party best able to control them
- Believe framework offers rational best start to IPP offers

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PROPOSED MODIFICATIONS TO
REGULATIONS ON THE PURCHASE OF ELECTRICITY FROM INDEPENDENT POWER PRODUCERS
(For power generated from residue fuel or cogeneration only)

THE NATIONAL ENERGY POLICY OFFICE

February 1989

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FOREWORD

At the National Energy Policy Committee (NEPC) meeting on October 24, 1988, the Committee approved a policy guideline that would allow the private sector to generate and sell electricity to the electric utilities. The committee also established a time frame for the implementation of the policy guideline. The first step was to establish, by the end of 1988, regulations on the purchase of electric power generated from residue fuels or cogeneration processes from private power producers.

A draft of the regulations, which has now been completed, was a joint effort between the Electricity Generating Authority of Thailand (EGAT), the Metropolitan Electricity Authority (MEA), and the Provincial Electricity Authority (PEA). The major points covered in the regulations include the encouragement of private sector participation in power generation, the encouragement of increasing the use of primary energy by-products and the improved efficient utilization of primary energy in power generation. The regulations also specify the characteristics of the electricity generation process, the procedures for the purchase of electricity from cogeneration or residue power producers and the criteria for establishing purchase prices. The draft regulations will be discussed in a technical conference to provide an opportunity for comment before the final regulations are issued. The target date for final regulations to be published is March 31, 1989.

Applications for the sale of electricity by cogeneration or residue power producers to the electric utilities will be accepted three months after the official announcement of the regulations and for such period after that date until the amount of power offered to the electricity authorities equals the amount solicited. EGAT will issue solicitations for such power on an annual basis. EGAT will request 300 MW in its first solicitation. The applications submitted will be reviewed by EGAT, coordinating with MEA and PEA, with recommendations presented to the NEPC.

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(SAMPLE)

ANNOUNCEMENT

Reference : REGULATIONS FOR THE PURCHASE OF ELECTRIC POWER FROM PRIVATE COGENERATION OR RESIDUE POWER PRODUCERS

Following the National Energy Policy Committee (NEPC) resolution to promote energy efficiency through the generation of electricity from the efficient utilization of residue fuels or cogeneration processes and NEPC review, the electricity authorities have established regulations and procedures for the purchase of electricity from such power producers.

The Electricity Generating Authority of Thailand, in conjunction with the Metropolitan Electricity Authority and the Provincial Electricity Authority , hereby announces that private entities interested in selling electricity to the electricity utilities are required to follow the procedures and guidelines as per the attached announcement.

Effective on .....

Date of announcement .....

.....

(Mr. Paopat Chavanalikikorn)

The Electricity Generating Authority of Thailand

.....

(Mr. Anant Atilaksana)

The Metropolitan Electricity Authority

.....

(Mr. Veera Pitrachart)

The Provincial Electricity Authority

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REGULATIONS FOR THE PURCHASE OF ELECTRICITY FROM COGENERATION OR RESIDUE POWER PRODUCERS

Contents

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Attached Application form for the sale of electricity

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REGULATIONS FOR THE PURCHASE OF ELECTRICITY FROM COGENERATION OR RESIDUE POWER PRODUCERS

Definitions

' Cogeneration or Residue Power Producer' (CR) refers to an entity which g and sells electricity in accordance with the standards of power generating processes as stated in B.

'Electricity Authorities' (EA) refers to :

The Electricity Generating Authority of Thailand (EGAT)

The Metropolitan Electricity Authority (MEA)

The Provincial Electricity Authority (PEA)

A. Objectives of Purchasing Electricity from Cogeneration or Residue Power Producers

are as follows :

1. To encourage greater private sector participation in power generation.
2. To encourage the utilization of primary energy by-products in the generation of electricity.
3. To stimulate more efficient utilization of primary energy for power generation.
4. To meet the nation's growing needs for generating capacity.

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B. Characteristics of Cogeneration or Residue Power Producers

The Electricity Authorities will buy from the following categories power producers, subject to the limitations described later in these regulati

1. Electricity generated by utilizing renewable, waste or residue fuel from facilities sized less than 50 MW. Renewable, waste and residue fuels include but are not limited to agricultural waste (such as sugar and rice harvesting and processing products dendrothermal projects, wood, municipal garbage biogas, hydro, wind and any other fuel except oil, coal, lignite or natural gas. Electricity generated using oil, gas coal or lignite from these renewable, waste and residue facilities will also be purchased under these regulations provided that generation from residue or waste fuel represents at least 33 percent of the annual generation of kilowatthours at the facility.

2. Cogenerated power from facilities using any fuel where the ratio of useful thermal output (thermal energy made available for use in any industrial or commercial process, or used in any heating or cooling application) to total energy output is no less than 10 percent on an annual basis.

C. The Standard Requirements of Privately-Owned Power Systems

Cogeneration or Residue Power Producers wishing to generate and distribute electricity to the state-owned electricity utilities are required to abide by the established safety standards. In addition, their power lines, when connected to the public utility system, must adhere to the technical specifications as set by each electricity authority accordingly. Interconnection requirements are appended to these regulations.

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D. Power Purchasing Procedures

The procedures for purchasing electricity from Cogeneration or Residue Power Producers are as follows:

1. CRs wishing to sell electricity to the electricity authorities must submit their applications at the Electricity Generating Authority of Thailand's headquarters at Tambon Bangruey, Amphoe Bangruey, Nonthaburi Province.

2. In addition to the application form, other documents detailing the following information are also required :

2.1 The juristic entity registration and the prospectus.

2.2 Maps showing the location of the plant and its layout.

2.3 A description of the power generating site.

2.4 Details of thermal utilization in the production process of the plant and the characteristics of the power generation process.

2.5 Descriptions of details of electricity generators, prime movers and their technical specifications.

2.6 Single line diagrams and metering and relaying diagrams illustrating how the plant is to be connected to the public power system.

2.7 The amount of power consumption and the proposed procedure for supplying power into the public power system.

2.8 The number of power generator operators the facility will employ, and the requirements for operator educational levels and engineering licenses.

3. The result of the application will be announced within 90 days after the submission of all the required documents.

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4. EGAT will make the standard contract attached to these regulations available to CRs approved to sell electricity to the EA. CRs may, at their option, negotiate non-price terms of the standard contract with EGAT to suit the requirements of the facility. CRs approved to sell electricity to the EA are required to sign a contract with EGAT within one year after the date of approval.

E. Criteria for Power Purchase

The criteria for purchasing electricity from the CR are established as follows:

1. EGAT will be the sole purchaser of electricity. unless the CR, EGAT and MEA or PEA as appropriate agree otherwise.
2. The electricity authorities will purchase electricity from facilities that meet the characteristics of a CR as described in Section B in an amount up to the amount solicited.
3. CRs may not sell electricity to the electric authorities without a contract for the sale of that power.
4. The CR is required to submit permits for plant construction, equipment installation, and electricity production and distribution no more than eighteen months after the signing of the contract.
5. In the event more electrical capacity is offered to the electricity authorities than the amount solicited (300 MW in its first solicitation), the electricity authorities reserve the right to select those CR proposals that best meet the requirements of the electricity authorities.
6. The electricity authorities retain the right to inspect the CR's electricity distribution equipments and to request the correction of defective equipment if does not meet the requirements of these regulations.

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F. Electricity Purchasing Point

The purchasing point is designated as the connecting point betwee the CR's lines and the main public power system.

G. Expenses of CR

1. Main system power connection costs.

The total cost of connecting power to the main system, namely, the costs associated with electricity distribution, metering, safety measures, and additional operating expenses incurred by the electricity authorities must be incurred by the CR.

2. Equipment inspection costs.

The CR is required to pay all inspection costs as stated in E.7, whether the inspections are prescribed by the electricity authorities or requested by the CR. The CR is required to pay for such costs within 30 days of receiving payment notification from the electricity authorities.

H. Criteria for Determining the Purchase Price

Prior to its solicitation for purchases of electricity from CRs, EGAT will establish a level for capacity payments to projects accepted in that solicitation. The level of capacity payments will be established based on the estimated capacity costs of new generation units planned by EGAT in the time period covered by the solicitation . For the purpose of its first solicitation, the level for capacity payments will equal 2660 Baht per Kilowatt per year. The capacity value, in kilowatts, will be allocated in a manner shown in the capacity payments section below.

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The energy price will be announced on a yearly basis, and will commence on the first day of each calendar year. The calculation will be performed in a consistent manner each year.

During the peak and partial load periods, the price will be calculated by adding 25% to the average energy costs and operating and maintenance costs incurred by EGAT's thermal power plants during the prior fiscal year.

During the light load period, the price will be calculated by adding 25% to EGAT's average energy cost incurred by EGAT's thermal power plants during the prior fiscal year.

If, however, EGAT estimates that the energy costs it will avoid by purchasing from cogeneration and residue plants in the calendar year exceeds the values specified above, then EGAT will pay CRs the energy costs it estimates it will avoid by purchasing from such facilities for the calendar year. EGAT shall provide its estimates of the energy costs it will avoid and the details of its calculation to the National Energy Policy Committee for review prior to each calendar year. Such avoided energy costs will be calculated on a bahts per kilowatthour basis for Peak, Partial peak and Light Load Periods.

Capacity Payment

The Annual Capacity Value of the term of the agreement will equal _____Baht per Kilowatt per year (2640 Baht for the first solicitation). [Explanatory note : the annual figure of 2640 baht proposed for the first solicitation is equivalent to 220 baht per Kilowatt per month ; attachment A outlines the method used to derive this figure.] The Monthly Capacity Value

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will equal the Annual Capacity Value multiplied by the Monthly Ratio for each month, where the Monthly Ratio is EGAT's peak electric demand for the corresponding month in the prior year divided by the sum of EGAT's twelve monthly peak electric demands for the prior year.

The monthly capacity payment for the term of the agreement will equal the Monthly Capacity Value multiplied by the Net Dependable Capacity of the facility. The Net Dependable Capacity of the facility shall be defined as the lesser of :

(i) The Monthly Stated Capacity ; or

(ii) Monthly Peak Capacity minus [10% x (Monthly Stated Capacity minus Monthly Peak Capacity)]

where :

Monthly Stated Capacity is the amount of dependable capacity that the CR intends to provide to EGAT. The CR will specify Monthly Stated Capacity in kilowatts for each month in the year at the time of contract signing. The CR may respecify Monthly Stated Capacity at three year intervals following the contract signing based on the actual experience of the facility

Monthly Peak Capacity is equal to the sum of : (i) .7x [Peak Period kwh deliveries in month/ (.8x hours in Peak Period in month)]; and (ii) .3x [Partial Peak Period kwh deliveries in month/ (.8x hours in Partial Peak Period in month)].

EGAT may propose allocation factors other than 70% Peak Period and 30% Partial Peak period in subsequent solicitations.

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Losses

The energy and capacity payments described above shall be increased by a percentage value (loss factor) equal to the estimated reduction in system losses that the CR will provide. The loss factor for CRs delivering power to the transmission or subtrancmission system (above 15000 volts) will be 4.30% in 1989. The loss factor for CRs delivering at distribution voltages (at or below 15000 volts) will be 10.38% in 1989. [Explanatory note : attachment B shows EGAT's tabulation of transmission and distribution losses; the 1987 values have been used in this proposal.] EGAT may however, conduct a loss study for any CR that it believes will reduce losses by less than these loss factors. If the loss study shows a lower value of loss reduction then EGAT may employ such lower loss factor. The loss factor will be adjusted annually based on EGAT, MEA and PEA average transmission, subtransmission and distribution losses for the prior year.

1/ NOTE

Peak and Partial Peak

Purchase Price = (Energy Cost + Operating Costs + Maintenance Cost of EGAT's thermal plants) + 25%

Light Load

Purchase Price = Energy Cost of thermal plants + 25%

Note that the 3 periods are

Peak	18.30-21.30
Partial Peak	08.00-18.30
Light	21.30-08.00

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I. Terms of payment

Monthly payments for the purchase of electricity will be made within 30 days upon the receipt of payment notifications.

J. Damages to the main power system

The CR will be held responsible for all damage done to their own power system if the cause of damage originates from within their own plant.

The CR will also be held responsible for all damage done to the main public power system if the damage is caused by the CR's operating error or by a failure of the CR's own equipment.

Note Any CR wishing to purchase electricity from the electricity authorities must follow the normal procedures established by the authorities for all prospective users. The purchase price from the electricity authorities is the same as for other customers.

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Form EGAT RF-1

Economic Policy Division

The Electricity Generating Authority of Thailand

Receipt No.....

Date Received.....

Signed.....

(Receiver)

APPLICATION FOR ELECTRICITY SALE

Address .....

Date.....Month.....Year.....

Name ..... Age ..... Nationality .....

Race ..... Home address number ..... Trok/Soi .....

Province ..... Telephone number .....

I am submitting the application in the capacity of .....

Name of the company .....

Headquaters address ..... Telephone number .....

Plant location ..... Telephone number .....

I hereby submit this application form for the sale of electricity to the state electricity authorities. The following additional documents are attached.

1. The Juristic entity registration and the prospectus
2. Maps showing the location of the plant and its layout.
3. A description of the power generating site.
4. Details of thermal utilization in the production process of the plant and the characteristics of the power generation process.
5. Descriptions of details of electricity generators, prime movers and their technical specifications.

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6. Single line diagrams and metering and relaying diagrams illustrating how the plant is to be connected to the public power system.
7. The amount of power consumption and the proposed procedure for supplying power into the public power system.
8. The number of power generator operators the facility will employ, and the requirements for operator's educational levels and their engineering licenses.

I hereby certify that the above information and the documents attached are true and correct.

Signed.....Applicant

(.....)

Position .....

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Descriptions of Details of Electricity Generators and Prime Movers

1. Power generator

- Type of electricity generator
- Capacity (Kilowatt per unit)
- Rated Voltage
- Rate Current
- Rotation (Round per minute)
- System (phase, line number)
- Frequency (Round per minute)
- Power factor (%)
- Engine condition
- Manufacturer
- Serial number

2. Prime mover

- Type (combustion, thermal gas turbine, steam turbine)
- Horse power
- Rotation
- Fuel (Diesel, natural gas, etc.)
- Number of piston or stage
- Engine condition (%)
- Manufacturer
- Serial number

Detail of the Safety System

1. Metering and safety equipment

- Amp. Meter
- Volt meter
- Demand meter
- Frequency and Kilowatt hour meters
- Fuse
- Cut-out
- Circuit Breaker
- Relay

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(Sample)

(EGAT Trademark)

ANNOUNCEMENT

THE PURCHASE PRICE OF ELECTRICITY FROM

COGENERATION ON RESIDUE POWER PRODUCERS

With reference to the regulation for the purchase of electricity from Cogeneration or Residue Power Producers, the Electricity Generation Authority of Thailend will buy electricity, during the 1989 fiscal year, based on the following rates.

A. Energy price

A.1	During the peak load period	00.60 Baht/kwh
A.2	During the partial peak load period	00.80 Baht/kwh
A.3	During the light load period	00.75 Baht/kwh
	Capacity Price	220 Baht/Kw/month

The above prices are effective as of October 1, 1988.

Announcement date : September 30, 1988

.....

(Mr. Paophat Chaovanalikikorn)

General Manager

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Attachment A:

Method for Derriving

Avoided Capacity Cost

Source: PDP 88-02 p 35-36 Summary of Sources of Financing 1989 Commitments

Bang Pakong Combined Cycle Block3	(300 MW)	$198.25 million U.S.
Bang Pakong Combine Cycle Block4	(300)	169.96
Krabi Lignite Unit 4	(75)	119.72
Nam Phong Combined Cycle Blocks 1-2	(210)	167.50
Mae Moh Unit 11	(300)	251.33
Lan Krabu Combined Cycle (steam turbine)	(50)	50.08
New Combined Cycle Block 1	(300)	207.52
New Combined Cycle Block 2	(300)	170.58
New Combined Cycle Block 3	(300)	187.09
Bang Pakong Thermal Unit 4	(600)	412.39
Total	2735 MW	$1934.36 million

Average cost/KW = $ 1,934.36 million/2,735 MW = $707/KW

For Thailand Power Tariff Structure study, a 12% annuity over 25 years is used, or a.1275 annual factor. Adding operation and maintenance cost to this (note no taxes in calculation) gives about a 15% annual charge rate.

$707 x .15 x 25 $\frac{\text{Baht}}{\text{dollar}}$ 12mo/yr = 220 Baht/kw-month

Operation and Maintenance - 1988 " Other Generating Expenses"/Installed MW

= 2,593,000,000 Baht/6,894,200 kw

= 376 Baht/kw-yr

Operation and Maintenance /Capacity cost = 376/(220x12) = 14.2%

Annual charge rate = .1275 x 1.142 = .146, or approximately 15%

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LEVEL OF GENERATION, TRANSMISSION AND DISTRIBUTION LOSSES

Year	Energy Generation (GWh)	Generating losses		Transmission and Substation losses1/		Distribution losses (MEA and PEA)		Total Losses (EGAT MEA and PEA)	
		GWh	%	GWh	%	GWh	%	GWh	%
1980	14,753.73	590.45	4.00	583.95	3.96	845.13	5.73	2,019.52	13.69
1981	15,959.97	612.29	3.84	842.06	5.28	870.24	5.45	2,324.59	14.57
1982	16,801.95	602.49	3.57	917.49	5.43	870.52	5.16	2,390.49	14.16
1983	19,066.30	659.05	3.46	901.17	4.73	1,157.17	6.07	2,717.38	14.25
1984	21,066.44	830.10	3.94	931.63	4.42	1,336.86	6.35	3,098.58	14.71
1985	23,356.74	1,022.81	4.38	1,167.20	5.00	1,392.43	5.96	3,582.44	15.34
1986	24,779.53	1,010.03	4.08	1,335.38	5.39	1,483.63	5.99	3,829.04	15.45
1987	28,193.16	1,154.68	4.10	1,211..46	4.30 2/	1,714.43	6.08	4,080.52	14.47

Source : PDP 8802-Vol.1

Notes : 1/ Including MEA and PEA Sub-Transmission, street lighting, mining and construction used.
2/ Reduction of about 1 percent transmission loss was due to the commissioning of Mae Moh-Mae Tako 500 kV line (4x795 MCM ACSR conductor per phase), which is being energized at 230 kV; the installations of reactive power compensation equipment such as static VAr control (SVC) at Chumphon and shunt capacitor banks.

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MASSACHUSETTS ELECTRIC COMPANY

REQUIREMENTS FOR INTERCONNECTION OF QUALIFYING SMALL POWER PRODUCERS AND COGENERATORS WITH MASSACHUSETTS ELECTRIC COMPANY

Any Small Power Producer or Cogenerator ("QF") wishing to interconnect with the Company's electrical distribution system mu meet the requirements set forth in this policy before the Company will interconnect with the QF. Once interconnected, the Company may disconnect from the QF if the QF departs from this policy's requirements. The QF must return to full compliance with this policy prior to reconnecting.

I. To prevent inadvertent and unwanted re-energization of a dead Company line or bus, the QF must install and maintain the following equipment:

A. A circuit breaker must be installed to isolate the QF's generation from the Company's system whenever the Company side of the interconnection is dead. A voltage transformer must be connected either phase to phase, or phase to ground, on the Company side of the circuit breaker. The voltage transformer must supply an undervoltage relay that will open the circuit breaker when voltage is at 75% or less of normal voltage and prevent

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the closing of the circuit breaker until Company volt is restored to normal. If the voltage transformer is connected phase to ground, it must be rated for phase phase voltage and have a loading resistor to prevent ferroresonance. The voltage relay must have time dela using suitable interlocks, the QF may disable the undervoltage relay whenever the generator is not runnin so that the QF's load will remain connected to the Com during abnormal voltage conditions on the Company's system. For 120V systems, the voltage transformer may be omitted.

B. The Company shall have the right to open the interconnection at any time to maintain the line. The may continue to generate to meet its own loads, but must have an open switch at the interconnection. The open switch must have a visible air break that can be locked open, tagged, and grounded on the Company side by Compa personnel.

C. QFs operating induction generators do not require the protection described in this paragraph I unless the Company specifically finds that protection is required during its interconnection inspection.

II. To prevent interconnection while out of synchronization, the Q must install and maintain the following equipment:

A. Two voltage transformers with correct polarity and phasi must be installed to synchronize the generator with the Company's system. One shall be installed on each side c

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the circuit breaker. They shall supply a synchroscope monitoring the primary system that must be energized before the circuit breaker can be closed.

B. Non-directional overcurrent relays supplied by current transformers in the generator circuit must be installed with a setting suitable to detect an out-of-phase connection. The relays shall be designed to trip the circuit breaker.

C. The circuit breaker used for synchronizing the generator must be capable of withstanding at least twice the circuit voltage. Also, it must be capable of interrupting the current produced when the generator, at full voltage, is connected to the Company's line 180° out of phase, which may produce more current than a short circuit.

D. This paragraph II shall not apply to QFs operating induction generators.

III. To detect and prevent ground faults, the QF must install and maintain the following equipment:

A. For interconnections having a transformer between the generator and the Company with an ungrounded winding at the Company voltage, a voltage transformer must be installed and connected phase to ground on the Company side of the transformer or the Company side of a circuit breaker. The voltage transformer must be rated for the circuit phase to phase voltage, and have a loading resistor to prevent ferroresonance. This may be the same

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voltage transformer used under paragraph IA. One undervoltage relay and one overvoltage relay supplied by this voltage transformer must be installed to detect ground faults and trip the appropriate circuit breaker, under paragraph IA. The voltage relays must have time delay. The requirements of this paragraph IIIA shall not apply to single phase interconnections connected phase to phase.

B. For interconnections having a transformer between the generator and the Company with a grounded winding at the Company voltage:

(i) Three Phase Interconnection: A study must be performed to determine whether a voltage or a current method of ground fault detection must be used.

(ii) Single Phase Interconnection: No special ground fault detection method is needed as it is provided under paragraph IA as dead line detection.

C. For interconnections having no transformer between the generator and the Company:

(i) 480/277V Systems: A voltage transformer must be installed on each phase connected phase to ground with a undervoltage relay on each transformer. The relays shall be designed to trip the appropriate circuit breaker after a time delay.

(ii) 208/120V Systems: An undervoltage relay must be installed on each phase connected phase to ground. The

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relays shall be designed to trip the appropriate circuit breaker after a time delay.

(iii) 120/240V Single Phase Systems: When the generator is 240V, two undervoltage relays must be installed and connected from each side to ground. When the generator is 120V, one undervoltage relay must be installed and connected to the same 120V side as the generator. These relays shall be designed to trip the appropriate circuit breaker after a time delay.

D. This paragraph III shall not apply to QFs operating induction generators.

IV. To prevent frequency outside permissible limits, the QF shall install and maintain the following equipment:

A. A voltage transformer with 115V or 120V normal output, connected to either the generator voltage or the Company voltage, must be installed to supply an underfrequency relay and an overfrequency relay. These relays shall be designed to trip the appropriate interconnection circuit breaker after a time delay. The permissible limits are approximately 59Hz to 61Hz.

The frequency relays are not expected to operate while the QF is interconnected with the Company. They should not be connected to the generator side of the circuit breaker used for synchronizing.

B. Induction generators do not require frequency relays.

V. To prevent voltage generated outside permissible limits, the QF

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shall install and maintain the following equipment:

A. (i) Three Phase Generators: A voltage transfor connected phase to phase or phase to ground at th Company voltage must be installed to supply voltag relays when a three phase generator is used. If a voltage transformer is connected phase to ground, must be rated for the phase to phase voltage and have a loading resistor to prevent ferroresonance. It may be the same voltage transformer installed t meet the requirements of paragraph IA. An undervoltage and an overvoltage relay must be installed to trip the appropriate interconnection circuit breaker after a time delay. The permissibl voltage limits are approximately 114V to 126V when 120V is the normal.

The voltage relays are not expected to operat while the QF is interconnected with the Company.

By using suitable interlocks, the QF may disable the voltage relays whenever the generator i not running so that the QF's load will remain connected to the Company during abnormal voltage conditions on the Company's system.

The voltage transformers may be connected to the generator voltage level with suitable adjustmen in the relay settings to compensate for the power transformer ratio.

(ii) Single Phase Generators: When the generator

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is single phase, the voltage measurement will be made on the phase used by the generator.

B. No voltage transformer is needed when the interconnection is at 120V.

C. The voltage relays must be frequency compensated to have the same calibration at frequencies 30Hz to 90Hz.

D. An undervoltage relay must be installed for induction generators, but the overvoltage relay is not required. The undervoltage relay is not ordinarily required for induction

generators having a capacity of 30KW or less.

VI. Additional Information and Requirements:

A. The Company may require the QF to discontinue generating or to disconnect from the Company's system whenever other customers complain about poor electrical service and the Company believes that the QF's generation may be the cause. Interconnection may be resumed when it is determined that the QF has not caused the condition or when the QF has taken corrective action satisfactory to the Company.

B. The Company will assist communication companies in determining the source and type of interference caused by the QF interconnection with the electrical circuit.

C. The Company shall have the right to automatically reclose circuit breakers after they have tripped open without determining whether the QF is keeping the circuit energized.

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D. The Company reserves the right to refuse to interconnect or to discontinue an interconnection, with a QF if:

(i) The anticipated voltage flicker will be objectionable to other customers.

(ii) The anticipated voltage regulation will be objectionable to other customers.

(iii) The anticipated harmonic generation and waveform distortion will affect communication facilities.

(iv) The limits of toleration for flicker, voltage regulation and waveform distortion, as defined by appropriate standards, have already been reached on the circuit due to previous interconnections with QFs or other customers.

E. The QF must not reduce the reliability or the power factor of the circuit below the level that existed prior to the QF's interconnection.

F. The Company shall have the right to review and approve the interconnection plans and the specifications for equipment proposed to be used by a QF before effecting an interconnection.

G. Before the initial interconnection and as required thereafter, the Company shall have the right to calculate or check the relay settings and either test or witness the testing of the relays. The relays must be tested by the QF on a periodic basis, not less than once every four years.

H. The QF must not add generators or replace generators with

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a different type or larger size without first notifying the Company and complying with this policy's requirements. The QF may, however, reduce generation without notice.

I. The Company may transfer the distribution circuit to a different substation, change voltage levels or use the circuit for underfrequency load shedding after providing the QF with notice.

J. The QF must coordinate its protective relaying with the protective devices on the distribution circuit, and if necessary, install special relays and communication, such as pilot wire protection.

K. The QF must provide protection for its equipment and remove all faults from the Company circuit in a manner that coordinates with the circuit protection. The QF shall be solely responsible for the protection of its own equipment.

L. The attached diagram provides an example of the minimum protective requirements for interconnection with and operation of a QF's generators. Note that small induction generators require significantly less protection and are considered on an individual basis.

Effective Date: March 1, 1984

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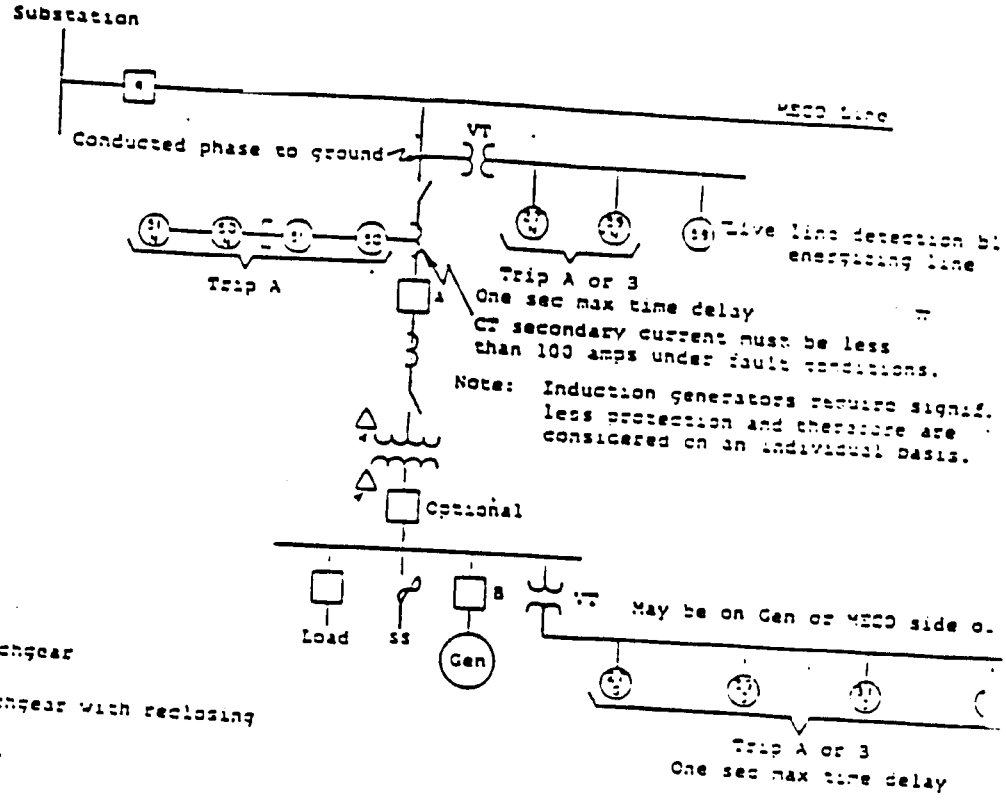
TYPICAL MINIMUM PROTECTION REQUIREMENTS FOR INTERCONNECTION AND OPERATION OF CUSTOMER'S GENERATOR



SYMBOLS

- Switchgear
- Switchgear with reclosing
- Relay
- Transformer
- CTs
- Fuses
- Undervoltage-Gen (1)
- Undervoltage-MECO Line ground fault (1)
- Overcurrent-Instantaneous, phase (2 or 3)
- Overcurrent-Instantaneous, ground (1)
- Overcurrent-Inverse Time, phase (2 or 3)
- Overcurrent-Inverse Time, ground (1), Optional
- Overvoltage-Instantaneous, blocking (1)
- Overvoltage-Gen (1)
- Overvoltage-MECO Line ground fault (1)
- Overfrequency (1)
- Underfrequency (1)
- Timer-if necessary

NOTES

Synchronizing not shown

Fuses may be used in place of switchge under certain conditions

Additional relays may be required by .

Customer relay protection is not show

Surge voltage protection is not show

Metering is not shown

Effective Date: March 1, 1984

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ANNEX 4

EGAT DRAFT REGULATIONS

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REGULATIONS ON THE PURCHASE OF ELECTRICITY FROM INDEPENDENT POWER PRODUCERS

(For power generated from residue fuel or cogeneration only)

THE ELECTRICITY GENERATING AUTHORITY OF THAILAND
THE METROPOLITAN ELECTRICITY AUTHORITY
THE PROVINCIAL ELECTRICITY AUTHORITY

December 1988

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FORWARD

At the 1/1988 National Energy Policy Committee meeting on October 24, 1988, the Committee approved a policy guideline that would allow the private sector to generate and sell electricity to the electric utilities. The committee also established a time frame for the implementation of the policy guideline. The first step was to establish, by the end of 1988, regulations on the purchase of electric power generated from residue fuels or cogencration processes from private independent power producers.

A draft of the regulations, which has now been completed, was a joint effort between the Electricity Generating Authority of Thailand (EGAT), the Metropolitan Electricity Authority (MEA), and the Provincial Electricity Authority (PEA). The major points covered in the regulations include the encouragement of private sector participation in power generation, the encouragement of increasing the use of primary energy by-products and the improved efficient utilization of primary energy in power generation. The regulations also specify the characteristics of the electricity generation process, the procedures for the purchase of electricity from the independent power producers and the criteria for establishing purchase prices. When finalized, the regulations would be announced to the public.

Applications for the sale of electricity by independent power producers to the electric utilities will be accepted six mounths after the official announcement of the regulations. The applications submitted will be jointly reviewed by all three electricity authorities.

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(SAMPLE)

ANNOUNCEMENT

Reference : REGULATIONS FOR THE PURCHASE OF ELECTRIC POWER FROM PRIVATI INDEPENDENT POWER PRODUCERS

Following the National Energy Policy Committee resolution to proc energy efficiency through the generation of electricity from the effic utilization of residue fuels or cogeneration processes, the the electric authorities have established regulations and procedures for the purchase electricity from independent power producers.

The Electricity Generating Authority of Thailand, the Metropolita Electricity Authority and the Provincial Electricity Authority hereby annou that private entities interested in selling electricity to the electrici utilities are required to follow the procedures and guidelines as per th attached announcement.

Effective on .....

Date of announcement .....

.....

(Mr. Paopat Chavanalikikorn)

The Electricity Generating Authority of Thailar

.....

(Mr. Anant Atilaksana)

The Metropolitan Electricity Authority

.....

(Mr. Veera Pitrachart)

The Provincial Electricity Authority

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REGULATIONS FOR THE PURCHASE OF ELECTRICITY FROM THE PRIVATE INDEPENDENT POWER PRODUCERS

(For power generated from residue fuel or cogeneration only)

Contents

Definition

A. The objectives of purchasing electricity from independent power producers

B. Characteristics of independent power producers

C. The standard requirements of privately owned power systems

D. Power purchasing procedures

E. Criteria for power purchase

F. Purchasing point

G. Expenses of independent power producers

H. Criteria for Determining the purchase price

I. Terms of payment

J. Damage to electrical systems

Attached Application form for the sale of electricity

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REGULATIONS FOR THE PURCHASE OF ELECTRICITY FROM INDEPENDENT POWER PRODUCE

(For power generated from residue fuel or cogeneration only)

Definition

"Independent Power Producer" (IPP) refers to an entity which gener and sells electricity in accordance with

the standards of power generating processe as stated in B.

"Electricity Authorities" (EA) refers to :

The Electricity Generating Authority of Thailand (EGAT)

The Metropolitan Electricity Authority (MEA)

The Provincial Electricity Authority (PEA)

A. Objectives of Purchasing Electricity from Independent Power Producers

are as follows :

1. To encourage greater private sector participation in power generatic
2. To encourage the utilization of primary energy by-products in the generation of electricity.
3. To stimulate more efficient utilization of primary energy for power generation.

B. Characteristics of Independent Power Producers

The Electricity Authorities will consider buying fro the followin categories of power producers :

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1. Electricity generated by utilizing residue fuel ;
2. Cogenerated power optimizing the ratio betwe.. waste heat and electricity generation by taking into consideration the heating requirements of that private entity.

C. The Standard Requirements of Privately-Owned Power Systems

Independent power producers wishing to generate and distribute electricity to the state-owned electricity utilities are required to abide by the established safety standards. In addition, their power lines, when connected to the public utility system, must adhere to the technical specifcations as set by each electricity authority accordingly.

D. Power Purchasing Procedures

The procedures for purchasing electricity from independent power producers are as follows:

1. IPPs wishing to sell electricity to the electricity authorites must submit their applications at the Electricity Generating Authority of Thailand's headquarters at Tambon Bangruey, Amphoe Bangruey, Nonthaburi Province.

2. In addition to the application form, other documents detailing the following information are also required :

2.1 The juristic entity registration and the prospectus.

2.2 Maps showing the location of the plant and its layout.

2.3 A description of the power generating site.

2.4 Details of thermal utilization in the production process of the plant and the characteristics of the power generation process.

2.5 Descriptions of details of electricity generators, prime movers and their technical specifications.

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2.6 Single line diagrams and metering and relaying diagrams illustrating how the plant is to be connected to the public power system.

2.7 The amount of power consumption and the proposed procedure for supplying power into the public power system.

2.8 The number of power generator operators, and the operator's educational records and engineering licenses.

3. The result of the application will be announced within 90 days af the submission of all the required documents.

4. IPP approved to sell electricity to the EA are required to sign contract with EGAT within one year after the date of approval

E. Criteria for Power Purchase

The criteria for purchasing electricity from the IPP are establis as follows:

1. EGAT will be the sole purchaser of electricity.
2. The electricity authorities will purchase electricity from licensed IPP only.
3. The generating capacity and the amount of electricity supplied to the main grid by the IPP must receive prior approval from EA and must not exceed 50 MW.
   The amount of electricity purchased will be determined by system capability and security (in accordance with the authorities' technical standards).
4. IPP is required to submit permits for plant construction, equipment installation, and electricity production and distribution on the day of the signing of the contract.

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5. The electricity authorities reserve the right to determine the starting date for the purchase of electricity from IPP.
6. Officials of the electricity authorites are entitled to operate the switching system in the IPP's power plant, though IPP may be allowed to operate the system themselves. In the latter case, private producers must observe the authorities' switching orders to ensure the maximum safety of both party's operators.
7. The electricity authorities retain the right to inspect the IPP's electricity distribution equipments and to request the correction of defective equipments if necessary.

F. Electricity Purchasing Point

The purchasing point is designated as the connecting point between the IPP's lines and the main public power system.

G. Expenses of IPP

1. Main system power connection costs.
The total cost of connecting power to the main system, namely, the costs associated with electricity distribution, metering, safety measures, and additional operating expenses incurred by the electricity authorities must be incurred by the IPP.

2. Equipment inspection costs.
IPP is required to pay all inspection costs as stated in E.7, whether inspections are prescribed by the electricity authorities or requested by the IPP in addition to all additional operating costs incurred by the electricity authorities. IPP

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is required to pay for such costs within 30 days of receiving payment notification from the authorities.

H. Criteria for Determining the Purchase Price

The purchase price will be announced on a yearly basis, and wi commence from the first day of each fiscal year. The criteria for determi the purchase price are based on the ways power is discharged into the pu power system; these can be classified into 2 types.

Type 1 If the amounts of electricity and the time periods of dischar power from IPP into the public power system are unreliable the purchase p will be calculated by adding 25% to the average energy cost incurred by EG thermal power plant during that particular year:

Purchase price = Average Energy Cost of EGAT'S thermal Plant + 25%

Type 2 If the power to be discharged has high degree of reliability dur the peak load period and if the amount discharged remains fairly regular purchse price will be calculated according to 3 separate time periods as fol

1. During the peak load period, the price will be calculated by adding 25% to the combined total of the energy costs, operating costs, maintenance costs, and depreciation costs incurred by EGAT's thermal power plant during that particular year.

2. During the partial peak load period, the price will be calculated by adding 25% to the combined total of the energy costs and the average operating costs incurred by EGAT thermal power plant during that year. However, the amount of electricity priced at the partial peak load rate must not exceed the average hourly peak load

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demand. The amount of electricity supplied that exceeds the average hourly peak load demand level will be priced at the light load rate.

3. The purchasing price during the light load rate will be priced at the same rate as Type 1 purchase price. 1/

Fines IPP agreeing to the type 2 contract will be subject to fines under the following conditions:

1. IPP failing to meet the peak and the partial load supply agreements will be fined 10% of the value of the amount of electricity undersupplied.
2. If the amount of electricity supplied annually from IPP is lower than the amount agreed upon for three consecutive years, the purchase price will automotically revert to the Type 1 purchase price.

1/ NOTE

Peak

Purchase Price = (Energy Cost + Operating Costs + Maintenance Cost + Depreciation of thermal plant) + 25%

Partial Peak

Purchase Price = (Energy Cost + Operating Cost of thermal plant) + 25%

Light Load

Purchase Price = Energy Cost of thermal plant + 25%

Note that the 3 periods are

Peak	18.30-21.30
Partial Peak	08.00-18.30
Light	21.30-08.00

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I. Terms of payment

Monthly payments for the purchase of electricity will be made wit 45 days upon the receipt of payment notifications.

J. Damages to the main power system

IPP will be held responsible for all damage done to their own pow system whether the causes of damage originate from within their own plant from the public power system.

IPP will also be held responsible for all damage done to the publ main power system whether the damage is caused by a failure of their equipment or by the public power system.

Note IPP wishing to purchase electricity from the electricity authorities mu follow the normal procedures established by the authorities for prospective users. The purchase price from the electricity authorities a the same as other customers.

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Form EGAT RF-1

Economic Policy Division

The Electricity Generating Authority of Thailand

Receipt No.....

Date Received.....

Signed.....

(Receiver)

APPLICATION FOR ELECTRICITY SALE

Address .....

Date.....Month.....Year.....

Name ..... Age ..... Nationality .....

Race ..... Home address number ..... Trok/Soi .....

Province ..... Telephone number .....

I am submitting the application in the capacity of .....

Name of the company .....

Headquaters address ..... Telephone number .....

Plant location ..... Telephone number .....

I hereby submit this application form for the sale of electricity to the state electricity authorities. The following additional documents are attached.

1. The Juristic entity registration and the prospectus
2. Maps showing the location of the plant and its layout.
3. A description of the power generating site.
4. Details of thermal utilization in the production process of the plant and the characteristics of the power generation process.
5. Descriptions of details of electricity generators, prime movers and their technical specifications.

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6. Single line diagrams and metering and relaying diagrams illustrating how the plant is to be connected to the public power system.
7. The amount of power consumption and the proposed procedure for supplying power into the public power system.
8. The number of power generator operatrs, and the operator's educational records and their engineering licenses.

I herely certify that the above information and the docum attached are true and correct.

Signed.....Applicant
(.....)
Position .....

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Descriptions of Details of Electricity Generators and Prime Movers

1. Power generator

- Type of electricity generator
- Capacity (Kilowatt per unit)
- Rated Voltage
- Rate Current
- Rotation (Round per minute)
- System (phase, line number)
- Frequency (Round per minute)
- Power factor (%)
- Engine condition
- Manufacturer
- Serial number

2. Prime mover

- Type (combustion, thermal gas turbine, steam turbine)
- Horse power
- Rotation
- Fuel (Diesel, natural gas, etc.)
- Number of piston or stage
- Engine condition (%)
- Manufacturer
- Serial number

Detail of the Safety System

1. Metering and safety equipment

- Amp. Meter
- Volt meter
- Demand meter
- Frequency and Kilowatt hour meters
- Fuse
- Cut-out
- Circuit Breaker
- Relay

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(Sample)

(EGAT Trademark)

ANNOUNCEMENT

THE PURCHASE PRICE OF ELECTRICITY FROM PRIVATE INDEPENDENT POWER PRODUC

With reference to the regulation for the purchase of electricity from independent power producers (for power generated from residue fuel cogeneration only), the Electricity Generation Authority of Thailand will electricity, during the 1989 fiscal year, based on the following rates.

A.	Type 1 purchasing price	00.75 Baht/kwh
B.	Type 2 purchasing price	
	B.1 During the peak load period	00.91 Baht/kwh
	B.2 During the partial peak load period	00.80 Baht/kwh
	B.3 During the light load period	00.75 Baht/kwh

The above prices are effective as of October 1, 1988.

Announcement date : September 30, 1988

.....

(Mr. Paophat Chaovanalikikorn)

General Manager

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~~ANNEX 5~~

MODEL POWER PURCHASE AGREEMENT

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MEMORANDUM

DATE : February 22, 1989

From : John Levett

Peter Barre

TO: Dr. Piyasvasti Amranand

Director, National Energy Policy Office

SUBJECT Draft Model power Purchase Agreement

Attached please find a draft power purchase agreement for use with cogeneration and residue/renewable/waste energy power projects.

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AGREEMENT dated as of _____ between _____ ("Seller") and the Electric Generating Authority of Thailand ("EGAT")

ARTICLE I. BASIC UNDERSTANDINGS

Seller intends to own and operate a [cogeneration or resid fueled] electric power generating facility (the "Facility") located _____. The Facility will have a generating capability approximately _____ kilowatts.

Subject to the following terms, Seller agrees to sell and Eg agrees to purchase the entire Net Electric Output of the Facility.

ARTICLE II. DEFINITIONS

Whenever used in this Agreement, the following terms shall be defin as follows:

"Electric System" shall mean the electric system of EGAT and/or the electric system of the Metropolitan Electricity Authority and/or the Provincial Electricity Authority.

"Utility Practice(s)" shall mean the practices that, at particular time, in the exercise of reasonable judgement in light of the facr known or that should have been known at the time a decision was made, would have been expected to accomplish the desired result in a manner consistent wit law, regulation, reliability, safety, environmental protection, economy an expedition. With respect to the Facility, Good Utility Practice includes bu is not limited to taking reasonable steps to provide that:

(1) adequate materials, resources and supplies, are available to meet the Facility's needs;

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(2) Sufficient operating personnel are available and are adequately experienced, trained and licensed to operate the Facility properly and are capable of responding to emergency conditions whether caused by events on or off the site of the Facility;

(3) routine and non-routine maintenance and repairs are performed on a basis that promotes reliable long-term and safe operation, and are performed by trained and experienced personnel utilizing proper equipment and tools;

(4) appropriate monitoring and testing is done to ensure equipment is functioning as designed;

(5) equipment is not operated in a reckless manner, or in a manner unsafe to workers, the general public or the environment or without regard to defined limitations such as steam pressure, temperature and moisture content, chemical content of make-up water, flood conditions, safety inspection requirements, operating voltage, current, frequency, rotational speed, polarity, synchronization, control system limits, etc.;

(6) equipment will function properly under both normal and emergency conditions.

"Light Load Energy Rate" shall mean 125 percent the average energy cost incurred by EGAT's thermal power plants during the prior fiscal year (October). A calculation of Light Load Energy Rate for 1989 is attached. The Light Load Energy Rate will be recalculated in the same manner annually

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(including any new thermal power plants EGAT adds to its system), and is adjusted on the first day of each calendar year.

"Light Load Period" shall mean all hours from 9.00 p.m. to 8.0

"Monthly Peak Capacity" shall mean the sum of : (i) .7, [Peak Period Net Electric Output in month/(.8x hours in Peak period in month)] , and (ii) .3 x [Partial Peak Period Net Electric Output/ (.8 x hours in Partial Period in month)] . If EGAT requests seller to discontinue deliveries in month [up to 500 hours per year permitted] then such hours shall be subtracted from the quantities hours in Peak period and/or hours in Partial peak period consistent with the time periods EGAT requested Seller to discontinue deliveries of electricity. No adjustments to the calculation of Monthly Capacity will be made for reduced Net Electric Output during Light Load Period.

"Monthly Ratio" shall mean EGAT's peak electric demand for corresponding month in the prior year divided by the sum of EGAT's twelve monthly peak electric demands for the prior year.

. "Must Run" shall mean that Seller shall have operating control the amount of electricity to be generated at the Facility and sold to EGAT. Seller's operating control shall be subject only to such directions as may be issued by EGAT solely for purposes of ensuring safe and reliable Electric Utility operation. EGAT may include economic considerations in their direct to Seller only to the extent permitted in Article 12 of the Agreement.

"Net Electric Output" shall mean the total amount of electric delivered to EGAT.

"Partial-Peak Period" shall mean all hours from 8.00 a.m. to 6.00 p.m.

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"Peak Energy Rate" Shall mean 125 percent of the sum of averc energy cost and operating and maintenance costs incurred by EGAT's thermal power plants during the prior fiscal year (October). A calculation of Pe Energy Rate for 1983 is attached. The Peak Energy Rate will be recalculat in the same manner annually (including any new thermal power plants EGAT ac to its system) ,and will be adjusted on the first day of each calendar year.

"Peak Periods" shall mean all hours from 6.30 p.m. to 9.30 p.m.

"Project Lender (s)" shall mean any party providing construction c permanent financing of the Facility.

"Monthly Stated Capacity" is shown in Schedule _____ [to t provided by Seller prior to the execution of this Agreement]. Seller ma respecify Monthly Stated Capacity at three year intervals following tr execution of this Agreement based on the operating experience of the Facility.

ARTICLE III. TERM

The term of this Agreement shall extend for a period of _____ year [5-20 years to be selected by Seller if Seller desires capacity payment plu energy payment. Seller may select a shorter term than 5 years but only ener payments will be made if the term is less than 5 years], beginning on the date Seller first delivers electricity to EGAT.

Notwithstanding the preceding paragraph, EGAT may terminate this Agreement if Seller has not (a) obtained all permits necessary for the construction of the Facility; and (b) begun a continuous program program of construction, both within 18 months after the execution of this Agreement.

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ARTICLE IV. TERMS OF SALE

Design and Construction Requirement:

Seller agrees that the Facility shall be designed and construc a planned useful life of not less than the term of this Agreement as the of the utilization of construction materials and equipment and its ope and maintenance in accordance with the requirements of Good Utility Pra Seller shall ensure that all equipment used in the Facility shall be des constructed and tested in accordance with the applicable codes and standa permit operation of the Facility for the term of this Agreement in acco with Good Utility Practice.

Purchase and Sale of Electricity

Seller shall sell and EGAT shall purchase the Net Electric (when and if available at the price specified in ARTICLE V, below. EGAT to accept delivery of the Net Electric Output. EGAT shall not, however liable for any damages arising from its inability to accept delivery o electricity that the Facility is otherwise capable of generating if operates in accordance with Good Utility Practice and promptly restores ability.

Operating Requirements

All equipment and facilities connected to the Electric System be installed and maintained in a safe manner, and in accordance with Utility Practice and applicable regulations. If at any time the operatio the Facility endangers the safety of personnel, or interferes with the sa reliable operation of the Electric System, EGAT may discontinue purchases Seller and disconnect from the Facility until such condition has

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corrected. Unless an emergency exists, EGAT shall give Seller reasonable notice of its intention to disconnect from the Facility and to discontinue purchases from Seller, and, where practical, allow suitable time for Seller to remove the interfering condition. EGAT's judgements with regard to discontinuance of purchases or disconnection of facilities under this paragraph shall be made in accordance with Good Utility Practice.

Commencing as of the Commencement Date of Operation, Seller shall:

(1) operate and maintain the Facility in accordance with Good Utility Practice. Seller shall provide EGAT with such information as EGAT may request to determine whether the Facility is being so operated and maintained;

(2) use best efforts to maximize delivery of electricity from the Facility during Peak Periods;

(3) provide EGAT, at EGAT's request, an estimate of electricity to be sold on a monthly basis for an period specified by EGAT;

(4) provide EGAT, at EGAT's request, an estimate of the amount of electricity that the Facility is capable of selling to EGAT for the next day;

(5) provide for scheduled maintenance of the Facility during periods designated by EGAT. EGAT shall designate such periods for each calendar year in writing prior to the preceding September. The periods designated by EGAT shall be subject to Seller's approval which shall not be withheld unless maintenance during such periods is inconsistent with Good Utility Practice or Seller's steam requirements or residue fuel constraints.

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(6) provide EGAT such supporting information related to billing as EGAT may reasonably request.

The estimates and schedules provided by Seller under subparagr (3) and (4) above shall be prepared based on conditions anticipated at t time such estimates and schedules are made, but shall not be binding on Sell Seller shall, however, promptly inform EGAT, whenever it appears that act generation at the Facility will vary more than ten percent (10%) from the m recent estimates or schedules provided under subparagraphs (3) or (4) above

The parties recognize that emergencies, accidents, and events force majeure may necessitate a departure from scheduled generation. Sell however, agrees to use all reasonable efforts to promptly resume schedu generation.

Power Factor and Voltage Standards

Unless otherwise requested by EGAT Seller will operate the Facil at a unity power factor during Light Load Periods, and in an overexci condition at ninety percent (90%) power factor during Peak and Partial P Periods. If Seller lacks the capacity to operate the Facility at a nin percent (90%) power factor (or fails to so operate the Facility when requir EGAT has invoked, at Seller's expense, capacitors or other electric equip necessary to ensure that electricity can be delivered at such power factor.

Upon EGAT's request, Seller shall operate at such other power fac or excitation level as EGAT specifies. In no case, however, will Seller required to operate outside of the range of the Facility's capability determined from the equipment manufacturer's recommendations.

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If EGAT requests, Seller shall operate the Facility in accordance with a voltage schedule provided by EGAT that specifies maximum and minimum voltage levels for high and low system load periods. In no case, however, will Seller be required to operate outside the volt-ampere (VAR) range of the Facility's capability as determined from the equipment manufacturer's recommendations.

Dispatch Requirements

Seller agrees to submit the Facility to dispatch by EGAT. EGAT agrees to dispatch the Facility as a Must Run Facility's; provided, however, that EGAT may request, upon 8 hours prior notice, that the Facility not deliver electricity to EGAT for such time period as EGAT designates. Seller agrees not to deliver electricity to EGAT during such periods. The parties agree that such periods shall not exceed 500 hours per year.

ARTICLE V. PRICE AND BILLING

EGAT shall pay Seller the sum of:

(a) a monthly capacity charge equal to the product of 2660 Baht per kilowatt times the Monthly Ratio times the lesser of : (i) the Stated Monthly Capacity; or (ii) the Monthly Average Peak Capacity minus [0.1x (Monthly Stated Capacity minus Monthly Peak Capacity)]; and

(b) a monthly energy charge equal to the sum of :

(i) Net Electric Output during Peak and Partial Peak Periods multiplied by Peak Energy Rate; and

(ii) Net Electric Output during Light Load Periods multiplied by Light Load Energy Rate.

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Provided, however, that EGAT will estimate the energy costs expected to avoid on a baht per kilowatthour basis by purchasing power [illegible] cogenerator and residue plants in the next calendar year. EGAT shall set its estimate and details of its calculation for review and approval to National Energy Policy Committee prior to the beginning of each calendar ye Seller may, at its option, elect to be paid on the basis of [illegible] the rates (which may differ by time period) for the calendar year.

Both the energy and capacity payments described above shall increased by a percentage value ("Loss Factor") to reflect reduced losses a result of the Facility. The Loss Factor for this Agreement is equal to [illegible] for delivery above 15000 volts, 10.35% for delivery below 15000 volts. E[illegible] may, however, conduct a loss study if it believes the Facility will redu [illegible] losses by less than this amount. If the loss study (for representat [illegible] levels over the year) shows a lower value of loss reduction EGAT may [illegible] lower loss factor. The Loss Factor will be adjusted annually [illegible] EGAT, MEA and PEA average transmission, subtransmission and distributi losses for the prior year.

The monthly capacity charge will be paid only if the term of t Agreement equals or exceeds five years.

Bills for all amounts due under this ARTICLE V shall be rendered EGAT monthly. EGAT shall provide Seller with a description of the format such bills and Seller agrees to follow such format and to provide [illegible] such billing information as EGAT may request.

EGAT shall pay Seller within thirty (30) days after receipt of invoice by EGAT. EGAT may dispute all or any part of any bill by mailing Seller written notice thereof within thirty (30) days of receipt of such b and by paying to Seller any amount not in dispute.

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ARTICLE VI. DEFAULT/TERMINATION/SECURITY

A. Events of Default. The occurrence of any one or more of the following shall constitute an "Event of Default" hereunder:

(i) If, except to the extent permitted under ARTICLE V, above, with regard to amounts in dispute, Egat or Ii fail to make any payment required pursuant to ARTICLE V, above, or fails to accept delivery except as permitted in this Agreement and such failure continues for a period of forty-five (45) days after written notice thereof from Seller,

(ii) If (a) Seller shall fail in any material respect to comply with any material obligation under this Agreement, except due to causes external to Seller or attributable to Egat's wrongful act or failure to act, and (ii) after written notice thereof from Egat, such failure shall continue for a period of forty-five (45) days, or, if such failure cannot reasonably be cured within such forty-five (45) day period, such further period as shall reasonably be required to effect such cure, provided that Seller commences within such forty-five (45) day period to effect such cure and at all times thereafter [illegible] diligently to complete such cure as quickly as possible;

It is expressly understood that a Project Lender may cure any Event of Default enumerated above on behalf of Seller within any time limit specified in this Paragraph A.

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The enumeration of Events of Default hereunder shall not be cons to limit or exclude the right of the parties to seek remedies at law o damages for the breach of any other obligation hereunder.

E. Termination. If an Event of Default shall occur and be contin the non-defaulting party may, by notice in writing, terminate this Agreement of the date of such notice.

C. Milestones and Completion Security. Seller shall within thirty days of the signing this Agreement provide EGAT with a written development p that outlines preoperational milestones. Seller shall include, at a mini milestone dates for financial closing, permitting, construction start date expected date of first delivery of electricity. Seller shall provide wit quarterly status report on its progress in meeting each of the milestones its development plan. In addition, Seller shall provide EGAT with immed written notice of any occurrences that are likely to substantially delay construction start date or the date of first delivery of electricity. Se shall immediately notify EGAT in writing if, and at such time that, it deci to discontinue its efforts to construct the Facility.

ARTICLE VII. DELIVERY AND MEASUREMENT OF ELECTRICITY

All electricity shall be delivered to EGAT at the point interconnection between the Electric System and Seller's system in the form three-phase fifty hertz alternating current at a voltage determined by mu agreement of the parties. Momentary voltage fluctuations shall be permitt provided that they neither disturb service provided by EGAT to its custo nor hinder EGAT in maintaining proper voltage conditions. The location of interconnection shall be determined by mutual agreement of the parties.

EGAT shall, at Seller's expense, provide, own, and maintain mete

BEST AVAILABLE DOCUMENT

and communication equipment at the Facility for measuring electricity delivered to EGAT and the status of switching equipment. Seller shall provide suitable space at the Facility for installation of the metering and communication equipment at no cost to EGAT. The metering equipment shall be capable of recording var flow and of segregating electricity delivered during Peak Period, Partial Peak and Light Load Periods.

EGAT agrees to operate and maintain its interconnection and transmission facilities in accordance with Good Utility Practice so as to permit the delivery to the Electrical System of the Facility's Net Electric Output.

Meters shall be read by Seller on the first day of each month. The amount of electricity delivered to EGAT in Peak Periods, Partial Peak and Light Load Periods during the preceding month shall be determined from such readings. Daily meter readings and log sheets shall be recorded. If EGAT so requests, one copy shall be mailed to EGAT each day.

All metering equipment installed pursuant to this ARTICLE VII associated with the Facility shall be routinely tested, in accordance with Good Utility Practice, at Seller's expense. If, at any time, any metering equipment is found to be inaccurate by more than two percent (2%), EGAT shall cause such metering equipment to be made accurate or replaced at Seller's expense, and meter readings for the period of inaccuracy shall be adjusted so far as the same can be reasonably ascertained, but no adjustment prior to the beginning of the preceding month shall be made except by agreement of the parties. The test shall be made in such manner as may be mutually agreed upon by the parties. Each party shall comply with any reasonable request of the other concerning the sealing of meters, the presence of a representative of the other party when the seals are broken and the tests are made, and other matters effecting the accuracy of the measurement of electricity delivered from the

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Facility. If either party believes that there has been a meter fai stoppage, it shall immediately notify the other.

ARTICLE VIII. CONSTRUCTION OF INTERCONNECTION FACILITIES

The interconnection facilities shall be constructed at S expense. EGAT reserves to itself the construction and ownership o interconnection taps and all necessary modifications to the Electric attributable to the interconnection of the Facility. Seller agrees to pa in advance prior to the start of construction for all costs that reasonably estimates will be incurred in connection with such activ Upon completion of construction, the parties agree to make a final adju to correct for any overpayment or underpayment. EGAT represents that in the interconnection, it will use standard equipment that EGAT employs EGAT for its own system, all in accordance with Good Utility Practice.

Seller shall be responsible for construction of all interconnection facilities. As soon as reasonably practicable, Seller s furnish, for review and approval by EGAT, specifications for such facili Responsibility for making the final interconnection between the systems reserved exclusively to EGAT. Prior to making such interconnection, EGAT s have the right to require Seller to provide documentation reasons demonstrating that the Facility and the interconnection facilities constru by Seller have been constructed in accordance with Good Utility Practice comply with all applicable safety and electrical codes. The interconnec requirements will be consistent with the requirements attached to this Agree

ARTICLE IX. ACCESS TO FACILITY

Properly accredited representatives of EGAT shall at all reasonabl times and upon reasonable notice have access to the Facility to m

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inspections and obtain information required in connection with this Agreemer While at the Facility, such representatives shall observe such reasonab safety precautions as may be required by Seller and shall conduct themselves a manner that will not interfere with the operation of the Facility.

ARTICLE X. NOTICES; REPRESENTATIVES OF THE PARTIES

Any notice, demand or request required or authorized by thi Agreement to be given by one party to the other party shall be in writing. I shall either be personally delivered or mailed, postage prepaid, to th representative of said other party designated in this ARTICLE.- Any suc notice, shall be deemed to be given when so delivered or mailed.

Notices and other communications by Seller to EGAT shall b addressed to:

Electric Generating Authority of Thailand

_____

_____

Notices and other communications by EGAT to Seller shall be addressed to:

_____

_____

_____

Either party may change its representative by written notice to the other.

The parties' representatives designated above shall have full authority to act for their respective principals in all technical matters relating to the performance of this Agreement. However, they shall not have authority to amend, modify, or waive any provision of this Agreement unless they are authorized officers of their organization.

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ARTICLE XI. INSURANCE, LIABILITY, INDEMNIFICATION, AND RELATIONSHIP OF PARTIES

[Note : Insurance specialists in Thailand should provide input appropriate levels]

A. Seller shall, at its own expense, acquire and maintain throughout term of this Agreement the following minimum insurance coverages:

(i) Statutory coverage for Worker's Compensation, and Basic Employers' Liability coverage with a limit no less than _____ ;

(ii) comprehensive General Liability Coverage including Operations, Contractual Liability and Broad Form Property Damage Liability, written with limits no less than: _____

Bodily Injury - _____ per occurrence

Property Damage - _____ per occurrence

or _____

Combined Single Limit;

(iii) Comprehensive Automobile Liability Coverage, including all owned, non-owned, and hired vehicles, written with limits no less than:

Bodily Injury - _____ per person/

_____ per accident

Property Damage - _____ per occurrence;

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(iv) All Risk Property Coverage and Boiler and Machinery Coverage against damage to the Facility in amount not less than the full replacement cost of the Facility (to restore the Facility to its condition prior to the casualty loss). Such policies shall be endorsed to require that:

(1) complete copies of each inspection or other report required by or performed for the insurer shall be provided to EGAT within _____ days of its completion.

(2) The coverage afforded shall not be canceled or reduced without at least _____ days prior written notice to EGAT and

(3) in the event of a loss, the insurance proceeds shall be applied to repair of the Facility unless Seller and EGAT agree otherwise;

(v) Business Interruption Insurance providing funds to cover all of Seller's costs to the extent that they would not be eliminated or reduced by the failure of the Facility to operate (including but not limited to rent or mortgage payments, interest and principal payments on loans or bonds and salaries and wages) for a period of at least twelve (12) months after a reasonable deductible period;

The insurance policies specified in clause (ii) and (iii), above, shall be endorsed naming EGAT, its employees, agents, and affiliates as

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additional insured with respect to any and all third party bodily injury a property damage claims arising from Seller's performance of this Agreement shall require days written notice to be given to EGAT of cancellation a material change in any of the policies.

Evidence of insurance for the coverages specified herein shall provided to EGAT prior to the First delivery of electricity to EGAT. Sh any changes occur during the term of the Agreement, Seller shall furnish E with revised certificates of insurance evidencing coverage described in section.

The insurance coverages described in clause (ii) and (iii), abo shall be primary to any other coverage available to EGAT and shall not deemed to limit Seller's liability under this Agreement.

B. Neither EGAT nor Seller, nor their respective officers, director agents, employees, parent or affiliates, or their respective office director, agents or employees shall be liable to the other party or its parent subsidiaries, affiliates, officers, director, agents, employees, successors assigns, for claims, for incidental, indirect or consequential damage connected with or resulting from performance or non-performance of th Agreement, including, without limitation, claims in the nature of lost revenue (other than payments properly due under this Agreement), income or profi irrespective of whether such claims are based upon warranty, negligence strict liability, contract, operation of law or otherwise

C. Seller agrees to defend, indemnify and save EGAT, its officer directors, employees, agents and affiliates and their officers, directors, employees and agents harmless from and against any and all claims, suits actions or causes of action for damage by reason of bodily injury, death or damage to property caused by Seller, its officers, directors, employees, agent

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or affiliates or Caused by or sustained on its facilities, except to the extent caused by an act of negligence or willful misconduct by an officer, director, agent, employee or affiliate of EGAT, its successors or assigns

D. EGAT agrees to defend, indemnify and save Seller, its officers, directors, employees, agents and affiliates and their officers, directors, employees and agents harmless from and against any and all claims, suits, actions or causes of action for damage by reason of bodily injury, death or damage to property caused by, its officers, directors, employees, agents or affiliates or caused by, its officers, directors, employees, agents or affiliates or caused by or sustained on its facilities, except to the extent caused by an act of negligence or willful misconduct by an officer, director, agent, employee or affiliate of Seller, its successors or assigns.

E Nothing in this Agreement shall be construed as creating any relationship between the parties other than that of independent contractors for the sale and purchase of electricity generated by the Facility.

ARTICLE XII ASSIGNMENT

Neither party shall assign, pledge or otherwise transfer this Agreement or any right or obligation under this Agreement without first obtaining the other party's written consent, which shall not be unreasonably withheld; except that Seller may assign its interests in this Agreement, in whole or in part, to financing institutions or entities in connection with the construction and/or permanent financing of the Facility or modification thereof without EGAT's consent.

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ARTICLE XIII. FORCE MAJEURE

A. The parties shall be excused from performing their recip. obligations hereunder and shall not be liable in damages or otherwise, if only to the extent that they are unable to so perform or are prevented performing by an event of force majeure, including, without limitation, cha of law, storm, flood, lightning, drought, earthquake, fire, explos equipment failure, civil disturbance, labor dispute, act of God or the pub enemy, action of a court or public authority, or any other cause beyond t control, including, without limitation, shutdown of, or limited operation the Facility due to breakdown or unscheduled repair or maintenance.

B. If either party shall rely on the occurrence of an event or condi described in Paragraph A, above as a basis for being excused from performa of its obligations under this Agreement, then the party relying on the even condition shall (i) provide prompt notice to the other party of the occurre of the event or condition giving an estimation of its expected duration and probable impact on the performance of its obligation hereunder, (ii) exerci all reasonable efforts to continue to perform its obligations hereunder, (; expeditiously take action to correct or cure the event or condition excusi performance, (iv) exercise all reasonable efforts to mitigate or limit dam to the other party to the extent such action will not adversely affect its o interests, and (v) provide prompt notice to the other party of the cessatior the event or condition giving rise to its excusal from perfomance.

ARTICLE XIV WAIVERS

The failure of either party to insist in any one or more instanc upon strict performance of any of the provisions of this Agreement or to t advantage of any of its rights under this Agreement shall not be construed as general waiver of any such provision or the relinquishment of any such rig

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but the same shall continue and remain in full force and effect, except wi respect to the particular instance or instances.

ARTICLE XV. REGULATION

This Agreement and all rights, obligations and performances of th parties hereunder, are subject to all applicable laws, now to all dul promulgated orders and other duly authorized action of governmental authorit having jurisdiction.

ARTICLE XVI DISPUTE RESOLUTION

Any dispute under this Agreement shall be resolved by bindin arbitration in accordance with the requirements of this subsection.

(1) Either party shall give to the other written notice in sufficient detail of the existence and nature of any dispute proposed to be arbitrated. If within sixty (60) days the dispute is not resolved through negotiations pursued diligently in good faith, the parties shall attempt to agree on a person to serve as arbitrator. If the parties cannot agree on an arbitrator within ten days, each shall then appoint one person to serve as an arbitrator and the two thus appointed shall select a third arbitrator with such expertise to serve as Chairman of the panel of arbitrators; and such three arbitrators shall determine all matters by majority vote; provided, however, if the two arbitrators appointed by the parties are unable to agree upon the appointment of the third arbitrator with five days after their appointment, both

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shall give written notice of such failure to agree to the parties, and, if the parties fail to agree upon the selection of such third arbitrator within five days thereafter, then either of the parties upon written notice to the other may require such appointment from and pursuant to the rules of ____. Prior to appointment, each arbitrator shall agree to conduct such arbitration in accordance with the terms of this subsection. The arbitration panel may choose legal counsel to advise it on the remedies it may grant, procedure and such other legal issues as the panel deems appropriate.

(2) The parties shall have sixty calendar days to perform discovery and present evidence and argument to the arbitrators. During that period, the arbitrators shall be available to receive and consider all such evidence as is relevant and, within reasonable limits due to the restricted time period, to hear as much argument as is feasible, giving a fair allocation of time to each party to the arbitration. The arbitrators shall use all reasonable means to expedite discovery and to sanction noncompliance with reasonable discovery requests or any discovery order. The arbitrators shall not consider any evidence or argument not presented during such period and shall not extend such period except by the written consent of both parties or upon a finding that the party opposing an extension has unreasonably delayed the discovery process. At the conclusion of such period, the

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arbitrators shall have forty-five (45) calendar days to reach a determination.

(3) The arbitrators shall have the right only to interpret and apply the terms and conditions of this Agreement and to order any remedy allowed by this Agreement, but may not change any term or condition of this Agreement, deprive either party of any right or remedy expressly provided hereunder, or provide any right or remedy that has not been expressed hereunder.

(4) The arbitrators shall give a written decision to the parties stating their findings of fact, conclusions of law and order, and shall furnish to each party a copy thereof signed by them within five (5) calendar days from the date of their determination.

(5) Any factual determination made by the arbitrators shall be conclusive and binding upon the parties and not subject to judicial review, except on the ground of fraud or bias and may be presented to any court as a stipulation of the parties.

(6) The parties shall each pay fifty percent (50%) of the cost of arbitrator or arbitrators and any legal counsel appointed pursuant to subsection (1).

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ARTICLE XVII. SEVERABILITY

If any provision or provisions of this Agreement shall be invalid, illegal, or unenforceable, the validity, legality, and enforceability of the remaining provisions shall in no way be affected or impaired thereby.

ARTICLE XVIII. MODIFICATIONS

No modification to this Agreement shall be binding on either party unless it shall be in writing and signed by both parties.

ARTICLE XIX. PRIOR AGREEMENT SUPERSEDED

This Agreement constitutes the entire agreement between the parties relating to the subject matter hereof and its execution supersedes all previous agreements, discussions, communications and correspondence with respect to the subject matter hereof.

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ARTICLE XX. COUNTERPARTS

This Agreement may be executed in any number of counterparts, and each executed counterpart shall have the same force and effect as an original instrument.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

ELECTRIC GENERATING AUTHORITY OF THAILAND

By_____

Title:_____

By_____

Title:_____

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TAB 12

Turkey:

- **Regulation on Determining the Principles for Granting Permission to Institutions Other Than the Turkish Electricity Authority for the Construction and Operation of Electric Power Plants**

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TURKEY

Regulation on Determining the Principles for Granting Permission to Institutions Other Than the Turkish Electricity Authority for the Construction and Operation of Electric Power Plants

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MINISTRY OF ENERGY AND NATURAL RESOURCES
Energy Department

REGULATION ON DETERMINING THE PRINCIPLES FOR GRANTING PERMISSION TO INSTITUTIONS OTHER THAN THE TURKISH ELECTRICITY AUTHORITY FOR THE CONSTRUCTION AND OPERATION OF ELECTRIC POWER PLANTS

February - 1986

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REGULATION
ON
DETERMINING THE PRINCIPLES FOR GRANTING PERMISSION TO INSTITUTIONS OTHER THAN THE TURKISH ELECTRICITY AUTHORITY FOR THE CONSTRUCTION AND OPERATION OF ELECTRIC POWER PLANTS

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The Republic of Turkey
Official Gazette
September 4, 1985

Decree No. 85/9799

The implementation of the "Regulation on Determining the Principles for Granting Permission to Institutions Other Than the Turkish Electricity Authority for the Construction and Operation of Electric Power Plants" has been approved by the Council of Ministers on August 16, 1985 in accordance with Article 10 of Law No. 3096 dated December 4, 1984, and based on the Report No. 5853 of the Ministry of Energy and Natural Resources, dated August 14, 1985.

Kenan EVREN
President

I. K. ERDEM
for Prime Minister

I. K. ERDEM Minister of State and Deputy Prime Minister	K. OKSAY Minister of State	A.M. YILMAZ Minister of State
C. BUYUKBAS Minister of State	A. TENEKECI Minister of State	M. T. TITIZ Minister of State
A. KARAEVLI Minister of State	M. N. ELDEM Minister of Justice	Z. YAVUZTURK Minister of National Defense
Y. AKBULUT Minister of Interior Affairs	V. HALEFOGLU Minister of Foreign Affairs	A. K. ALPTEMOCIN Minister of Finance and Customs
M. V. DINÇERLER Minister of National Education, Youth and Sportive Affairs	I. S. GIRAY Minister of Reconstruction and Resettlements	M. AYDIN Minister of Health and Social Aid
V. ATASOY Minister of Transportation	H. H. DOGAN Minister of Agriculture, Forestry and Village Affairs	M. KALEMLI Minister of Employment and Social Security
H. C. ARAL Minister of Industry and Trade	S. N. TUREL Minister of Energy and Natural Resources	M. M. TAŞCIOGLU Minister of Culture and Tourism

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REGULATION ON DETERMINING THE PRINCIPLES FOR GRANTING PERMISSION TO INSTITUTIONS OTHER THAN THE TURKISH ELECTRICITY AUTHORITY FOR THE CONSTRUCTION AND OPERATION OF ELECTRIC POWER PLANTS

SECTION I

General Provisions

Objective

Article 1 – The objective of this Regulation is to determine the principles and procedures for granting permission to the domestic and foreign investment companies of special law status for the construction and operation of electric power plants.

Scope

Article 2 – This Regulation encompasses the rules and procedures for the construction and operation of electric power plants and for selling electricity either to the Turkish Electricity Authority or to a utility by the investment companies specified in Article 4 of Law No. 3096 on "Respecting Authorization to the Institutions other than the Turkish Electricity Authority for Generation, Transmission, Distribution and Trade of Electric Energy."

Definitions

Article 3 – As used in this Regulation hereinafter

The Ministry	shall refer to the Ministry of Energy and Natural Resources
TEK	shall refer to the Turkish Electricity Authority
DSI	shall refer to the General Directorate of State Hydraulic Works
Utility	shall refer to a capital investment company established for providing electricity services in pursuance with Article 3 of Law No. 3096 dated December 4, 1984.

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a) The electric power plant is to comply with the general energy and economic policies of the State.

b) The plant construction and operation contract can cover a period of up to 99 years.

c) The power company is to guarantee the realization of its investment programme as approved by the Ministry.

d) The power company is to be responsible for renewal of the plant in accordance with the technical and economical characteristics of the plant over the life of the Contract.

e) The annual electricity generation of all power plants is planned by the Ministry on the basis of the national economic policies. The security and stability of the national power system as well as the revision of the electricity generation planning in accordance with the changing conditions are under the responsibility of TEK on behalf of the Ministry. The power companies are subject to fully respect to the monthly, weekly, daily and hourly revisions in the electricity generation programmes made by TEK.

f) Autoproducers can be provided with permission for the construction and operation of electric power plants by the Ministry, upon consultation with TEK or the utility, depending on the region of the relevant facility.

g) In cases where economical electricity generation possibilities are remote from the consumption centers, the autoproducers or the autoproducer groups can apply to the Ministry, like any other power company, for getting permission to construct and operate electric power plants for meeting their own electric energy requirements.

For the autoproducer groups, the relevant entities constituting the group must be identified prior to an application.

Within the context of the "Electric Power Plant Construction and Operation Contract" to be prepared for the applications in accordance with this clause, a special section is to be included for specifying

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the Ministry, the applicant is required to prepare a feasibility report within the period set by the Ministry and to submit it with five copies to the Ministry.

The Ministry shall also inform either TEK or the utility, depending on the location of the proposed power plant, about the final decision.

c) In case of a subsequent application for the same plant, the applicant will be informed of the deadline for submission of the feasibility report, which is to be considered as the date notified to the first applicant, and will be provided with the list of companies which have applied beforehand as well as be reminded that an application can be made for another power plant.

d) In case of several applications for the same plant, besides the criteria as project economics, electricity generation cost and the proposed selling price: the financial capability and experience of the company, and the organizational scheme envisaged for realization of the project, the proposed date of commencement of construction work and the period of realization of the project are also taken into consideration in selection of the company.

e) Concerning the applications for those power plants included in the investment programmes of the public establishments, the decision for approval or disapproval of the proposal is reached by the Ministry upon taking into account the views of the related public enterprises and the State Planning Organization.

In case of approval of the proposal, the applicant, in co-operation with the related public enterprises, is requested to prepare a feasibility report, describing the realized and planned investments for the plant in concern and representing the part of the project work to be pursued under the sole responsibility of the applicant with the provision of such information as time schedule, financing plan, organizational scheme etc.; and is requested to submit the feasibility report to the Ministry within a period to be specified by the Ministry.

In case of several applications, the provisions described in Parag. (d) of Article 5 shall be applied.

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SECTION III

Supervision

The Authority of the Ministry for Supervision

Article 7 – Activities of the power companies can be supervised by the Ministry at all stages. Any defects identified as a consequence of these supervisions is to be resolved by the company without any delay

Sanctions to be applied against the power companies due to disobedience to the Ministry's warnings and the circumstances necessitating the termination of the Contract shall be included in the Contract.

SECTION IV

Electric Energy Selling Tariffs

Tariff Rates

Article 8 – a) Electric energy selling tariffs of the power companies shall be prepared by themselves, bearing in mind the provisions specified in clause (b) of this Article, and shall become effective upon approval by the Ministry.

b) In determination of the tariff rates, the following factors shall be taken into consideration:

1 – Operating and maintenance costs (fuel, materials, personnel, taxes, depreciation and other expenses)

2 – Interest and exchange rate differences paid on investments.

3 – Revaluation of the capital: payment of a reasonable amount of dividend in accordance with market conditions: and prices applied by TEK for the similar power plants.

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Expropriation

Article 11 -- In the event of any need for expropriation within the framework of the approved application projects of the electric power plants to be constructed by the power companies the expropriation procedure shall be carried out by the Ministry, in pursuance with the provisions of Law No. 2942 on Expropriation, on the condition that the expropriation costs shall be covered by the company in concern

Multipurpose Hydroelectric Power Plants

Article 12 – The cost allocation of purposes and the repayment of realized investments for the multipurpose hydroelectric power plant projects shall be pursued in accordance with the principles outlined in Annex 2.

The Sale of Feasibility Reports and Finalized Projects

Article 13 – The sale to the power companies of the feasibility reports and finalized projects prepared by the public agencies and enterprises shall be pursued in accordance with the principles specified in Annex 3.

Legal Base

Article 14 – This Regulation is prepared in pursuance with the provisions of Article 10 of Law No. 3096 on "Respecting Authorization to the Institutions other than the Turkish Electricity Authority for Generation, Transmission, Distribution and Trade of Electric Energy"

Effective Date

Article 15 – This Regulation enters into effect on the date of its publication.

Execution

Article 16 – This Regulation shall be executed by the Ministry of Energy and Natural Resources.

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Section

5. Geological Structure
5.2. General geology
5.2. Dam location and geology of the related installations (*)
5.3. Geology of reservoir site (*)
5.4. Material surveys
5.5. Earthquakes

Section

6. Proposed Plant
6.1. Reservoir operation policy and optimization (*)
6.2. Dam type and height selection (*)
6.3. Spillway and bottom outlet gate (*)
6.4. Installed power optimization
6.5. Energy / irrigation facilities
6.6. Power station and intake canal
6.7. Turbine type, unit capacity and number of units
6.8. Generator type and capacity
6.9. Transformer type and quantity
6.10. Switchyard
6.11. Power transmission
6.12. Access road

Section

7. Project Realization Period
7.1. Final project preparation period, commencement and completion dates for construction and commissioning

Section

8. Installation Costs
8.1. Principles employed in the estimation of costs
8.2. Summary of cost estimates
8.3. Annual expenditures
8.4. Foreign currency requirements
8.5. Investment costs

(*) For hydro power plants with dam

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3. Applicants, wishing to prepare special feasibility reports, in different form from the feasibility report format specified in Annex 1, for generating electrical energy based on hydro, lignite, hardcoal, natural gas, LNG (liquefied natural gas) or LPG (liquefied petroleum gas), petroleum products, geothermal, nuclear, solar, wind and other energy sources, must obtain a permission from the Ministry in advance.

4. During the course of the preparation of the feasibility report, the Ministry can follow up the activities of the applicant without causing any disruptions to the work of the company. It shall be the applicant's obligation to furnish to the authorized personnel of the Ministry all the required information and assistance.

5. Additional information to be included in the feasibility report :

- Copies of the legal documents indicating the source of supply of the energy resource for generating electric power. In the case of thermal power plants, the cost of raw materials cannot exceed the cost for similar materials utilized at the thermal power plants of TEK.

- Financial capability of the company, domestic and foreign money, equity, equity increment plan, letters of intent from the creditor bank (s) etc. and a certified copy of these documents.

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4.1.8. Loan instalments and interest payments over the operating period
4.1.9. Cash flow chart
4.1.10. Financial profitability
4.1.11. Internal rate of return
4.2. Raw Material Mining Information
4.3. Raw Material Utilization Information
4.4. Raw Material Supply Information
4.5. Information on Cooling Water

Section

5. Facility Site Information
5.1. Geological structure
5.2. Foundation surveys (Soil mechanics)
5.3. Seismic conditions
5.4. Access road

Section

6. Proposed Plant
6.1. Capacity selection
6.2. Optimal installed capacity, number and capacity of units
6.3. Turbine type and unit capacity
6.4. Generator type and capacity
6.5. Transformer type and the number of transformers.
6.6. Power station and the auxiliary installations (location, type, volume)
6.7. Switchyard and connections to the system
6.8. Construction problems
6.9. Annual energy production
6.10. Frequency stabilizer and synchronous compensator working characteristics (if required by the Ministry)
6.11. Stockyard facilities
6.12. Stock control and stock piling programme
6.13. Ash disposal and ash piling facilities
6.14. Type of cooling water facilities
6.15. Waste utilization possibilities
6.16. Combined heat and power alternative
6.17. Solutions to the environmental problems
6.18. The plant operation scheme

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Explanatory Remarks

ANNEX I (b)

1. The feasibility report is to be prepared on the basis of reliable and sufficient technical and economic data so as to justify the absolute viability of the project.

2. Taking into account the specifications of the project, formation of a "Project Consultation Board" can be recommended in the feasibility report with a view to ensuring the completion of the project in accordance with the proposed plan and programme. The Board shall be formed in case of approval of the recommendation by the Ministry.

3. Applicants wishing to prepare special feasibility reports, in different form from the feasibility report format specified in Annex I, for generating electrical energy based on hydro, lignite, hard coal, natural gas, LNG (liquefied natural gas) or LPG (liquefied petroleum gas), petroleum products, geothermal, nuclear, solar, wind and other energy sources, must obtain a permission from the Ministry in advance.

4. During the course of the preparation of the feasibility report, the Ministry can follow up the activities of the applicant without causing any disruptions to the work of the company. It shall be the applicant's obligation to furnish to the authorized personnel of the Ministry all the required information and assistance.

5. Additional information to be included in the feasibility report :

   - Copies of the legal documents indicating the source of supply of the energy resource for generating electric power. In the case of thermal power plants, the cost of raw materials can not exceed the cost for similar materials utilized at the thermal power plants of TEK.

   - Financial capability of the company, domestic and foreign money, equity, equity increment plan, letters of intent from the creditor bank (s), etc. and a certified copy of these documents.

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4.2. Composition of the water - steam mixture
4.3. Composition of the exploited steam

Section
5 Project Site Information
5.1. General information
5.2. Geological structure
5.3. Drilling and testing activities and the results achieved
5.4. Operational problems (crustation, boron etc.)
5.5. Foundation surveys (soil mechanics)
5.6. Seismic conditions
5.7. Topographical characteristics of the site
5.8. Access road
5.9. Impeding factors on the field potential
5.10. Possibilities for increasing the field potential
5.11. Environmental impact of the project (harmful effects of the waste geothermal fluid on plants and the environment)

Section
6. Proposed Plant
6.1. General description, purpose and capacity selection
6.2. Steam generation capacity
6.3. Steam condensation system
6.4. Annual energy generation
6.5. Combined heat and power option
6.6. The plant operation scheme
6.7. Construction problems
6.8. In case the facility is a power generation plant:
6.8.1. Transportation of steam to the power plant
6.8.2. Optimal installed capacity, number and capacity of units
6.8.3. Turbine and generator specifications
6.8.4. Power plant and the auxilary installations (location and type)

Section
7. Project Realization Period
7.1. Application project preparation period, commencement and completion dates for construction and commissioning

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2. Taking into account the specifications of the project, formation of a "Project Consultation Board" can be recommended in the feasibility report with a view to ensuring the completion of the project in accordance with the proposed plan and programme. The Board shall be formed in case of approval of the recommendation by the Ministry.

3. Applicants wishing to prepare special feasibility reports, in different form from the feasibility report format specified in Annex 1, for generating electrical energy based on hydro, lignite, hard coal, natural gas, LNG (liquefied natural gas) or LPG (liquefied petroleum gas), petroleum products, geothermal, nuclear, solar, wind and other energy sources, must obtain a permission from the Ministry in advance.

4. During the course of the preparation of the feasibility report, the Ministry can follow up the activities of the applicant without causing any disruptions to the work of the company. It shall be the applicant's obligation to furnish to the authorized personnel of the Ministry all the required information and assistance.

5. Additional information to be included in the feasibility report :

- Copies of the legal documents indicating the source of supply of the energy resource for generating electric power. In the case of thermal power plants, the cost of raw materials can not exceed the cost for similar materials utilized at the thermal power plants of TEK.

- Financial capability of the company, domestic and foreign money, equity, equity increment plan, letters of intent from the creditor bank(s), etc. and a certified copy of these documents

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5.5. Access road
5.6. Topographical characteristics of the location
5.7. Factors affecting the wind regime on the project site
5.8. Environmental impact of the project (noise, reflection etc.)

Section
6. Proposed Project
6.1. Capacity selection
6.2. Optimal installed capacity, number and capacity of units.
6.3. Type and characteristics of the turbine (cut-in, cut-out, efficiency, speed control, etc.)
6.4. Generator type and characteristics
6.5. Type and height of the tower
6.6. Tower and turbine frequency
6.7. Gearbox specifications
6.9. Storage units

Section
7. Project Realization Period
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Additional information to be included in the feasibility report :

- Copies of the legal documents indicating the source or supply of the energy resource for generating electric power. In the case of thermal power plants,the cost of raw materials can not exceed the cost for simular materials utilized at the thermal power plants of TEK.

- Financial capability of the company. domestic and foreign money. equity. equity increment plan. letters of intent from the creditor bank (s). etc.. and a certified copy of these documents.

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Section

7. Project Realization Period
7.1. Application project preparation period, commencement and completion dates for construction and commissioning

Section

8. Investment Cost
8.1. Criteria employed in the estimation of costs

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3. Applicants wishing to prepare special feasibility reports, in different form from the feasibility report format specified in Annex I, for generating electrical energy based on hydro, lignite, hard coal, natural gas, LNG (liquefied natural gas) or LPG (liquefied petroleum gas), petroleum products, geothermal, nuclear, solar, wind and other energy sources, must obtain a permission from the Ministry in advance.

4. During the course of the preparation of the feasibility report, the Ministry can follow up the activities of the applicant without causing any disruptions to the work of the company. It shall be the applicant's obligation to furnish to the authorized personnel of the Ministry all the required information and assistance.

5. Additional information to be included in the feasibility report.

- Copies of the legal documents indicating the source of supply of the energy resource for generating electric power. In the case of thermal power plants the,cost of raw materials can not exceed the cost for similar materials utilized at the thermal power plants of TEK.

- Financial capability of the company, domestic and foreign money, equity, equity increment plan, letters of intent from the creditor bank (s), etc., and a certified copy of these documents.

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the Ministry deems it necessary, the percentages of purposes will be recalculated on the basis of the new data and the realized expenditures. The joint cost shall then be allocated to each purpose on the basis of the new percentages determined

Article 3 -- In calculating cost allocations, the same interest rate shall be applied to each purpose. This interest rate shall be determined by the Ministry

Article 4 - During the feasibility study phase of multipurpose projects, the related institutions and the company shall maintain continuous co-operation on the subject of cost allocations with a view to ensuring the information exchange and the agreement on the main criteria forming the basis of the conclusions to be reached.

Article 5 In case of multipurpose projects involving electrical energy generation, the cost for each purpose shall be determined by applying one of the methods outlined below such that to the extent of availability and suitability of data at hand, the previous method shall prevail over the next.

1. Separable Costs – Remaining Benefits Method
2. Special Costs – Remaining Benefits Method
3. Single Purpose Alternative Project Costs Method

Article 6 - The "Separable Costs – Remaining Benefits Method" shall be applied in the following manner :

a) The benefit of each purpose shall be calculated separately

b) Costs of single purpose alternative projects possessing benefits as equal to the benefit of each purpose in a multipurpose project shall be calculated

c) For each purpose, the "justifiable cost" shall be determined by adopting the lesser of the benefit or the alternative cost figure

d) The " separable cost" for each purpose shall be calculated individually

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f) By deducting the total special costs from the total cost of the multi purpose project, the "joint cost" of the project shall be determined and then distributed among the benefits by using the percentage distribution given in paragraph (e) above.

2) The total allocated cost for each purpose shall be determined as the sum of the special cost and the distributed joint cost for each purpose.

This method shall be used if the calculation of the separable costs is difficult. The methodologies adopted in estimation of the costs and benefits for each purpose should be identical or nearly similar.

Section 8 – The "Single Purpose Alternative Project Costs Method" shall be applied in the following manner :

In this method, allocation of the joint costs is assigned in accordance with the percentage distribution of the single purpose alternative project costs. The method is employed when the benefits of the purposes in the other methods can not be calculated by similar approaches.

a) The "special costs" are calculated for each purpose in a multi-purpose project

b) The "joint costs" are determined by deducting the "special costs" from the total project cost

c) The project costs and their percentage distribution are estimated for the single purpose alternative projects yielding the same benefits.

d) The joint cost is distributed among the purposes on the basis of these percentages.

e) The total cost for each purpose is determined as the sum of the special cost and the distributed joint cost for each purpose.

Article 9 – Calculation of Benefits :

a) Energy benefits : Energy benefits in the multipurpose projects are

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Article 14 – The share of the joint expenditures allocated to energy purposes of the multipurpose facilities shall be paid to the Treasury, on behalf and to the account of the General Directorate of State Hydraulic Works (DSI), at an interest rate to be applied for repayment of the state loans and on the basis of the debt repayment schedule specified in the feasibility report, over a period of time not exceeding ten years, as deemed favourable by the company, subsequent to the commissioning of the hydropower facility.

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e) Prior to submission of the feasibility report, the finalized project and the related documents to the power companies, an agreement or a protocol shall be formulated and signed between the public establishment and the company in concern, with a view to specifying and confirming the above - specified foregoing terms and conditions for the sale and payments as well as for the other related issues as deemed necessary

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TAB 13

United Kingdom:

- **Electricity Act 1989 – Chapter 29**
- **Draft Electricity Generation License**

UNITED KINGDOM

- Electricity Act 1989 -- Chapter 29
- Draft Electricity Generation License

Electricity Act 1989

CHAPTER 29

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Electricity Act 1989

1989 CHAPTER 29

An Act to provide for the appointment and functions of a Director General of Electricity Supply and of consumers' committees for the electricity supply industry; to make new provision with respect to the supply of electricity through electric lines and the generation and transmission of electricity for such supply; to abolish the Electricity Consumers' Council and the Consultative Councils established under the Electricity Act 1947; to provide for the vesting of the property, rights and liabilities of the Electricity Boards and the Electricity Council in companies nominated by the Secretary of State and the subsequent dissolution of those Boards and that Council; to provide for the giving of financial assistance in connection with the storage and reprocessing of nuclear fuel, the treatment, storage and disposal of radioactive waste and the decommissioning of nuclear installations; to amend the Rights of Entry (Gas and Electricity Boards) Act 1954 and the Local Government (Scotland) Act 1973; and for connected purposes. [27th July 1989]

BE IT ENACTED by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

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ELECTRICITY SUPPLY

Introductory

1.—(1) The Secretary of State shall appoint an officer to be known as the Director General of Electricity Supply (in this Act referred to as "the Director") for the purposes of carrying out the functions assigned or transferred to him by this Act. The Director General of Electricity Supply.

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(2) The Secretary of State and the Director shall each have a duty to exercise the functions assigned or transferred to him by this Part in the manner which he considers is best calculated to secure—

(a) that the prices charged to tariff customers by public electricity suppliers for electricity supplied in pursuance of section 16(1) below to premises in any area of Scotland specified in an order made by the Secretary of State are in accordance with tariffs which do not distinguish (whether directly or indirectly) between different parts of that area; and

(b) that public electricity suppliers are not thereby disadvantaged in competing with persons authorised by a licence or exemption to supply electricity to such premises.

(3) Subject to subsections (1) and (2) above, the Secretary of State and the Director shall each have a duty to exercise the functions assigned or transferred to him by this Part in the manner which he considers is best calculated—

(a) to protect the interests of consumers of electricity supplied by persons authorised by licences to supply electricity in respect of—

(i) the prices charged and the other terms of supply;

(ii) the continuity of supply; and

(iii) the quality of the electricity supply services provided;

(b) to promote efficiency and economy on the part of persons authorised by licences to supply or transmit electricity and the efficient use of electricity supplied to consumers;

(c) to promote research into, and the development and use of, new techniques by or on behalf of persons authorised by a licence to generate, transmit or supply electricity;

(d) to protect the public from dangers arising from the generation, transmission or supply of electricity; and

(e) to secure the establishment and maintenance of machinery for promoting the health and safety of persons employed in the generation, transmission or supply of electricity;

and a duty to take into account, in exercising those functions, the effect on the physical environment of activities connected with the generation, transmission or supply of electricity.

(4) In performing his duty under subsection (3)(a)(i) above, the Secretary of State or the Director shall take into account, in particular, the protection of the interests of consumers of electricity in rural areas.

(5) In performing his duty under subsection (3)(a)(iii) above, the Secretary of State or the Director shall take into account, in particular, the interests of those who are disabled or of pensionable age.

(6) In this section references to the functions assigned to the Secretary of State by this Part do not include references to functions under section 36 or 37 below and references to the functions so assigned to the Director do not include references to functions relating to the determination of disputes.

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(4) The requirement to consult imposed by subsection (1) above shall not apply to the granting of any exemptions which, having regard to the provisions of section 4 above, need to be granted before the commencement of that section. PART I

Licences authorising supply etc.

6.—(1) The Secretary of State after consultation with the Director, or the Director with the consent of, or in accordance with a general authority given by, the Secretary of State, may grant a licence authorising any person—

(a) to generate electricity for the purpose of giving a supply to any premises or enabling a supply to be so given;

(b) to transmit electricity for that purpose in that person's authorised area; or

(c) to supply electricity to any premises in that person's authorised area.

(2) The Secretary of State after consultation with the Director, or the Director with the consent of, or in accordance with a general authority given by, the Secretary of State, may—

(a) grant a licence authorising any person to supply electricity to any premises specified or of a description specified in the licence; or

(b) extend such a licence by adding to the premises or descriptions of premises specified in the licence.

(3) An application for a licence or extension shall be made in the prescribed manner and shall be accompanied by such fee (if any) as may be prescribed; and within 14 days after the making of such an application, the applicant shall publish a copy of the application in the prescribed manner.

(4) Before granting a licence under subsection (1)(b) or (c) above, the Secretary of State or the Director shall give notice—

(a) stating that he proposes to grant the licence;

(b) stating the reasons why he proposes to grant the licence; and

(c) specifying the time (not being less than 28 days from the date of publication of the notice) within which representations or objections with respect to the proposed licence may be made,

and shall consider any representations or objections which are duly made and not withdrawn.

(5) A notice under subsection (4) above shall be given by publishing the notice in such manner as the Secretary of State or the Director considers appropriate for bringing it to the attention of persons likely to be affected by the grant of the licence.

(6) A licence shall be in writing and, unless previously revoked in accordance with any term contained in the licence, shall continue in force for such period as may be specified in or determined by or under the licence.

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(b) may include provision for determining the terms on which such agreements are to be entered into. PART I

(3) Conditions included in a licence by virtue of subsection (1)(a) above may require the licence holder—

(a) to comply with any direction given by the Director as to such matters as are specified in the licence or are of a description so specified;

(b) except in so far as the Director consents to his doing or not doing them, not to do or to do such things as are specified in the licence or are of a description so specified;

(c) to refer for determination by the Director such questions arising under the licence as are specified in the licence or are of a description so specified; and

(d) to refer for approval by the Director such things falling to be done under the licence, and such contracts or agreements made before the grant of the licence, as are specified in the licence or are of a description so specified.

(4) Conditions included in a licence by virtue of subsection (1)(a) above may—

(a) instead of specifying or describing any contracts or agreements to which they apply, refer to contracts or agreements designated (whether before or after the imposition of the conditions) by the Secretary of State or the Director; and

(b) instead of containing any provisions which fall to be made, refer to provisions set out in documents so designated and direct that those provisions shall have such effect as may be specified in the conditions.

(5) Conditions included in a licence may contain provision for the conditions to cease to have effect or be modified at such times, in such manner and in such circumstances as may be specified in or determined by or under the conditions.

(6) Any provision included by virtue of subsection (5) above in a licence shall have effect in addition to the provision made by this Part with respect to the modification of the conditions of a licence.

(7) Any sums received by the Secretary of State or the Director in consequence of the provisions of any condition of a licence shall be paid into the Consolidated Fund.

Conditions for funding certain companies engaged in nuclear generation in Scotland.

8.—(1) Without prejudice to section 7(1)(a) above, it may be a condition of a licence granted to a company ("the licence holder") that it shall from time to time provide any company to which subsection (2) below applies, comes to apply or has at any time applied with such funds as may be determined by or under the condition in respect of such of that company's liabilities as may be so determined.

(2) This subsection applies to any company engaging in the operation of a nuclear generating station in Scotland while—

(a) deemed for the purposes of the Companies Act 1985 to be a subsidiary of the licence holder; or 1985 c. 6.

(b) a related company of the licence holder (as defined in paragraph 92 of Schedule 4 to that Act).

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(b) any reference to electric lines or electrical plant included a reference to pipes and associated works used or intended to be used for conveying heat so produced, and steam produced from and air and water heated by such heat;

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and in this subsection "associated works", in relation to pipes, means any of the following connected with the pipes, namely, any valve, filter, stopcock, pump, meter, inspection chamber and manhole and such other works as may be prescribed.

(4) A licence under paragraph (b) or (c) of section 6(1) above may provide that, where any part of the licence holder's authorised area is designated in a subsequent licence under that paragraph, Schedule 4 to this Act shall have effect in relation to the licence holder as if any reference to the activities which he is authorised by his licence to carry on included a reference to the activities which he was previously so authorised to carry on.

(5) The provisions of Schedule 5 to this Act (which provide for the acquisition of water rights for hydro-electric stations in Scotland) shall have effect.

Modification of licences

Modification by agreement.

11.—(1) Subject to the following provisions of this section, the Director may modify the conditions of a licence if the holder of the licence consents to the modifications.

(2) Before making modifications under this section, the Director shall give notice—

(a) stating that he proposes to make the modifications and setting out their effect;

(b) stating the reasons why he proposes to make the modifications; and

(c) specifying the period (not being less than 28 days from the date of publication of the notice) within which representations or objections with respect to the proposed modifications may be made,

and shall consider any representations or objections which are duly made and not withdrawn.

(3) A notice under subsection (2) above shall be given—

(a) by publishing the notice in such manner as the Director considers appropriate for the purpose of bringing the notice to the attention of persons likely to be affected by the making of the modifications; and

(b) by serving a copy of the notice on the holder of the licence.

(4) The Director shall also send a copy of a notice under subsection (2) above to the Secretary of State; and if, within the period specified in the notice, the Secretary of State directs the Director not to make any modifications, the Director shall comply with the direction.

Modification references to Monopolies Commission.

12.—(1) The Director may make to the Monopolies and Mergers Commission (in this Part referred to as "the Monopolies Commission") a reference which is so framed as to require the Commission to investigate and report on the questions—

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(b) any other assistance which the Commission may require, and which it is within his power to give, in relation to any such matters;

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and the Commission, for the purpose of carrying out any such investigation, shall take account of any information given to them for that purpose under this subsection.

(7) In determining for the purposes of this section whether any particular matter operates, or may be expected to operate, against the public interest, the Monopolies Commission shall have regard to the matters as respects which duties are imposed on the Secretary of State and the Director by section 3 above.

(8) Sections 70 (time limit for report on merger reference), 81 (procedure in carrying out investigations) and 85 (attendance of witnesses and production of documents) of the 1973 Act, Part II of Schedule 3 to that Act (performance of functions of the Monopolies Commission) and section 2[illegible] of the 1980 Act (modifications of provisions about performance of such functions) shall apply in relation to references under this section as if—

(a) the functions of the Commission in relation to those references were functions under the 1973 Act;

(b) the expression "merger reference" included a reference under this section;

(c) in the said section 70, references to the Secretary of State were references to the Director and the reference to three months were a reference to six months;

(d) in paragraph 11 of the said Schedule 3, the reference to section 71 of the 1973 Act were a reference to subsection (2) above; and

(e) paragraph 16(2) of that Schedule were omitted;

and in this Part "the 1973 Act" means the Fair Trading Act 1973 and "the 1980 Act" means the Competition Act 1980.

1973 c. 41.
1980 c. 21.

(9) For the purposes of references under this section the Secretary of State shall appoint not less than eight additional members of the Monopolies Commission; and if any functions of the Commission in relation to any such reference are performed by a group—

(a) the chairman of the Commission shall select one, two or three of those additional members to be members of the group; and

(b) the number of regular members to be selected by him under paragraph 10 of Schedule 3 to the 1973 Act shall be reduced accordingly.

Reports on modification references.

13.—(1) In making a report on a reference under section 12 above, the Monopolies Commission—

(a) shall include in the report definite conclusions on the questions comprised in the reference together with such an account of their reasons for those conclusions as in their opinion is expedient for facilitating a proper understanding of those questions and of their conclusions;

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(d) specifies modifications by which those effects could be remedied or prevented.

the Director shall, subject to the following provisions of this section, make such modifications of the conditions of that licence as appear to him requisite for the purpose of remedying or preventing the adverse effects specified in the report.

(2) Before making modifications under this section, the Director shall have regard to the modifications specified in the report.

(3) Before making modifications under this section, the Director shall give notice—

(a) stating that he proposes to make the modifications and setting out their effect;

(b) stating the reasons why he proposes to make the modifications; and

(c) specifying the period (not being less than 28 days from the date of publication of the notice) within which representations or objections with respect to the proposed modifications may be made,

and shall consider any representations or objections which are duly made and not withdrawn.

(4) A notice under subsection (3) above shall be given—

(a) by publishing the notice in such manner as the Director considers appropriate for the purpose of bringing the matters to which the notice relates to the attention of persons likely to be affected by the making of the modifications; and

(b) by serving a copy of the notice on the holder of the licence.

Modifications by order under other enactments.

15.—(1) Where in the circumstances mentioned in subsection (2) below the Secretary of State by order exercises any of the powers specified in—

(a) Parts I and II of Schedule 8 to the 1973 Act; or

(b) section 10(2)(a) of the 1980 Act,

the order may also provide for the modification of the conditions of a licence to such extent as may appear to him to be requisite or expedient for the purpose of giving effect to or of taking account of any provision made by the order.

(2) Subsection (1) above shall have effect where—

(a) the circumstances are as mentioned in section 56(1) of the 1973 Act (order on report on monopoly reference) and the monopoly situation exists in relation to the generation, transmission or supply of electricity;

(b) the circumstances are as mentioned in section 73(1) of that Act (order on report on merger reference) and the two or more enterprises which ceased to be distinct enterprises were both engaged in the generation, transmission or supply of electricity; or

(c) the circumstances are as mentioned in section 10(1) of the 1980 Act (order on report on competition reference) and the anti-competitive practice relates to the generation, transmission or supply of electricity.

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(5) In this section and sections 17 to 23 below—

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(a) any reference to giving a supply of electricity includes a reference to continuing to give such a supply;

(b) any reference to requiring a supply of electricity includes a reference to requiring such a supply to continue to be given; and

(c) any reference to the provision of an electric line or an item of electrical plant is a reference to the provision of such a line or item either by the installation of a new one or by the modification of an existing one.

Exceptions from duty to supply

17.—(1) Nothing in section 16(1) above shall be taken as requiring a public electricity supplier to give a supply of electricity to any premises if—

(a) such a supply is being given to the premises by a private electricity supplier; and

(b) that supply is given (wholly or partly) through the public electricity supplier's electric lines and electrical plant;

and in this Part "private electricity supplier" means a person, other than a public electricity supplier, who is authorised by a licence or exemption to supply electricity.

(2) Nothing in section 16(1) above shall be taken as requiring a public electricity supplier to give a supply of electricity to any premises if and to the extent that—

(a) he is prevented from doing so by circumstances not within his control; or

(b) circumstances exist by reason of which his doing so would or might involve his being in breach of regulations under section 29 below, and he has taken all such steps as it was reasonable to take both to prevent the circumstances from occurring and to prevent them from having that effect; or

(c) it is not reasonable in all the circumstances for him to be required to do so.

(3) Paragraph (c) of subsection (2) above shall not apply in relation to a supply of electricity which is being given to any premises unless the public electricity supplier gives to the occupier, or to the owner if the premises are not occupied, not less than seven working days' notice of his intention to discontinue the supply in pursuance of that paragraph.

Power to recover charges.

18.—(1) Subject to the following provisions of this section, the prices to be charged by a public electricity supplier for the supply of electricity by him in pursuance of section 16(1) above shall be in accordance with such tariffs (which, subject to any condition included in his licence, may relate to the supply of electricity in different areas, cases and circumstances) as may be fixed from time to time by him.

(2) A tariff fixed by a public electricity supplier under subsection (1) above —

(a) shall be so framed as to show the methods by which and the principles on which the charges are to be made as well as the prices which are to be charged; and

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Power to require security

20.—(1) Subject to the following provisions of this section, a public electricity supplier may require any person who requires a supply of electricity in pursuance of subsection (1) of section 16 above to give him reasonable security for the payment to him of all money which may become due to him—

(a) in respect of the supply; or

(b) where any electric line or electrical plant falls to be provided in pursuance of that subsection, in respect of the provision of the line or plant;

and if that person fails to give such security, the supplier may if he thinks fit refuse to give the supply, or to provide the line or plant, for so long as the failure continues.

(2) Where any person has not given such security as is mentioned in subsection (1) above, or the security given by any person has become invalid or insufficient—

(a) the public electricity supplier may by notice require that person, within seven days after the service of the notice, to give him reasonable security for the payment of all money which may become due to him in respect of the supply; and

(b) if that person fails to give such security, the supplier may if he thinks fit discontinue the supply for so long as the failure continues;

and any notice under paragraph (a) above shall state the effect of section 23 below.

(3) Where any money is deposited with a public electricity supplier by way of security in pursuance of this section, the supplier shall pay interest, at such rate as may from time to time be fixed by the supplier with the approval of the Director, on every sum of 50p so deposited for every three months during which it remains in the hands of the supplier.

(4) A public electricity supplier shall not be entitled to require security in pursuance of subsection (1)(a) above if—

(a) the person requiring the supply is prepared to take the supply through a pre-payment meter; and

(b) it is reasonably practicable in all the circumstances (including in particular the risk of loss or damage) for the supplier to provide such a meter.

Additional terms of supply.

21. A public electricity supplier may require any person who requires a supply of electricity in pursuance of section 16(1) above to accept in respect of the supply—

(a) any restrictions which must be imposed for the purpose of enabling the supplier to comply with regulations under section 29 below; and

(b) any terms restricting any liability of the supplier for economic loss resulting from negligence which it is reasonable in all the circumstances for that person to be required to accept.

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(5) An order under this section—

(a) may include such incidental, supplemental and consequential provision (including provision requiring either party to pay a sum in respect of the costs or expenses incurred by the person making the order) as that person considers appropriate; and

(b) shall be final and—

(i) in England and Wales, shall be enforceable, in so far as it includes such provision as to costs or expenses, as if it were a judgment of the county court;

(ii) in Scotland, shall be enforceable as if it were an extract registered decree arbitral bearing a warrant for execution issued by the sheriff.

(6) In including in an order under this section any such provision as to costs or expenses as is mentioned in subsection (5) above, the person making the order shall have regard to the conduct and means of the parties and any other relevant circumstances.

The public electricity supply code.

24. The provisions of Schedule 6 to this Act (which relate to the supply of electricity by public electricity suppliers) shall have effect.

Enforcement of preceding provisions

Orders for securing compliance.

25.—(1) Subject to subsections (2) and (5) and section 26 below, where the Director is satisfied that a licence holder is contravening, or is likely to contravene, any relevant condition or requirement, he shall by a final order make such provision as is requisite for the purpose of securing compliance with that condition or requirement.

(2) Subject to subsection (5) below, where it appears to the Director—

(a) that a licence holder is contravening, or is likely to contravene, any relevant condition or requirement; and

(b) that it is requisite that a provisional order be made,

he shall (instead of taking steps towards the making of a final order) by a provisional order make such provision as appears to him requisite for the purpose of securing compliance with that condition or requirement.

(3) In determining for the purposes of subsection (2)(b) above whether it is requisite that a provisional order be made, the Director shall have regard, in particular—

(a) to the extent to which any person is likely to sustain loss or damage in consequence of anything which, in contravention of the relevant condition or requirement, is likely to be done, or omitted to be done, before a final order may be made; and

(b) to the fact that the effect of the provisions of this section and section 27 below is to exclude the availability of any remedy (apart from under those provisions or for negligence) in respect of any contravention of a relevant condition or requirement.

(4) Subject to subsection (5) and section 26 below, the Director shall confirm a provisional order, with or without modifications, if—

(a) he is satisfied that the licence holder to whom the order relates is contravening, or is likely to contravene, any relevant condition or requirement; and

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(ii) the acts or omissions which, in his opinion, constitute or would constitute contraventions of that condition or requirement; and

(iii) the other facts which, in his opinion, justify the making or confirmation of the order; and

(c) specifying the period (not being less than 28 days from the date of publication of the notice) within which representations or objections with respect to the proposed order or proposed confirmation may be made,

and shall consider any representations or objections which are duly made and not withdrawn.

(2) A notice under subsection (1) above shall be given—

(a) by publishing the notice in such manner as the Director considers appropriate for the purpose of bringing the matters to which the notice relates to the attention of persons likely to be affected by them; and

(b) by serving a copy of the notice, and a copy of the proposed order or of the order proposed to be confirmed, on the licence holder to whom the order relates.

(3) The Director shall not make a final order with modifications, or confirm a provisional order with modifications, except—

(a) with the consent to the modifications of the licence holder to whom the order relates; or

(b) after complying with the requirements of subsection (4) below.

(4) The requirements mentioned in subsection (3) above are that the Director shall—

(a) serve on the licence holder to whom the order relates such notice as appears to him requisite of his proposal to make or confirm the order with modifications;

(b) in that notice specify the period (not being less than 28 days from the date of the service of the notice) within which representations or objections with respect to the proposed modifications may be made; and

(c) consider any representations or objections which are duly made and not withdrawn.

(5) As soon as practicable after making a final order or making or confirming a provisional order, the Director shall—

(a) serve a copy of the order on the licence holder to whom the order relates; and

(b) publish the order in such manner as he considers appropriate for the purpose of bringing it to the attention of persons likely to be affected by it.

(6) Before revoking a final order or a provisional order which has been confirmed, the Director shall give notice—

(a) stating that he proposes to revoke the order and setting out its effect; and

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(8) In this section and section 28 below "the court" means the High Court in relation to England and Wales and the Court of Session in relation to Scotland.

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Power to require information etc.

28.—(1) Where it appears to the Director that a licence holder may be contravening, or may have contravened, any relevant condition or requirement, the Director may, for any purpose connected with such of his functions under section 25 above as are exercisable in relation to that matter, serve a notice under subsection (2) below on any person.

(2) A notice under this subsection is a notice signed by the Director and—

(a) requiring the person on whom it is served to produce, at a time and place specified in the notice, to the Director or to any person appointed by the Director for the purpose, any documents which are specified or described in the notice and are in that person's custody or under his control; or

(b) requiring that person, if he is carrying on a business, to furnish, at a time and place and in the form and manner specified in the notice, to the Director such information as may be specified or described in the notice.

(3) No person shall be required under this section to produce any documents which he could not be compelled to produce in civil proceedings in the court or, in complying with any requirement for the furnishing of information, to give any information which he could not be compelled to give in evidence in any such proceedings.

(4) A person who without reasonable excuse fails to do anything required of him by notice under subsection (2) above shall be liable on summary conviction to a fine not exceeding level 5 on the standard scale.

(5) A person who intentionally alters, suppresses or destroys any document which he has been required by any notice under subsection (2) above to produce shall be liable—

(a) on summary conviction, to a fine not exceeding the statutory maximum;

(b) on conviction on indictment, to a fine.

(6) If a person makes default in complying with a notice under subsection (2) above, the court may, on the application of the Director, make such order as the court thinks fit for requiring the default to be made good; and any such order may provide that all the costs or expenses of and incidental to the application shall be borne by the person in default or by any officers of a company or other association who are responsible for its default.

Provisions with respect to supply generally

Regulations relating to supply and safety.

29.—(1) The Secretary of State may make such regulations as he thinks fit for the purpose of—

(a) securing that supplies of electricity are regular and efficient;

(b) protecting the public from dangers arising from the generation, transmission or supply of electricity, from the use of electricity supplied or from the installation, maintenance or use of any electric line or electrical plant; and

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(2) The duties of an electrical inspector under this Part shall be as follows— PART I

(a) to inspect and test, periodically and in special cases, electric lines and electrical plant belonging to persons authorised by a licence or exemption to generate, transmit or supply electricity;

(b) to examine, periodically and in special cases, the generation, transmission or supply of electricity by such persons;

(c) to inspect and test, if and when required by any consumer, any such lines and plant on the consumer's premises, for the purpose of determining whether any requirement imposed by or under this Part in respect of the lines or plant or the supply of electricity through or by them has been complied with; and

(d) such other duties as may be imposed by regulations under this section or as the Secretary of State may determine.

(3) The Secretary of State may by regulations—

(a) prescribe the manner in which and the times at which any duties are to be performed by electrical inspectors;

(b) require persons authorised by a licence or exemption to generate, transmit or supply electricity—

(i) to furnish electrical inspectors with records or other information; and

(ii) to allow such inspectors access to premises and the use of electrical plant and other facilities;

(c) make provision for relieving persons authorised by a licence to supply electricity from any obligation to supply in such cases as may be prescribed; and

(d) prescribe the amount of the fees which are to be payable to such inspectors.

(4) Any fees received by electrical inspectors shall be paid to the Secretary of State; and any sums received by him under this subsection shall be paid into the Consolidated Fund.

Use etc. of meters.

31. The provisions of Schedule 7 to this Act (which relate to the use, certification, testing and maintenance of electricity meters) shall have effect.

Protection of public interest

Electricity from non-fossil fuel sources.

32.—(1) The Secretary of State may, after consultation with the Director and with the suppliers concerned, by order require each public electricity supplier in England and Wales or each such supplier in Scotland, before a day specified in the order, to make (in so far as he has not already done so) and produce evidence to the Director showing that he has made—

(a) such arrangements; or

(b) where a previous order under this subsection has had effect in relation to him, such additional arrangements,

as will secure the result mentioned in subsection (2) below.

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"declared net capacity", in relation to a non-fossil fuel generating station, means the highest generation of electricity (at the main alternator terminals) which can be maintained indefinitely without causing damage to the plant less—

(a) so much of that capacity as is consumed by the plant; and

(b) in the case of a station which is capable of being fuelled by a fossil fuel, so much of that capacity as the Director may determine;

"fossil fuel" means coal, coal products, lignite, natural gas, crude liquid petroleum or petroleum products;

"natural gas" and "petroleum products" have the same meanings as in the Energy Act 1976; 1976 c. 76.

"non-fossil fuel generating station" means a generating station which is (or may be) fuelled or driven otherwise than by a fossil fuel;

and for the purposes of this section a public electricity supplier shall be regarded as such a supplier in England and Wales or such a supplier in Scotland, according as his authorised area falls wholly or mainly in England and Wales or wholly or mainly in Scotland.

(9) The Secretary of State may by regulations provide—

(a) that subsections (5) to (8) above shall have effect in relation to any non-fossil fuel generating station which is driven by water, wind or solar power with such modifications as may be prescribed; and

(b) that electricity generated outside the United Kingdom shall be treated for the purposes of subsection (5)(a) above as generated by a non-fossil fuel generating station in such circumstances and to such extent as may be prescribed.

(10) In relation to any time before the commencement of section 4 above, any requirement imposed by subsection (1) above to consult with public electricity suppliers in England and Wales or public electricity suppliers in Scotland shall be construed as a requirement to consult with the Area Boards or, as the case may be, the Scottish Boards.

Fossil fuel levy

33.—(1) Where the Secretary of State has made one or more orders under section 32 above in relation to public electricity suppliers in England and Wales, or public electricity suppliers in Scotland, he may by regulations provide—

(a) for the imposition on such suppliers, and on persons authorised by a licence under section 6(2) above to supply electricity within the authorised area of such a supplier, of a levy in respect of each qualifying month;

(b) for the collection of payments in respect of that levy by a prescribed person; and

(c) for the making by that person to such suppliers, out of the payments so collected, of payments in respect of each qualifying month.

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(8) In this section— PART I

"advance payment" means any payment made or expense incurred in relation to a particular generating station before electricity is first generated by that station, and any reference to the making of advance payments shall be construed accordingly;

"deferred payment" means any payment made or expense incurred in relation to a particular generating station after electricity ceases to be generated by that station;

"fossil fuel generating station" means a generating station fuelled by a fossil fuel;

"leviable electricity" means electricity which—

(a) is generated by a fossil fuel generating station; or

(b) is generated by a non-fossil fuel generating station in pursuance of qualifying arrangements;

"non-fossil fuel generating station" means a generating station fuelled or driven otherwise than by a fossil fuel;

"qualifying arrangements" in relation to a public electricity supplier, means any arrangements evidence of the making of which he has produced to the Director in pursuance of an order under section 32 above and which—

(a) were made jointly with one or more other public electricity suppliers; and

(b) satisfy such other requirements as may be prescribed;

"qualifying month" in relation to a public electricity supplier or a person authorised by a licence under section 6(2) above to supply electricity within the authorised area of such a supplier, means a month beginning on or after the day appointed by the first order under section 32 above which has effect in relation to that supplier;

and other expressions which are used in section 32 above have the same meanings as in that section.

Fuel stocks etc. at generating stations.

34.—(1) This section applies to any generating station which—

(a) is of a capacity not less than 50 megawatts; and

(b) is fuelled otherwise than by waste or manufactured gases;

and in this subsection "waste" has the same meaning as in the Control of Pollution Act 1974. 1974 c. 40.

(2) The Secretary of State may by order provide that subsection (1) above shall have effect as if for the capacity mentioned in paragraph (a) there were substituted such other capacity (not exceeding 100 megawatts) as may be specified in the order.

(3) In respect of any generating station to which this section applies, the Secretary of State may give a direction requiring the person who operates it—

(a) to make such arrangements with respect to stocks of fuel and other materials held at or near that generating station for the purposes of its operation as will—

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(3) In subsections (1) and (2) above "specified" means specified by or under the Secretary of State's direction; and a person authorised by a licence to transmit electricity shall give effect to any direction given to him under subsection (2) above notwithstanding any other duty imposed on him by or under this Part. PART I

(4) The Secretary of State shall lay before each House of Parliament a copy of every direction given under section 34 above or this section unless he is of the opinion that disclosure of the direction is against the interests of national security or the commercial interests of any person.

(5) A person who, without reasonable excuse, contravenes or fails to comply with a direction of the Secretary of State under section 34 above or this section shall be liable—

(a) on summary conviction, to a fine not exceeding the statutory maximum;

(b) on conviction on indictment, to a fine.

(6) No proceedings shall be instituted in England and Wales in respect of an offence under this section except by or on behalf of the Secretary of State.

(7) Paragraphs 1 to 4, 7 and 8 of Schedule 2 to the Energy Act 1976 (administration of Act and other matters) shall have effect as if— 1976 c. 76.

(a) section 34 above were contained in that Act;

(b) the powers of paragraph 1 were exercisable for any purpose connected with securing compliance with a direction under that section;

(c) information obtained by virtue of that paragraph could lawfully be disclosed to any person by whom anything falls to be specified under such a direction; and

(d) the powers conferred by sub-paragraph (1)(c) of that paragraph included power to direct that information and forecasts be furnished to any such person.

Consent required for construction etc. of generating stations.

36.—(1) Subject to subsections (2) and (4) below, a generating station shall not be constructed, extended or operated except in accordance with a consent granted by the Secretary of State.

(2) Subsection (1) above shall not apply to a generating station whose capacity—

(a) does not exceed the permitted capacity, that is to say, 50 megawatts; and

(b) in the case of a generating station which is to be constructed or extended, will not exceed the permitted capacity when it is constructed or extended;

and an order under this subsection may make different provision for generating stations of different classes or descriptions.

(3) The Secretary of State may by order provide that subsection (2) above shall have effect as if for the permitted capacity mentioned in paragraph (a) there were substituted such other capacity as may be specified in the order.

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(5) No proceedings shall be instituted in England and Wales in respect of an offence under this section except by or on behalf of the Secretary of State.

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38. The provisions of Schedule 9 to this Act (which relate to the preservation of amenity and fisheries) shall have effect.

Preservation of amenity and fisheries.

Consumer protection: standards of performance

39.—(1) The Director may—

Electricity supply: performance in individual cases.

(a) with the consent of the Secretary of State; and

(b) after consultation with public electricity suppliers and with persons or bodies appearing to the Director to be representative of persons likely to be affected,

make regulations prescribing such standards of performance in connection with the provision by such suppliers of electricity supply services to tariff customers as, in his opinion, ought to be achieved in individual cases.

(2) Regulations under this section may—

(a) prescribe circumstances in which public electricity suppliers are to inform persons of their rights under this section;

(b) prescribe such standards of performance in relation to any duty arising under paragraph (a) above as, in the Director's opinion, ought to be achieved in all cases; and

(c) prescribe circumstances in which public electricity suppliers are to be exempted from any requirements of the regulations or this section,

and may make different provision for different public electricity suppliers.

(3) If a public electricity supplier fails to meet a prescribed standard, he shall make to any person who is affected by the failure and is of a prescribed description such compensation as may be determined by or under the regulations.

(4) The making of compensation under this section in respect of any failure by a public electricity supplier to meet a prescribed standard shall not prejudice any other remedy which may be available in respect of the act or omission which constituted that failure.

(5) Any dispute arising under this section or regulations made under it—

(a) may be referred to the Director by either party; and

(b) on such a reference, shall be determined by order made either by the Director or, if he thinks fit, by the consumers' committee to which the supplier is allocated or any sub-committee of that committee;

and the practice and procedure to be followed in connection with any such determination shall be such as may be prescribed.

(6) An order under subsection (5) above shall be final and shall be enforceable—

(a) in England and Wales, as if it were a judgment of the county court;

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(3) A public electricity supplier who without reasonable excuse fails to do anything required of him by subsection (2) above shall be liable on summary conviction to a fine not exceeding level 5 on the standard scale.

(4) The Director shall at least once in every year arrange for the publication, in such form and in such manner as he considers appropriate, of such of the information collected by or furnished to him under this section as it may appear to him expedient to give to customers or potential customers of public electricity suppliers.

(5) In arranging for the publication of any such information the Director shall have regard to the need for excluding, so far as that is practicable—

(a) any matter which relates to the affairs of an individual, where publication of that matter would or might, in the opinion of the Director, seriously and prejudicially affect the interests of that individual; and

(b) any matter which relates specifically to the affairs of a particular body of persons, whether corporate or unincorporate, where publication of that matter would or might, in the opinion of the Director, seriously and prejudicially affect the interests of that body.

Consumer protection: miscellaneous

Functions with respect to competition.

43.—(1) If and to the extent that he is requested by the Director General of Fair Trading to do so, it shall be the duty of the Director to exercise the functions of that Director under Part III of the 1973 Act so far as relating to courses of conduct which are or may be detrimental to the interests of consumers of electricity, whether those interests are economic or interests in respect of health, safety or other matters; and references in that Part to that Director shall be construed accordingly.

(2) There are hereby transferred to the Director (so as to be exercisable concurrently with the Director General of Fair Trading)—

(a) the functions of that Director under sections 44 and 45 of the 1973 Act; and

(b) the functions of that Director under sections 50, 52, 53, 86 and 88 of that Act,

so far as relating to monopoly situations which exist or may exist in relation to commercial activities connected with the generation, transmission or supply of electricity; and references in Part IV and sections 86, 88 and 133 of that Act to that Director shall be construed accordingly.

(3) There are hereby transferred to the Director (so as to be exercisable concurrently with the Director General of Fair Trading) the functions of that Director under sections 2 to 10 and 16 of the 1980 Act so far as relating to courses of conduct which have or are intended to have or are likely to have the effect of restricting, distorting, or preventing competition in connection with the generation, transmission or supply of electricity; and references in those sections and in section 19 of that Act to that Director shall be construed accordingly.

(4) Before either Director first exercises in relation to any matter functions transferred by any of the following provisions, namely—

(a) paragraph (a) of subsection (2) above;

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Investigation of complaints

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Investigation of enforcement matters.

45.—(1) Subject to subsection (2) below, it shall be the duty of the Director to investigate any matter which appears to him to be an enforcement matter and which—

(a) is the subject of a representation (other than one appearing to the Director to be frivolous) made to the Director by or on behalf of a person appearing to the Director to have an interest in that matter; or

(b) is referred to him by a consumers' committee under subsection (3) below.

(2) The Director may, if he thinks fit, require a consumers' committee to investigate and report to him on any matter falling within subsection (1) above which relates to a person authorised by a licence to supply electricity in the committee's area.

(3) It shall be the duty of each consumers' committee to refer to the Director any matter which—

(a) appears to the committee to be an enforcement matter; and

(b) is the subject of a representation (other than one appearing to the committee to be frivolous) made to the committee by or on behalf of a person appearing to the committee to have an interest in that matter.

(4) In this section and section 46 below "enforcement matter" means any matter in respect of which any functions of the Director under section 25 above are or may be exercisable.

Investigation of certain other matters.

46.—(1) It shall be the duty of each consumers' committee to investigate any matter which appears to the committee to be a relevant matter and which—

(a) is the subject of a representation (other than one appearing to the committee to be frivolous) made to the committee by or on behalf of a person appearing to the committee to have an interest in that matter; or

(b) is referred to the committee by the Director under subsection (2) below.

(2) Subject to subsection (3) below, it shall be the duty of the Director to refer to a consumers' committee any matter which—

(a) appears to the Director to be a relevant matter; and

(b) is the subject of a representation (other than one appearing to the Director to be frivolous) made to the Director by or on behalf of a person appearing to the Director to have an interest in that matter.

(3) Nothing in subsection (2) above shall require the Director to refer to a consumers' committee any matter in respect of which he is already considering exercising functions under this Part.

(4) Where on an investigation under subsection (1) above any matter appears to a consumers' committee to be a matter in respect of which it would be appropriate for the Director to exercise any functions under this Part, the committee shall refer that matter to the Director with a view to his exercising those functions with respect to that matter.

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(3) The Director General of Fair Trading shall consult the Director before publishing under section 124 of the 1973 Act any information or advice which may be published by the Director under this section. PART I

49.—(1) The Director shall, at such premises and in such form as he may determine, maintain a register for the purposes of this Part. Keeping of register.

(2) Subject to subsection (3) and to any direction given under subsection (4) below, the Director shall cause to be entered in the register the provisions of—

(a) every licence and every exemption granted to a particular person;

(b) every modification or revocation of a licence;

(c) every direction or consent given or determination made under a licence; and

(d) every final or provisional order, every revocation of such an order and every notice under section 25(6) above.

(3) In entering any provision in the register, the Director shall have regard to the need for excluding, so far as that is practicable, the matters specified in section 42(5)(a) and (b) above.

(4) If it appears to the Secretary of State that the entry of any provision in the register would be against the public interest or the commercial interests of any person, he may direct the Director not to enter that provision in the register.

(5) The contents of the register shall be available for inspection by the public during such hours and subject to the payment of such fee as may be specified in an order made by the Secretary of State.

(6) Any person may, on the payment of such fee as may be specified in an order so made, require the Director to supply him with a copy of, or extract from, any part of the register, being a copy or extract which is certified by the Director to be a true copy or extract.

(7) Any sums received by the Director under this section shall be paid into the Consolidated Fund.

50.—(1) The Director shall, as soon as practicable after the end of the year 1989 and of each subsequent calendar year— Annual and other reports.

(a) make to the Secretary of State a report on—

(i) his activities during that year; and

(ii) the Monopolies Commission's activities during that year so far as relating to references made by him; and

(b) send a copy of that report to the chairman and members of each of the consumers' committees.

(2) Every such report shall—

(a) include a general survey of developments, during the year to which it relates, in respect of matters falling within the scope of the Director's functions;

(b) set out any final or provisional orders made by the Director during that year;

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(2) Each consumers' committee shall at least once in every year, and whenever directed to do so by the Director, make a report to him on their activities; and every such report shall include a statement of the matters on which, during the period to which it relates, the committee have advised the Director under section 51 above.

(3) The Director may arrange for a report made to him under this section to be published in such manner as he considers appropriate.

(4) In publishing any report under this section the Director shall have regard to the need for excluding, so far as that is practicable, the matters specified in section 42(5)(a) and (b) above.

The National Consumers' Consultative Committee.

53.—(1) There shall be a committee, to be known as the National Consumers' Consultative Committee, of which the Director shall be chairman and the ordinary members shall be the persons who for the time being hold office as chairmen of consumers' committees.

(2) The Committee shall meet at least four times a year and shall be under a duty—

(a) to keep under review matters affecting the interests of consumers of electricity generally; and

(b) to facilitate the exchange of information relating to such matters between the Director, the ordinary members and their respective consumers' committees.

Provisions with respect to Consumers' etc. Councils

Abolition of Consumers' etc. Councils.

54. The following Councils, namely—

(a) the Electricity Consumers' Council;

(b) the Consultative Councils established under section 7 of the Electricity Act 1947 for the areas of Area Boards; and

1947 c. 54.

(c) the Consultative Councils established under section 7A of that Act for the districts of Scottish Boards,

shall cease to exist.

Compensation for chairmen and officers of abolished Councils.

55.—(1) The Secretary of State may pay to the persons who immediately before the commencement of section 54 above are the chairmen of the Councils ceasing to exist by virtue of that section such sums by way of compensation for loss of office, or loss or diminution of pension rights, as the Secretary of State may with the approval of the Treasury determine.

(2) The Secretary of State may also pay to persons who immediately before the commencement of section 54 above are officers of the Councils ceasing to exist by virtue of that section such sums by way of compensation for loss of employment, or loss or diminution of remuneration or pension rights, as the Secretary of State may with the approval of the Treasury determine.

(3) Any sums required by the Secretary of State for making payments under this section shall be paid out of money provided by Parliament.

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(v) the Director General of Telecommunications;

(vi) the Director General of Gas Supply;

(vii) the Director General of Water Supply;

(viii) the Civil Aviation Authority;

(ix) the Insolvency Practitioners Tribunal; or

(x) a local weights and measures authority in Great Britain,

of any of his or, as the case may be, their functions under any of the enactments or instruments specified in subsection (3) below;

(c) for the purpose of enabling or assisting the Secretary of State to exercise any powers conferred on him by the Financial Services Act 1986 or by the enactments relating to companies, insurance companies or insolvency or for the purpose of enabling or assisting any inspector appointed by him under the enactments relating to companies to carry out his functions; 1986 c. 60.

(d) for the purpose of enabling or assisting an official receiver to carry out his functions under the enactments relating to insolvency or for the purpose of enabling or assisting a recognised professional body for the purposes of section 391 of the Insolvency Act 1986 to carry out its functions as such; 1986 c. 45.

(e) for the purpose of facilitating the carrying out by the Health and Safety Executive of any of their functions under any enactment;

(f) in connection with the investigation of any criminal offence or for the purposes of any criminal proceedings;

(g) for the purposes of any civil proceedings brought under or by virtue of this Part or any of the enactments or instruments specified in subsection (3) below; or

(h) in pursuance of a Community obligation.

(3) The enactments and instruments referred to in subsection (2) above are—

(a) the Trade Descriptions Act 1968; 1968 c. 29.

(b) the 1973 Act;

(c) the Consumer Credit Act 1974; 1974 c. 39.

(d) the Restrictive Trade Practices Act 1976; 1976 c. 34.

(e) the Resale Prices Act 1976; 1976 c. 53.

(f) the Estate Agents Act 1979; 1979 c. 38.

(g) the 1980 Act;

(h) the National Audit Act 1983; 1983 c. 44.

(i) the Telecommunications Act 1984; 1984 c. 12.

(j) the Airports Act 1986; 1986 c. 31.

(k) the Gas Act 1986; 1986 c. 44.

(l) the Insolvency Act 1986;

(m) the Consumer Protection Act 1987; 1987 c. 43.

(n) the Water Act 1989; 1989 c. 15.

(o) any subordinate legislation made for the purpose of securing compliance with the Directive of the Council of the European Communities dated 10th September 1984 (No. 84/450/EEC) on

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(7) Without prejudice to any right which any person may have by virtue of subsection (5) above to bring civil proceedings in respect of any contravention or apprehended contravention of any directions under this section, compliance with any such directions shall be enforceable by civil proceedings by the Secretary of State for an injunction or interdict or for any other appropriate relief.

(8) In this section—

"dealings" includes dealings entered into otherwise than for purposes connected with the transmission of electricity;

"outside person", in relation to any person, means any person who is not an associate of his;

and for the purposes of this section a person is an associate of another if he and that other are connected with each other within the meaning of section 839 of the Income and Corporation Taxes Act 1988.

1988 c. 1

Making of false statements etc.

59.—(1) If any person, in giving any information or making any application under or for the purposes of any provision of this Part, or of any regulations made under this Part, makes any statement which he knows to be false in a material particular, or recklessly makes any statement which is false in a material particular, he shall be liable—

(a) on summary conviction, to a fine not exceeding the statutory maximum;

(b) on conviction on indictment, to a fine.

(2) Any person who seeks to obtain entry to any premises by falsely pretending to be—

(a) an employee of a public electricity supplier;

(b) an electrical inspector; or

(c) a meter examiner,

shall be liable on summary conviction to a fine not exceeding level 4 on the standard scale.

(3) No proceedings shall be instituted in England and Wales in respect of an offence under subsection (1) above except by or with the consent of the Secretary of State or the Director of Public Prosecutions.

Supplemental

Powers to make regulations.

60.—(1) Regulations made under any provision of this Part may provide for the determination of questions of fact or of law which may arise in giving effect to the regulations and for regulating (otherwise than in relation to any court proceedings) any matters relating to the practice and procedure to be followed in connection with the determination of such questions, including provision—

(a) as to the mode of proof of any matter;

(b) as to parties and their representation;

(c) for the right to appear before and be heard by the Secretary of State, the Director and other authorities; and

(d) as to awarding costs or expenses of proceedings for the determination of such questions, including the amount of the costs or expenses and the enforcement of the awards.

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(2) Regulations made under any provision of this Part which prescribe a period within which things are to be done may provide for extending the period so prescribed.

(3) Regulations made under any provision of this Part may—

(a) provide for anything falling to be determined under the regulations to be determined by such persons, in accordance with such procedure and by reference to such matters and to the opinion of such persons as may be prescribed by the regulations;

(b) make different provision for different cases, including different provision in relation to different persons, circumstances or localities; and

(c) make such supplemental, consequential and transitional provision as the Secretary of State or, as the case may be, the Director considers appropriate.

Concurrent proceedings.

61.—(1) Subsection (2) below applies where a licence holder makes an application to the Secretary of State for his consent under section 36 above for the construction or extension of a generating station and, for a purpose connected with the proposed construction or extension of that station, makes either or both of the following, namely—

(a) a compulsory purchase order; and

(b) an application to the Secretary of State for authorisation under paragraph 1 of Schedule 5 to this Act (water rights for hydro-electric generating stations in Scotland).

(2) The proceedings which—

1981 c. 67.
1947 c. 42.

(a) in the case of a compulsory purchase order, are required by Part II of the Acquisition of Land Act 1981 or Schedule 1 to the Acquisition of Land (Authorisation Procedure) (Scotland) Act 1947 to be taken for the purpose of confirming that order;

(b) in the case of an application under paragraph 1 of Schedule 5 to this Act, are required by paragraphs 7 to 12 of that Schedule to be taken in relation to that application,

may be taken concurrently (so far as practicable) with the proceedings required by Schedule 8 to this Act to be taken in relation to the application for consent under section 36 above.

(3) Subsection (4) below applies where a licence holder makes an application to the Secretary of State for his consent under section 37 above for the installation of an electric line above ground and, for a purpose connected with the proposed installation of that line, makes one or more of the following, namely—

(a) a compulsory purchase order;

(b) an application to the Secretary of State under paragraph 6 of Schedule 4 to this Act for a necessary wayleave; and

(c) a reference to the Secretary of State under paragraph 9 (felling and lopping of trees) of that Schedule.

(4) The proceedings which—

(a) in the case of a compulsory purchase order, are required by Part II of the Acquisition of Land Act 1981 or Schedule 1 to the Acquisition of Land (Authorisation Procedure) (Scotland) Act 1947 to be taken for the purpose of confirming that order;

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(a) belonging to Her Majesty in right of the Crown or of the Duchy of Lancaster, or to the Duchy of Cornwall; or

(b) belonging to a government department or held in trust for Her Majesty for the purposes of a government department.

(2) A consent given for the purposes of subsection (1) above may be given on such financial and other conditions as the appropriate authority giving the consent may consider appropriate.

(3) Subject to subsection (1) above, the provisions of this Part shall have effect in relation to land in which there is a Crown or Duchy interest as they have effect in relation to land in which there is no such interest.

(4) In this section "the appropriate authority"—

(a) in relation to land belonging to Her Majesty in right of the Crown and forming part of the Crown Estate, means the Crown Estate Commissioners;

(b) in relation to any other land belonging to Her Majesty in right of the Crown, means the government department having the management of that land;

(c) in relation to land belonging to Her Majesty in right of the Duchy of Lancaster, means the Chancellor of that Duchy;

(d) in relation to land belonging to the Duchy of Cornwall, means such person as the Duke of Cornwall, or the possessor for the time being of that Duchy, appoints;

(e) in relation to land belonging to a government department or held in trust for Her Majesty for the purposes of a government department, means that department;

and, if any question arises as to what authority is the appropriate authority in relation to any land, that question shall be referred to the Treasury, whose decision shall be final.

Interpretation etc. of Part I.
1973 c. 41.
1980 c. 21.

64.—(1) In this Part, unless the context otherwise requires—

"the 1973 Act" means the Fair Trading Act 1973;

"the 1980 Act" means the Competition Act 1980;

"authorised area" has the meaning given by section 6(9) above;

"electrical plant" means any plant, equipment, apparatus or appliance used for, or for purposes connected with, the generation, transmission or supply of electricity, other than—

(a) an electric line;

(b) a meter used for ascertaining the quantity of electricity supplied to any premises; or

(c) an electrical appliance under the control of a consumer;

"electric line" means any line which is used for carrying electricity for any purpose and includes, unless the context otherwise requires—

(a) any support for any such line, that is to say, any structure, pole or other thing in, on, by or from which any such line is or may be supported, carried or suspended;

(b) any apparatus connected to any such line for the purpose of carrying electricity; and

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"working day" means any day other than a Saturday, a Sunda Christmas Day, Good Friday or a day which is a bank holida within the meaning of the Banking and Financial Dealings A 1971.

1971 c. 80.

1972 c. 59

(2) The provisions of section 3 of the Administration of Justic (Scotland) Act 1972 (power of arbiter to state case to Court of Session shall not apply in relation to any determination under this Part made b an arbiter.

PART II
REORGANISATION OF THE INDUSTRY

Transfers to successor companies

Transfer of property etc. of Area Boards.

65.—(1) On such day as the Secretary of State may by order appoint for the purposes of this subsection and subsection (5) of section 66 below (in this Part referred to, in relation to any transfer effected by either subsection, as "the transfer date"), all property, rights and liabilities to which each Area Board is entitled or subject immediately before that date shall become by virtue of this subsection property, rights and liabilities of a company which, in relation to that Board, is nominated for the purposes of this subsection by the Secretary of State.

(2) Subject to subsection (3) below, the Secretary of State may, after consulting the Area Board concerned, by order nominate for the purposes of subsection (1) above any company formed and registered under the Companies Act 1985.

1985 c. 6.

(3) On the transfer date each company so nominated must be a company limited by shares which is wholly owned by the Crown.

(4) The Secretary of State shall not exercise any power conferred on him by this section or sections 66 to 69 below except with the consent of the Treasury.

(5) In this Part "supply company" means a company nominated for the purposes of subsection (1) above.

Transfer of property etc. of Generating Board and Electricity Council.

66.—(1) Before such date as the Secretary of State may direct, the Generating Board shall make a scheme for the division of all its property, rights and liabilities between three or more companies nominated by the Secretary of State for the purposes of this subsection; and of the companies so nominated—

(a) two shall be designated as generating companies; and

(b) one shall be designated as the transmission company.

(2) Before such date as the Secretary of State may direct, the Electricity Council shall make a scheme—

(a) for the transfer to a company nominated for the purposes of this subsection by the Secretary of State; or

(b) for the division between two or more companies so nominated,

of all its property, rights and liabilities (other than excepted rights and liabilities).

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Schedule 2 — *continued*

Page 74, line 34, after ("such") insert ("remuneration and")

Page 74, line 34, after ("allowances") insert ("including loss of remuneration")

Page 74, line 34, leave out ("with the approval of the Treasury")

Page 74, line 38, after ("he") insert ("after consultation with the chairman of the Committee")

Page 74, line 42, after ("members") insert ("other than the chairman")

Page 75, line 2, leave out ("with the approval of the Director")

Page 75, line 3, leave out ("and other")

Page 75, line 6, after ("they") insert ("subject to the objection of the Director")

Page 75, line 10, leave out ("such of their")

Page 75, line 11, leave out ("as do not relate to") and insert ("including")

Page 75, line 20, leave out ("financial") and insert ("calendar")

Page 75, line 23, leave out sub-paragraph (3)

Clause 4

BY THE LORD PEYTON OF YEOVIL

Page 3, line 1, leave out ("The Secretary of State and the Director shall each") and insert ("The Director shall")

BY THE LORD WILLIAMS OF ELVEL
THE LORD PESTON

Page 3, line 33, after ("electricity") insert ("in the context of optimum use of different fuel sources")

BY THE BARONESS HOOPER

Page 3, line 34, at end insert —

("(bb) to promote research into, and the development and use of, new techniques by or on behalf of persons authorised by a licence to generate, transmit or supply electricity;")

BY THE LORD WILLIAMS OF ELVEL
THE LORD PESTON

Page 3, line 34, at end insert —

("(bb) to set standards of performance and to ensure that customers are compensated for failure to meet those standards")

Page 3, line 39, at end insert —

("(3A) In performing his duty under subsection (3) (b) above, the Director shall require that before any Licence Holder applies for planning permission for the construction of new plant over 50 mW electrical capacity in aggregate, it must be demonstrated that the Licence Holder has examined all reasonable energy demand management alternatives on

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Schedule 4 — *continued*

Page 84, line 33, leave out ("or")

Page 84, line 36, at end insert ("; or

(e) any system apparatus (within the meaning of Part II of the Road Traffic (Driver Licensing and Information Systems) Act 1989) of an operator of a driver information system who is licensed under Part II of that Act.")

Page 85, line 52, at beginning insert ("the National Rivers Authority, any water undertaker or any sewerage undertaker or, in Scotland,")

Page 85, line 52, leave out ("and")

BY THE BARONESS HOOPER

Page 86, line 1, at end insert ("; and

(d) any operator of a driver information system who is licensed under Part II of the Road Traffic (Driver Licensing and Information Systems) Act 1989),")

BY THE LORD WILLIAMS OF ELVEL
THE LORD PESTON

Page 89, line 35, leave out paragraph 9

Clause 13

BY THE LORD PEYTON OF YEOVIL

Page 9, line 30, leave out from ("state") to end of line 32

Clause 14

BY THE LORD WILLIAMS OF ELVEL
THE LORD PESTON

Page 9, line 42, after ("interest") insert ("as defined in section 84 of the 1973 Act")

Page 11, line 21, after ("eight") insert ("properly qualified")

Clause 16

BY THE LORD PEYTON OF YEOVIL

Page 12, line 46, leave out subsection (2)

Clause 18

BY THE LORD WILLIAMS OF ELVEL
THE LORD PESTON

Page 14, line 9, at end insert ("and

(e) the tariff required, if any")

Page 14, line 46, at end insert —

("(5A) Where a supplier is under a duty to supply electricity in accordance with the provisions of this Act, and, in breach of that duty,

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Clause 34

BY THE LORD WILLIAMS OF ELVEL
THE LORD PESTON

Page 27, line 23, at end insert—

("(11) That all applications for major capital projects planned as a result of this section should be subject to the outcome of a planning inquiry held in public.

(12) That the provisions of this section and the orders arising from it shall be discounted as evidence for the purpose of any public inquiry under subsection (11) above.")

Clause 38

BY THE LORD WILLIAMS OF ELVEL
THE LORD PESTON

Page 31, line 5, leave out subsection (4)

Schedule 8

BY THE LORD WILLIAMS OF ELVEL
THE LORD PESTON

Page 103, line 33, at end insert ("and, if not, what objections have been raised")

Clause 39

BY THE LORD WILLIAMS OF ELVEL
THE LORD PESTON

Page 31, line 27, after ("ground") insert ("or below ground")

Clause 41

BY THE BARONESS OPPENHEIM-BARNES

Page 32, line 18, at end insert—

("( ) Without prejudice to the generality of sub-section 1 above, in making regulations under this section the Director shall have regard to the following aspects of service quality;

(a) the maximum number, if any of unplanned or planned interruptions of electricity supply;

(b) the maximum duration of any interruptions permitted under (a) above;

(c) the minimum notice required for planned interruptions of supply;

(d) the maximum variation allowable in voltage and frequence of supply, including transient variations;

(e) the maximum time allowable for the connection of new customers to an existing supply; and

(f) the restoration of a supply to customers where the supply has been terminated in error.")

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Clause 53—*continued*

BY THE LORD PEYTON OF YEOVIL

Page 39, line 38, leave out ("may") and insert ("shall")

Clause 58

BY THE LORD WILLIAMS OF ELVEL
THE LORD PESTON

Page 43, line 2, leave out ("who is, or is an associate of,")

Clause 60

BY THE LORD PEYTON OF YEOVIL

Page 44, line 24, leave out subsection (3)

Clause 66

BY THE LORD PEYTON OF YEOVIL

Page 49, line 13, leave out paragraph (a) and insert("(a) one shall be designated as the generating company")

Page 49, line 13, after ("two") insert ("or more")

After Clause 67

BY THE BARONESS HOOPER

Insert the following Clause—

("—(1) This section applies to any scheme under subsection (1) or (2) of section 66 or subsection (1) of section 67 above (in this Part referred to as a "transfer scheme"); and in this section and section 68 below "the relevant subsection", in relation to such a scheme, means that subsection.

Transfer schemes under sections 66 and 67

(2) A transfer scheme may—

(a) define the property, rights and liabilities to be allocated to a particular company nominated for the purposes of the relevant subsection—

(i) by specifying or describing the property, rights and liabilities in question;

(ii) by referring to all the property, rights and liabilities comprised in a specified part of the transferor's undertaking; or

(iii) partly in the one way and partly in the other;

(b) provide that any rights or liabilities specified or described in the scheme shall be enforceable either by or against either or any, or by or against both or all, of two or more companies nominated for the purposes of the relevant subsection;

(c) impose on any company nominated for the purposes of the relevant subsection an obligation to enter into such written agreements with, or execute such other instruments in favour of, any other company so nominated as may be specified in the scheme; and

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Schedule 10 — *continued*

Page 112, line 26, leave out ("such one of them as may be so specified") and insert ("transferee A")

Page 112, line 29, leave out from ("transferees") to end of line 33 and insert ("("transferee A") for the other or one of the others of them ("transferee B") to concur in the issue of such a certificate, transferee B has failed so to concur —

(a) tranferee A may refer the matter to the Secretary of State; and

(b) the Secretary of State may direct transferee B to concur in the issue of a certificate prepared in such terms as are specified in the direction.")

Page 113, line 22, leave out ("Any transaction") and insert ("A transaction of any description")

Page 113, line 24, leave out ("shall be binding on all other persons, and") insert ("—

(a) shall have effect subject to the provisions of any enactment which provides for transactions of that description to be registered in any statutory register; but

(b) subject to that, shall be binding in all persons")

Page 113, line 52, at end insert —

("*Interpretation*

10. Any reference in this Schedule to a transfer effected in pursuance of a transfer scheme is a reference to a transfer effected by this Act in pursuance of such a scheme.")

Clause 70

BY THE LORD PEYTON OF YEOVIL

Page 52, line 4, at end insert ("and in any case shall in no event dispose of securities or any rights to securities initially allotted to him in pursuance of this section in relation to a company designated in section 66(1)(b) above")

Clause 73

BY THE LORD PEYTON OF YEOVIL

Page 52, line 39, after ("(1)") insert ("Subject to section (*percentages of shareholdings*) below")

Page 53, line 4, after ("section") insert ("and section (*percentages of shareholdings*) below")

Page 53, line 44, after ("section") insert ("and section (*percentages of shareholdings*) below")

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Schedule 11 — *continued*

(ii) the machinery or plant had become a fixture, immediately after the grant of the lease.

(5) In sub-paragraph (4) above "the transferor" means the transferor under the transfer scheme in question and expressions which are used in Schedule 17 to the Finance Act 1985 have the same meaning as in that Schedule; and in construing that sub-paragraph the provisions of section 511(2) of the 1988 Act and the corresponding earlier enactments shall be disregarded.")

Page 117, line 48, leave out ("Electricity Board or the Electricity Council") and insert ("existing body")

Page 118, line 37, at end insert —

("'existing body in England and Wales" means an Area Board, the Generating Board or the Electricity Council;

"existing body in Scotland" means a Scottish Board;")

Clause 95

BY THE LORD WILLIAMS OF ELVEL

Page 66, line 27, leave out ("or the commercial interests of some other person")

After Clause 97

BY THE BARONESS HOOPER

Insert the following Clause —

("—(1) The Secretary of State shall exercise the power conferred on him by section 5 of the Science and Technology Act 1965 (expenditure on research and development in science or technology) for the purpose of promoting such research into, and such development of, new techniques relating to the generation, transmission or supply of electricity as appears to him to be necessary in the national interest.

Promotion of new techniques in national interest.

(2) The Secretary of State may, if he considers it expedient for purposes connected with the performance of his duty under this section, serve notice under this subsection on any licence holder or any person who is authorised by an exemption to generate or supply electricity.

(3) A notice under subsection (2) above may require the person on whom it is served to furnish, at a time and place specified in the notice, to the Secretary of State such information about that person's business as may be so specified.

(4) Subsections (3), (5) and (7) to (9) of section 97 above shall apply for the purposes of this section as they apply for the purposes of that section.")

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Electricity Bill

AMENDMENTS
TO BE MOVED ON REPORT

30th June 1989

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ELECTRICITY GENERATION LICENCE

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ELECTRICITY GENERATION LICENCE

PART I: TERMS OF THE LICENCE

1. The Secretary of State, in exercise of the powers conferred by Section 6(1)(a) of the Electricity Act 1989 (hereinafter referred to as the "Act") hereby licenses [name of generation company to be inserted] to generate electricity for the purpose of giving a supply to any premises or enabling a supply to be so given during the period specified in paragraph 3 below, subject to the Conditions set out in Part II below (hereinafter referred to as the "Conditions")

2. This licence is subject to modification or amendment in accordance with its terms or with Sections 10, 13 and 14 of the Act. The licence is further subject to the terms as to revocation specified in the Schedule below.

3. This licence shall come into force on the transfer date appointed under section 59 of the Act and unless revoked in accordance with the provisions of the Schedule shall continue until determined by not less than 25 years' notice in writing given by the Secretary of State to the licensee, such notice not to be served earlier than a date being 10 years after the licence comes into force.

[1990] Secretary of State for Energy

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purposes of Conditions [illegible] and [illegible] shall include any person who has made application to be so authorised.

'connection charges' means, in relation to use of system, charges made or levied or to be made or levied for the carrying out of works and provision of electric lines, electrical plant and ancillary meters in constructing entry and exit points to the system required by any authorised electricity supplier under an agreement for use of system, whether or not such charges are annualised for the purposes of such agreement.

"designated agreement" means any agreement entered or to be entered into between the licensee and one or more authorised electricity operators approved (with or without the imposition of conditions) and designated by the Director as such for the purposes of any Condition but so that any agreement so designated may (at the discretion of the Director) cease to be a designated agreement if amended in any material respect.

"Grid Code" means the Code prepared by the Transmission System Operator in compliance with the conditions of his licence.

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licensee determine for the purpose as being the date by which terms, merit order despatch the operation of which was suspended by such directions should whether or not in any modified form once more become operative

"use of system" means use of the system of electric lines, including electrical plant and ancillary meters which are owned or operated by the licensee and connect a generating station operated by or for the licensee with -

(i) the Transmission System; or

(ii) the electric lines of a person authorised by licence or exemption under the Act to supply electricity

"Transmission System" means the system of high voltage lines and electrical plant used for conveying electricity from a generating station to a substation, from one generating station to another or from one substation to another.

"Transmission System Operator" means the person for the time being holding a licence granted under Section 6(1)(b) of the Act.

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Condition 2 Separate accounts for Nuclear Generation Business

1. This Condition shall apply if the licensee carries on a Nuclear Generation Business

2. The first financial year of the licensee shall run from 1st April 1989 to 31st March, 1990, but thereafter a financial year shall accord with section 225 of the Companies Act 1985

3. The remaining paragraphs of this Condition apply for the purpose of ensuring that the licensee (and any affiliate or related company) maintains accounting and reporting arrangements which enable separate accounts to be prepared for the Nuclear Generation Business and showing the financial affairs of such Business.

4. The licensee shall in respect of the Nuclear Generation Business which it carries on:

(a) keep proper books of account and records in such a form that the revenues, costs, assets and liabilities of, or reasonably attributable to, the Nuclear Generation Business are separately identifiable in the books of the licensee (and any affiliate or related company) from those of any other business; and

(b) prepare on a consistent basis from its accounting records in respect of:

(i) the financial year commencing on 1st April 1989 and each subsequent financial year, accounting statements comprising a profit and loss account, a balance sheet and a statement of source and application of funds, together with notes thereto, and showing separately in respect of the Nuclear Generation Business and in appropriate detail the

account referred to in sub-paragraph (b)(i) and six months after the end of the financial year to which they relate in the case of the accounting statements and Auditors' report

5 Save with the prior written approval of the Director which shall not be unreasonably withheld the licensee shall not in relation to the accounting statements in respect of a financial year change the basis of charge or apportionment or allocation respectively referred to in sub-paragraph (b)(i) of paragraph 4 from that used in respect of the previous financial year

6 Accounting statements in respect of a financial year prepared under paragraph 4(b)(i) shall, so far as reasonably practicable having regard to the purposes of this Condition:

(a) have the same content (in relation to the Nuclear Generation Business) as the annual accounts of the licensee prepared under section 227 and, where appropriate, section 229 of the Companies Act 1985 and be prepared in accordance with the general rules and format and use the accounting principles and rules applicable to those accounts; and

(b) state the accounting policies used; and

(c) be published with the annual accounts of the licensee.

7. Unless the accounting statements prepared under paragraph 4(b)(i) are prepared on the current cost basis as provided by the alternative accounting rules, the licensee shall in addition to preparing those accounting statements under that paragraph, prepare accounting statements for the Nuclear Generation Business covering the same period, which shall comprise and show separately:

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"alternative accounting rules"	means the rules set out in Section C of Part II of Schedule 4 to the Companies Act 1985
"current cost assets"	means assets of any description mentioned in paragraph 31 of Section C of Part II of Schedule 4 to the Companies Act 1985
"the Handbook"	means the handbook published by the Accounting Standards Committee of the Consultative Committee of Accounting Bodies (CCAB Limited) or any successor body entitled "Accounting for the effects of changing prices; a Handbook" in its current edition for the time being.

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thereof) to which the request relates and shall state the date from which the licensee wishes the Director to agree that the specified paragraphs shall cease to have effect

5 Save where the Director otherwise agrees, no disapplication following delivery of a disapplication request shall have effect earlier than that date ("the disapplication date") which is the later of:

(a) a date being not less than 18 months after delivery of the disapplication request; and

(b) the fifth anniversary of the date of grant of this licence

6 If the Director has not made a reference to the Monopolies Commission under Section 11 of the Act relating to the modification of the paragraphs specified in the disapplication request before the beginning of the period of 12 months which will end with the disapplication date, the licensee may deliver written notice to the Director terminating the application of such of paragraphs 2 and 3 above (or any part of parts thereof as are specified in the disapplication request with effect from the disapplication date or a later date.

8. If the Monopolies Commission makes a report on a reference made by the Director relating to the modification of the paragraphs (or any part or parts thereof) specified in the disapplication request and such report does not include a conclusion that the cessation of such paragraphs, in whole or in part, operate or may be expected to operate against the public interest, the licensee may within 30 days after the publication of the report by the Director in accordance with Section 12 of the Act deliver to him written notice terminating the application of such paragraphs with effect from the disapplication date or later.

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Condition 5: Design standard for electric lines and electrical plant

1. The licensee shall design and maintain the licensee's electric lines and electrical plant to a standard not less than that set out in Engineering Recommendation P 2/5 (October 1978 revision) of the Electricity Council Chief Engineers' Conference or such other standard of design and maintenance as the licensee may, with the approval of the Director, adopt from time to time

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Condition 7: Central Despatch and Merit Order

1. At such times and in such manner as may be required by the Transmission System Operator the licensee shall provide the Operator with the information he requires, in accordance with Grid Code, to operate a merit order system for all generating plant subject to central despatch, including information about -

   (a) the state of availability of each of the generating sets in the licensee's generating stations; and

   (b) the capacity and likely output of each of those sets

2. To permit the scheduling, by price, of electricity capable of being generated by generating sets of the licensee and of other licensees, the licensee shall notify the Transmission System Operator of the bid price at which he is willing to deliver units of electricity to the Transmission System or to a Distribution System or directly to the customers of the licensee and the licensee shall -

   (a) in his notification, specify the particular generating sets which will produce those units so as to allow the Transmission System Operator to schedule and despatch electricity to be generated for delivery either to the appropriate point of entry to either System or to the licensee's customers; and

   (b) unless he is prevented from doing so by circumstances outside his control, despatch his generating sets as instructed by the Transmission System Operator in operating the merit order system in accordance with the Grid Code.

3. In this Condition:-

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Condition 9 Compulsory acquisition of land

1. The powers and rights conferred by or under the provisions of Schedule 3 to the Act (compulsory acquisition of land etc.) shall have effect for the purposes set out in paragraph 2 below

2. The purposes referred to in paragraph 1 above are -

(a) the construction or extension of a generating station,

(b) activities connected with the construction or extension of a generating station or connected with the operation of a generating station; and

(c) the installation, maintenance, removal or replacement of electric lines, and electrical plant associated with them, connecting a generating station with -

(i) the Transmission System; or

(ii) the electric lines of a person authorised by licence or exemption under the Act to supply electricity.

3. In paragraph 2 above -

(a) the references to "generating station" are to an electricity generating station which has, or will have when its construction or extension is completed, a capacity of not less than 50 Megawatts and which is, or will be when its extension or construction is completed, operated by or for the licensee; and

(b) "extension" in relation to a generating station includes the use by the person operating the station of any land (wherever situated) for a purpose directly related to the generation of electricity by that station.

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(ii) the electric lines of a person authorised by licence or exemption under the Act to supply electricity

3 Paragraph 8 of Schedule 4 to the Act shall apply to the licensee if -

a he wishes to exercise his rights of entry on land for the purpose of establishing whether or not the land is suitable for the construction or extension of a generating station, and

b) he obtains the consent of the Director before exercising those rights.

4 Works which are under, over, in, on, along or across any street, which for the purposes of the Highways Act 1980 constitutes a highway or part of a highway maintainable at the public expense, may be undertaken in pursuance of paragraph 1 above subject to the following conditions -

(a) that such works shall not be carried out except with the consent, which shall not be unreasonably withheld, of the highway authority and in accordance with such reasonable conditions as may be attached to such consent;

(b) that any question as to whether or not a consent of highway authority is unreasonably withheld, or as to the reasonableness of conditions attached to such consent, shall be determined by a single arbitrator to be appointed -

(i) by agreement between the licensee and the highway authority; or

(ii) in default of such agreement, by the Director on the application of either party.

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Condition 10: Use of system - requirement to offer terms to authorised electricity operators

1. The licensee shall, subject to paragraph 6 below, offer to enter into an agreement with any authorised electricity operator who has made application for use of system:

   (a) to accept into that system at such entry point and in such quantities as may be specified in the application electricity to be provided by or for the authorised electricity operator;

   (b) to deliver electricity equal in quantity to that accepted into the system (less only any distribution losses) from such exit points on that system and in such quantities as may be specified in the application to such person as the authorised electricity operator may specify; and

   (c) containing terms in accordance with paragraphs 3 and 4 below and such other terms and conditions as may be appropriate for the purposes of the agreement in the circumstances in which it is likely to be made.

2. The licensee shall offer terms for an agreement in accordance with paragraph 1 above as soon as practicable and in any event not more than three months after receipt by the licensee of an application from the authorised electricity operator containing all such information as the licensee may reasonably require for the purpose of formulating the terms of his offer.

3. The licensee's offer made in accordance with paragraph 1 shall make detailed provision regarding:

   (a) the carrying out of works (if any) required for the construction of the entry point to connect the licensee's electric lines to the Transmission System or to any other

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unless manifestly inappropriate, be set in conformity with paragraph 4 below

- The charges referred to in paragraph 3 to be contained in every agreement the subject of an offer by the licensee shall be such that:

(a) charges for the provision of electrical plant, connection charges or any charges for extension or reinforcement of the licensee's electric lines are set at a level which will enable the licensee to recover no more than:

(i) an appropriate proportion (taking account of the factors referred to in paragraph 5) of the proper costs directly or indirectly incurred by the licensee; and

(ii) a reasonable rate of return on the capital represented by such costs;

(b) charges for the installation of meters, switchgear or other apparatus and for their maintenance shall not exceed the proper costs thereof and a reasonable rate of return on the capital represented by such cost.

For the purpose of determining an appropriate proportion of the proper costs directly or indirectly incurred in carrying out works, the licensee shall have regard to:

(a) the benefit (if any) to be obtained or likely in the future to be obtained by the licensee or any other authorised electricity operator as a result of the carrying out of such works whether by virtue of the provision of electrical plant, the reinforcement or extension of the licensee's electric lines, or the provision of additional entry or exit points on such electric lines or otherwise; and

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Condition 10A: Use of system - functions of the Director

1. If, after a period which appears to the Director to be reasonable for the purpose, the licensee has failed to enter into an agreement with an authorised electricity operator pursuant to an application in accordance with Condition 10, the Director shall on the application of the operator or the licensee, settle any terms of the agreement in dispute between the licensee and the operator in such manner as appears to the Director to be reasonable having (in so far as relevant) regard, in particular, to the following considerations:

(a) that the operator should pay to the licensee the whole or an appropriate proportion (as determined in accordance with paragraph 5 of Condition 10) of the proper costs directly or indirectly incurred by the licensee in the carrying out of any works or in providing or doing any other thing under the agreement in question together with an element of profit calculated in accordance with the principles set out in paragraph 4 of Condition 10;

(b) that the performance by the licensee of its obligations under the agreement should not cause it to be in breach of any other Condition of this licence;

(c) that any methods by which the licensee's electric lines are connected to the Transmission System or to any other electric lines for the distribution of electricity accords with good engineering principles and practices;

(d) that the terms and conditions of agreements entered into by the licensee pursuant to an application in accordance with Condition 10 should be, so far as circumstances allow, as similar in substance and form as is practicable; and

(e) the Director's functions under the Act.

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Condition 11: Health and safety of employees

1. It shall be the duty of the licensee to act together with other licensees to consult with appropriate representatives of the employees for the purpose of establishing and maintaining an appropriate machinery or forum for the joint consideration of matters of mutual concern in respect of the health and safety of persons employed by those licensees.

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Condition 13: Payment of fees

1. The licensee shall, at the times stated hereunder, pay to the Secretary of State fees of the amount specified in, or determined under, the following paragraphs of this Condition

2. Within 30 days after the grant of this licence but, in any event, before 1st April 1990, the licensee shall pay to the Secretary of State an initial fee of £[ ].

3. In respect of the year beginning on 1st April in 1990 and in each subsequent year, the licensee shall, subject to paragraphs 4 and 5 below, pay to the Secretary of State a fee which is the aggregate of the following amounts:

   (a) the amount which is an appropriate proportion of the sum estimated by the Director, according to a method which has previously been disclosed in writing to the licensee, as likely to be his expenditure during the coming year in the exercise of his functions in relation to holders of licences granted by the Secretary of State under Section 6(1)(a) of the Act to the two companies designated as generating companies under Section 60(1) of the Act; and

   (b) the amount estimated by the Director (in consultation with the Monopolies and Mergers Commission) as having been incurred in the year immediately preceding the 1st April in question by the Commission in connection with refarences made to it under Section 11 of the Act with respect to this licence;

and the fee shall be paid by the licensee to the Secretary of State within one month of the Director giving notice to the licensee of its amount if that notice is given within three months of the beginning of the year in respect of which the fee is payable.

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SCHEDULE

Terms as to revocation

1. The Secretary of State may at any time revoke this licence by not less than 30 days' notice in writing to the licensee

(a) if the licensee agrees in writing with the Secretary of State that this licence should be revoked;

(b) if any amount payable under Condition 13 is unpaid 30 days after it has become due and remains unpaid for a period of 14 days after the Secretary of State has given the licensee notice that the payment is overdue provided that no such notice shall be given earlier than the sixteenth day after the day on which the amount payable became due;

(c) if the licensee fails to comply with a final order (within the meaning of Section 23 of the Act) or with a provisional order (within the meaning of that Section) which has been confirmed under that section and (in either case) such failure is not rectified to the satisfaction of the Secretary of State within three months after the Secretary of State has given notice of such failure to the licensee. Provided that no such notice shall be given by the Secretary of State before the expiration of the period within which an application under Section 25 of the Act could be made questioning the validity of the final or provisional order or before the proceedings relating to any such application are finally determined;

(d) if the licensee fails to comply with any order made by the Secretary of State under section 56, 73, 74 or 89 of the Fair Trading Act 1973 or under Section 10(2)(a) of the Competition Act 1980;

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(2) The licensee shall not be deemed to be unable to pay its debts for the purposes of paragraph [illegible] of this Schedule if any such demand as is mentioned in Section [illegible] of the Insolvency Act 1986 is being contested in good faith by the licensee with recourse to all appropriate measures and procedures or if any such demand is satisfied before the expiration of such period as may be stated in any notice given by the Secretary of State under paragraph 1 of this Schedule.

3. The provisions of Section 99 of the Act shall apply for the purposes of the service of any notice under this Schedule.

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