

MEMORANDUM

TO : USAID/Manila, Lawrence Ervin

23 February 1984

FROM : S&T/EY, Charles Bliss (TDY) *CB*

SUBJECT: Trip Report, 12-23 February 1984  
Conventional Energy Technical Assistance, 936-5724  
Project to Introduce Coal-Water-Mix (CWM) Fuels to the  
Philippines

Readers who are not completely familiar with the subject project should read Annex I, Project Description, in the attached draft Project Grant Agreement before continuing below.

During the TDY in Manila, I had numerous meetings with the Economic Development Foundation personnel (Purita Festin, Cesar Sarino, and Gil Guevara) and through them with Alex Melchor; two meetings with the First Philippine Industrial Corporation (Edilberto G. Gamboa, Senior VP and GM; Jose P. Cruz, Jr., Senior Manager, Coordinating and Technical Services; and Eustaquio E. Generoso, Jr., Asst VP, Operation and Maintenance); conversations within the Mission; and conversations with National Power Corporation (Jose U. Jovellanos, Special Assistant to the Chairman, and Avelino T. Galvez, Manager, Mechanical Planning Division, Projects Development Department).

On 18 February, in the company of EDF (Guevara), NPC (Galvez) and PNOG-Coal (Marcelino Soriano), I visited the physical installations at the terminals of the Batangas/Sucacat black products pipeline and the steam generators at the Sucacat Station.

On 20 February, in the company of EDF (Guevara), I visited the nickel production plant of the Marinduque Mining and Industrial Company on Nonoc Island and inspected the steam generators and ore roasters installations, the coal receiving and handling facilities, the steam-turbine/generator installations, and the general plant layout. The MMIC operations manager (Edwin J. Asiain) conducted the tour and we reported both before and after to the VP and general manager of the plant (Lauro S. Perez).

These activities related to providing assistance to the Mission in the preparation of a Project Grant Agreement to enable project activities to begin.

PRODUCTS

Draft Project Agreement. A draft project grant agreement is attached, which I have reviewed with respect to its technical content and relevance to the objectives to be attained in the first phase of the three-phase effort now envisioned to achieve successful large-scale introduction of CWM-fuels to the Philippines. The project grant agreement covers only the first phase of

effort, which is to determine the feasibility and justification for financing and undertaking the second phase, the actual demonstration of CWM-fuel performance on a large scale.

EDF Budget. The Economic Development Foundation is intended to be the Philippine member of the coordinated four-contractor team described in Annex I of the Project Grant Agreement. Their services will be contracted for by the Government of the Philippines through the Development Bank of the Philippines, a signatory of the Project Grant Agreement, in accordance with USAID Procurement practices. The EDF has accepted an eventual budget for their services to be provided in accordance with the Statement of Work for the Philippine Contractor, Annex II of the Project Grant Agreement. This budget sum is \$139,900, and is the sum to be granted in the Agreement. The ordinary line-item budget to support this sum is attached. We expect that the final line item budget can vary, but that the total sum will remain fixed. The remaining three contractors will be U.S. organizations, and their services will be granted, rather than the funds to cover them.

#### OBSERVATIONS

I would like to make a number of technical observations for the record on the situation in the Philippines relevant to utilization of CWM-fuels.

##### 1. General

S&T/EY has been monitoring the emergence of coal-water-mix fuels as a viable substitute for residual petroleum fuels since they began to receive serious attention in 1981. Now, from the present TDY results, the technical details of the Philippine situation have become clear, as well as the activities that need to be undertaken to take advantage of this situation.

The conditions in the Philippines for undertaking a large demonstration of CWM-fuel performance are as close to ideal as anyone can reasonably expect in the real world. The physical installations contain all of the major high-capital cost equipment items that will be needed for the project activities in the second phase (Demonstration). All personnel that I met and talked with seemed enthusiastic and motivated to cooperate with the project activities in the feasibility determination. The potential for economic benefit from using CWM-fuels to avoid domestic petroleum fuel oil consumption represents a significant impact as reducing foreign exchange demand, while at the same time representing a potential to achieve this impact with considerably less capital investment than a retrofit of large fuel-oil consuming to coal itself. It is clear to me, from prior discussions in the U.S., that a successful demonstration of CWM-fuel performance in the Philippines can accelerate the present rate of introduction of CWM-fuels into U.S. fuel-oil burning utilities.

##### 2. Nonoc Nickel Plant

The three oil-fired steam generators at Nonoc are now idle and "moth balled". Their thermal design reflects the low fuel oil prices that prevailed in the late 1960s. There are even no air heaters provided for the combustion air.

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Air preheat is prerequisite for CWM-fuel combustion. Nevertheless, given a demonstration of CWM-fuel performance with attractive results, these three units can be retrofitted for permanent higher thermal efficiency operation, and a cogeneration operation appears viable.

The present turbo-generator building has an empty bay near an end wall for an additional generation unit. Moreover, this end wall can be moved outward to provide space for two more generation units. Surigao City, at the north eastern tip of Mindanao, is a "row boat" distance away from Nonoc Island, and the National Power Corporation indicates an interest in considering accepting an export of electric power from the Nonoc plant to the Mindanao grid.

The present processing configuration of the nickel production facilities at Nonoc requires quantities of low-pressure steam. This requirement is suited to conventional cogeneration through the use of tapping turbines. In fact two of the three units now installed are tapping units. One activity for the technology/engineering contractor should be the review and identification of the plant steam balance as an input to the postulation of a cogeneration operation as a potential benefit to be evaluated in the determination of feasibility.

MMIC operations at Nonoc may be restructured to eliminate the ore drying and reducing ore-roasting unit and to substitute a high-pressure acid leaching step for solubilizing the nickel/cobalt content with higher yields. This option is now being studied by Kaiser Engineers on behalf of the California Nickel group. John Loftes of Kaiser is the contact. This alteration can radically affect the plant steam balance and the viability of a cogeneration concept. The prospect that this modification will actually occur needs to be reviewed before the assessment of a cogeneration benefit is made.

The plant is equipped with 3 - 250,000 barrel fuel oil storage tanks, of which two are considered surplus, and which could be made available for storage of CWM during the demonstration phase. An extraordinarily large concrete-paved coal storage area is available, where it is likely a CWM-fuel preparation plant, sized to serve the demonstration activities could be installed in the corner closest to the storage tanks. About a 500-1000 meter pipeline between preparation and storage tanks would be required which could be supported on the coal conveyor structure.

The plant management indicated the availability of staff from its process engineering department to collaborate and assist in the feasibility and demonstration activities.

### 3. Batangas/Sucat Facilities

These facilities are relevant to the adaptation of the Nonoc demonstration results to the retrofit of the 850 MW, 4-unit, Sucat (Gardner-Synder) station of the National Power Corporation from petroleum fuel oil firing to CWM-fuel firing. This station currently receives its fuel oil supply from Batangas through a 16-inch black products pipeline operated by the First Philippine Industrial Corporation. Batangas is the site of a coal receiving and storage depot to be operated when completed by PNOC-Coal.

The Batangas pumping station contains four diesel driven centrifugal pumps and provided with its own oil storage tanks. The intermediate pumping station was not visited. The destination terminal is equipped with storage tanks from which it serves the Sucat Station, and other fuel oil consuming stations nearby by pipeline and barge.

The prospect that an experimental pipeline loop could be built at Nonoc as part of the demonstration activities was discussed with the pipeline management. The experimental design would enable the management to minimize technical risk when it became necessary to retrofit the Batangas/Sucat line to carry CWM-fuel as an additional commodity.

The Sucat Station is equipped with one 150 MW, two 200 MW, and one 300 MW units. Particulate collection is limited to cyclones. Sulfur content in the fuel oil is about 3-3.5%. Space seems available for electrostatic precipitators by mounting off the rear wall of the station building and rearranging ductwork.

The NPC, through CIDA assistance, has a recent study made by Intercontinental Engineering Consultants covering the retrofit of the station to solid coal. The study is based on complete steam generator replacement in a new area and is not clear on how solid coal will be provided and stored in a suburban Manila location. The results, however, can provide a good baseline for comparing the capital requirements of a CWM option and establishing a capital-reduction benefit. in addition to a foreign exchange saving.

Both the new one-unit 300 MW Calaca coal-fired station and the 625 MW nuclear station should be in production in early 1985. This should ease dependence on the Sucat output whenever a retrofit is to be undertaken.

Other fuel oil fired electricity generation stations in the Manila area appear to be two units at the Tegen Station, eight units at the Rockwell Station, two at the Malaya Station, and two at the Bataan Station.

#### NEXT STEPS

The important next step is, of course, converting the attached draft Project Grant Agreement to a signed document. I consider the contents technically acceptable on behalf of S&T/EY. At this writing, the funding citation, needed by the Mission as part of their authorization for signature, has not yet arrived. Until this signed agreement is available no funding obligations can be made.

In the meantime, the Statement of Work for the Philippine Contractor has been established and is Annex II of the draft Project Grant Agreement. Upon signature of the Agreement, the expectations are that the Economic Development Foundation will be contracted to undertake this work.

From the S&T/EY point of view, the most important single step is to arrange for contracted services to cover the Statement of Work - 1, the Experimental Program. S&T/EY expects this Contractor will be the Brookhaven National

Laboratory. Their work program will determine the size of the coal samples to be shipped to the U.S. for experimentation. S&T/EY will begin efforts to enable the obligation of funds to this Contractor about the time of signature of the Project Grant Agreement.

Less critical are the contracted services for the Technology/Engineering Contractor and the Feasibility Determination Contractor. S&T/EY will begin as soon as expedient to prepare the Statements of Work and negotiate budgets for these two contracts from IQC sources. The candidates for the Technology/Engineering work are Burns and Roe, Ebasco, and Stone and Webster Engineering Corporation. The candidate for the Feasibility Determination work is Development Sciences, Inc., who were involved in the previous work on this subject in 1983.

Atch: As stated

cc: S&T/EY, Alan B. Jacobs  
ASIA/TR/EYE, Robert Ichord  
ASIA/PTB, Carl Penndorf

REVISED  
ARTICLES OF INCORPORATION  
OF THE  
ECONOMIC DEVELOPMENT FOUNDATION, INC.

KNOW ALL MEN BY THESE PRESENTS

That we, all of legal age, and a majority of whom are residents of the Philippines, have this day voluntarily associated ourselves together for the purpose of forming a non-stock, non-profit corporation under the laws of the Philippines.

AND WE HEREBY CERTIFY:

FIRST - That the name of the corporation shall be "THE ECONOMIC DEVELOPMENT FOUNDATION, INC."

SECOND - That the purposes for which said corporation is formed are as follows:

1. To encourage, promote, and develop industrial research guidance in the Philippines and to hold lectures, seminars, meetings, classes, conferences and exhibitions calculated to attain that purpose; to promote and encourage the dissemination of the results of scientific and technological research and the general application thereof; to foster and advance studies for technical, managerial and investment advisory service and guidance to individuals and industrial enterprises, and through said technical, managerial and investment guidance, to promote, initiate and develop industries of private ownership, and to identify, develop and promote industrial project and/or industrial research.

2. To conduct research, investigations and examinations on businesses and enterprises of every kind and description throughout the world with the aim of securing information and particulars for the investment and employment of capital.

3. To undertake and transact all kinds of business relative to the gathering and distribution of financial and investment information and statistics throughout the world.

4. To acquire, purchase, own, hold, operate, develop, lease, mortgage, pledge, exchange, sell, transfer, or otherwise, in any manner permitted by law, real and personal property of every kind and description or any interest therein as may be necessary to carry out its purposes.

the purposes of the corporation and from time to time, without limit as to amount, to draw, make, accept, endorse, guarantee, execute and issue promissory notes, drafts, bills of exchange, warrants, debentures, and other negotiable or non-negotiable instruments and evidence of indebtedness, and to secure the payment thereof and of the interest thereon by mortgage on, or pledge, conveyance or assignment in trust of, the whole or any part of the assets of the corporation, real, personal, or mixed, including contract rights, whether at the time owned or thereafter acquired, and to sell, pledge or otherwise dispose of such securities or other obligations for the corporation for its corporate purposes.

6. In furtherance of its purposes, to extend financial assistance and to enter into, make, perform and carry out, or cancel and rescind contracts of every kind and for any lawful purpose with any person, firm, association, corporation, syndicate, domestic or foreign, or others in which it has a lawful interest.

7. To invest funds, as it may be able to obtain from donations, grants, or loans, in securities from the returns of which the corporation hopes to subsist and carry on the activities and purposes for which it was formed.

8. As may be necessary to carry out and in connection with its purposes, to make any guaranty respecting securities, indebtedness, interest, contracts and other obligations so far as the same may be permitted to be done under the laws of the jurisdiction of incorporation of this corporation.

9. To act as attorney in fact for any person, corporation, association, partnership or other legal entity of similar nature under such terms as may be agreed upon.

10. In general to carry on any activity and to have and exercise all of the powers conferred by the laws of the jurisdiction of incorporation of this corporation; and to do any and all of the acts and things herein set forth to the same extent as juridical persons could do, and in any part of the world, as principal, factor, agent, or otherwise, either alone or in syndicate or otherwise in conjunction with any person, entity, syndicate partnership, association or corporation, domestic or foreign; to establish and maintain offices and agencies and to exercise all or any of the corporate powers and rights throughout the world.

THIRD - That the corporation shall be maintained by the contributions of and endowments from persons, corporations and other entities and supporters thereof, whether domestic or foreign, and the fees of its members. The solicitation of contribution from the public shall be subject to the provisions of Republic Act No. 4075.

FOURTH - (a) That at least sixty (60%) percent of its gross income, as defined in the Revised National Internal Revenue Code, and unrestricted donations, shall be devoted to undertaking, directly financing, or assisting pure, fundamental, or applied research, developmental work and/or economic evaluation and/or granting of scholarship for scientific and technological manpower training, including the establishment of professorial chairs, in any or all of the following fields:

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|---|--|
| (a) Industry                            | (e) Atomic Energy                        |
| (b) Agriculture                         | (f) Food and Nutrition                   |
| (c) Health Science                      | (g) Engineering                          |
| (d) Biological and<br>Physical Sciences | (h) Social Science and<br>the Humanities |

(b) Not more than thirty (30) percent of the gross income of the Foundation and not more than ten (10%) percent of the unrestricted donations to the Foundation shall be devoted to general and administrative expenses; (c) All donations to be received by the Foundation from another Foundation certified under the Rules and Regulation of the National Science and Development Board shall be subject to prior approval by the NSDB.

FIFTH - (a) That upon its dissolution as an NSDB-certified Foundation, its remaining assets shall be disposed of and turned over to any NSDB-certified Foundation of its choice or to the Republic of the Philippines or any of its agencies or instrumentalities or political subdivisions; (b) That in case of failure on the part of the Foundation to secure renewal of its certification as an NSDB-certified Foundation, or failure to comply with the pertinent regulations of the NSDB, the Foundation shall be charged an amount equivalent to the taxes that should have been paid without the benefit of NSDB certification from the date of last certification, the amount to be determined jointly by the NSDB and the BIR.

SIXTH - That the place where the principal office of the corporation is to be established or located is at Manila, Philippines.

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SEVENTH - That the term for which said corporation is to exist is FIFTY (50) YEARS from and after the date of incorporation.

EIGHTH - That the names and residences of the incorporators of the said corporation are as follows:

<u>NAMES</u>	<u>RESIDENCES</u>
HILARION M. HENARES, JR.	2511 Aurora St., Pasay City
RICHARD V. BERNHART	21 Saturn St., Bel-Air Village Makati, Rizal
ANTONIO C. DELGADO	57 Victoria Avenue, New Manila Quezon City
FILEMON C. RODRIGUEZ	52 Panay Avenue, Quezon City
SIXTO K. ROXAS	7 Second St., Villamar Court Parañaque, Rizal
ROBERTO T. VILLANUEVA	42 Banaba, Forbes Park Makati, Rizal
R. A. MEYJES	48-A McKinley Road, Forbes Park Makati, Rizal

NINTH - That the number of Trustees of said corporation shall be FIFTEEN (15) and that the names and residences of the Trustees of the corporation who are to serve until successors are elected and qualified as provided by the By-laws are as follows:

<u>NAMES</u>	<u>RESIDENCES</u>
HILARION M. HENARES, JR.	2511 Aurora St., Pasay City
RICHARD V. BERNHART	21 Saturn St., Bel-Air Village Makati, Rizal
ANTONIO C. DELGADO	57 Victoria Avenue, New Manila Quezon City
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R. A. MEYJES	48-A McKinley Road, Forbes Park Makati, Rizal

TENTH - That Sixto K. Roxas has been elected by the incorporators as Treasurer of the corporation to act as such until his successor is duly elected and qualified in accordance with the By-laws and as such Treasurer he has been authorized to receive all fees, contributions or endowments given to, received by and appertaining to the said corporation.

ELEVENTH - THAT ANY MANAGEMENT CONTRACT, TRUST AGREEMENT OR ANY OTHER CONTRACT TO BE ENTERED INTO BY THE FOUNDATION FOR THE MANAGEMENT OF ANY OF ITS ACTIVITIES SHALL BE SUBJECT TO APPROVAL BY THE NATIONAL SCIENCE DEVELOPMENT BOARD.

TWELFTH - THAT A MEMBER OF THE NSDB COMMITTEE ON SCIENCE FOUNDATIONS OR ITS AUTHORIZED REPRESENTATIVE SHALL BE ALLOWED TO SIT WITH THE BOARD OF TRUSTEES OF THE FOUNDATION AS A REPRESENTATIVE OF THE NSDB.

THIRTEENTH - That the Foundation shall allow the NSDB, thru its duly authorized representative, to inspect its investment portfolio for verification purposes.

FOURTEENTH - That any proposed amendment to these Articles of Incorporation or the Code of By-laws of the Foundation shall hereafter be subject to approval by NSDB prior to registration with the Securities and Exchange Commission.

FIFTEENTH - That the Foundation shall furnish the NSDB a certified true copy of the minutes and resolutions adopted in all meetings of the Board of Directors, committees or members of the Foundation within thirty (30) days after such meeting.

IN WITNESS WHEREOF, we have hereunto affixed our signatures in the City of Manila, Philippines, this 13th day of May, 1964.

(SGD.) HILARION M. HENARES, JR.      (SGD.) RICHARD V. BERNHART  
(SGD.) ANTONIO C. DELGADO              (SGD.) FILEMON C. RODRIGUEZ  
(SGD.) SIXTO K. ROXAS                  (SGD.) ROBERTO T. VILLANUEVA  
(SGD.) R. A. MEYJES

SIGNED IN THE PRESENCE OF:

(SGD.) MARTIN P. BONOAN                  (SGD.) ARTEMIO RAYMUNDO

C E R T I F I C A T I O N

WE, the undersigned officers of the Economic Development Foundation, Inc., pursuant to the requirements of Act No. 1459, as amended, otherwise known as The Corporation Law of the Philippines, do hereby certify to be true and correct the foregoing copy of the Revised Articles of Incorporation of the Economic Development Foundation, Inc. These revised Articles of Incorporation incorporate amendments adopted by the membership of the Foundation at its meeting duly called and constituted for the purpose and where a quorum was present on December 12, 1978.

December 12, 1978 at Makati, Metro Manila, Philippines.

(SGD.) EMILIO ABELLO  
Chairman and Trustee

(SGD.) FRANCISCO DEL ROSARIO  
Trustee

(SGD.) ERNESTO ABOITIZ  
Trustee

(SGD.) BENJAMIN SANVICTORES  
Trustee

(SGD.) ROMAN CRUZ, JR.  
Trustee

(SGD.) CESAR N. SARINO  
President and Trustee

(SGD.) WILLIAM DUNNING  
Trustee

(SGD.) GERARDO SICAT  
Trustee

(SGD.) NORMAN FARR  
Trustee

(SGD.) RICARDO SILVERIO, SR.

(SGD.) JOSE FERNANDEZ, JR.  
Trustee

(SGD.) DAVID SYCIP  
Trustee

(SGD.) VICENTE JAYME  
Trustee

(SGD.) ROBERTO VILLANUEVA  
Trustee

(SGD.) GAIHE W. SALAZAR, JR.  
Corporate Secretary

Available Document

## ARTICLE I

### DEFINITIONS AND ABBREVIATIONS

As used in this Code of By-Laws, when capitalized:

- Section 1.01 "Foundation" means the Economic Development Foundation, Incorporated
- 1.02 "Corporation Law" when used in the text, means Act No. 1459, as amended from time to time.
- 1.03 "Articles of Incorporation" means the Articles of Incorporation of the Foundation, as amended from time to time.
- 1.04 "Code of By-laws" means the Code of By-laws of the Foundation, as amended from time to time.

## ARTICLE II

### IDENTIFICATION

Section 2.01 N A M E

The name of this corporation is Economic Development Foundation, Incorporated.

Section 2.02 T Y P E

The Foundation is designed and established as a privately-operated, non-political, non-stock, non-profit service corporation.

Section 2.03 PURPOSES AND POWERS

The purposes for which the Foundation is formed and the powers that it may exercise are set forth in its Articles of Incorporation.

Section 2.04 CORPORATE SEAL

The seal of the Foundation shall be circular in form and mounted upon a metal die, suitable for impressing the same upon paper. About the upper periphery of the seal shall appear the words "Economic

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Development Foundation", and about the lower periphery thereof the word "Philippines". In the center of the seal shall appear the initials "EDF" superimposed upon a miniature reproduction of a map covering the territorial jurisdiction of the Republic of the Philippines.

**Section 2.05**      **FISCAL YEAR**

The fiscal year of the Foundation shall begin on the first day of January in each year and end on the last day of December in the same year.

**ARTICLE III**

**MEMBERSHIP**

**Section 3.01**      **CLASSIFICATION OF MEMBERS**

There shall be FOUR classes of (1) Donor member, (2) Sponsor member, (3) Regular member, and, (4) Associate members.

**Sections 3.02**      **ELIGIBILITY**

Any person, firm, partnership corporation, or association hereunder specified, who pays such membership contributions or fees and/or otherwise qualifies under such other conditions as hereinafter provided may become a member of the Foundation.

**Section 3.03**      **ADMISSION OF MEMBERS**

(a) Any person, firm, partnership, corporation, or association may become a donor member of the Foundation by making an unconditional and irrevocable donation in favor of the latter of cash or valuable property worth at least Fifteen Thousand (P15,000) pesos. A donor-member shall be a permanent member of the Foundation. The donor of cash or property valued at less than Fifteen Thousand (P15,000) shall be considered a regular member under subsection (c) hereof for a term of years computed at one year per thousand pesos or fraction thereof donated to the Foundation.

(b) Sponsor members shall consist of either of two types: (1) those which qualified and were sponsors of the Foundation as of April 27, 1967, and which convert their respective contributions into non-interest-bearing notes payable in equal installments over a period of three years beginning on December 29, 1979; and (2) those which shall hereafter grant non-interest-bearing loans of Fifteen Thousand (P15,000) pesos each to the Foundation payable in equal installment for a period of three years beginning on the fifteenth year from the date of the note evidencing the loan.

A sponsor member shall be a member of the Foundation until the full amount of his loan to the Foundation has been repaid.

(c) Any person, firm, partnership, or corporation desirous of becoming a regular member may make proper application therefor to the Foundation. The regular membership status of such person or entity when admitted shall be dependent upon his/its remittance to the Foundation of the fee of one thousand (P1,000) pesos, payable annually.

(d) The associate members shall consist of either of two types: (1) the members of the Steering Committee who served in the ad-interim Board of Trustees, which committee was organized to form the Foundation and to procure for it the rights and instrumentalities by which it is to carry out the purposes set forth in its Articles of Incorporation: Provided, however, That unless they qualify and be admitted either as sponsor or regular member within one year from and after the date of incorporation of the Foundation, the rights and privileges of membership of said memers of the Steering Committee shall cease and terminate after the expiration of said one year period; (2) the authorized representative of any institution from which the Foundation shall borrow for the purposes of acquiring and maintaining adequate capital to finance its operational requirements may, by contract or otherwise, be conferred by the Board of Trustees, an associate membership in the Foundation, which membership shall be subject to such restrictions as may be agreed upon and shall be effective only while the loan is outstanding and unpaid. Such action by the Board shall be subject to ratification by the members of record of the Foundation entitled to vote at any of its annual or special meetings.

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Association of banks, insurance companies, and financing companies, may qualify and be admitted as a sponsor or regular member of the Foundation under such terms and conditions as the Board of Trustees shall prescribe.

**Section 3.04 CORPORATE MEMBER TO SPECIFY REPRESENTATIVE**

Should an applicant for membership in the Foundation be a partnership, firm, corporation or association, it shall upon admission to membership communicate in writing to the Secretary of the Foundation the name, title, and address of the person authorized to represent it.

**Section 3.05 CERTIFICATE OF MEMBERSHIP**

A certificate of membership shall be issued by the Foundation to each class of members which shall be in such form as may be prescribed by the Board of Trustees, but shall not be transferable.

**Section 3.06 LOST CERTIFICATE**

In case a certificate is lost, destroyed or mutilated, a new certificate may be issued therefor upon payment of a reasonable replacement fee as the Board of Trustees in its discretion shall determine.

**Section 3.07 PRIVILEGES OF MEMBERS**

The Board of Trustees shall determine the privileges to which members of the Foundation shall be entitled. At the discretion of the Board, members shall, as far as practicable, have preference on all Foundation - sponsored activities.

**Section 3.08 MEMBER TO RECEIVE BY-LAWS**

Each member shall receive a copy of this Code of By-laws, and each revision thereof, and shall acknowledge receipt in writing.

**Section 3.09 DUTIES OF MEMBERS**

Every member must agree to obey the rules of the Foundation as set forth in this Code of By-laws, or elsewhere and the decisions of the general membership meeting or of the Board of Trustees. He must do his utmost to promote the aims and purposes of the Foundation and the success of its operations. Members shall agree to pay all charges and assessments voted by the Board or by the members.

The membership privileges of a sponsor or regular member in arrears in the payment of service charges or other charges beyond thirty (30) days shall be automatically suspended until satisfactory payment of such charges in arrears plus reasonable penalties at the discretion of the Board of Trustees; the membership privileges of a regular member shall be automatically terminated upon failure of said member to pay when due the annual membership fee; the privileges of associate members shall cease when the conditions for termination provided in Article III, Section 3.03 (d) shall take place.

#### ARTICLE IV

#### MEETING OF MEMBERS

##### Section 4.01 ANNUAL MEETING

The first annual meeting of the members for the election of the Board of Trustees, and for the transaction of such other business as may properly come before the meeting shall be held on November 16, 1964 at the principal office of the Foundation at 4:00 o'clock in the afternoon. Thereafter, and for the purpose of adjusting to a calendar year period, the annual meeting shall be held at the same hour and place on the second Monday of April of each year, if such day is not a legal holiday, and if a holiday, then on the first following day that is not a legal holiday. (As amended by the Members at their Second Annual Meeting on May 20, 1966.)

If for any reason the annual meeting of the members shall not be held at the time and place herein provided, the same may be held at any time thereafter, or the business to be transacted at such annual meeting may be transacted at any special meeting called for that purpose.

##### Section 4.02 SPECIAL MEETING

At any time in the interval between annual meetings, special meetings of the members may be called by the President of the Foundation, or by order of the majority of the Board. On request in writing delivered to the President or Secretary of the Foundation of twenty (20%) per centum or more of members, it shall be the duty of the President or the Secretary to call forthwith a meeting of the members. Such request shall state the purpose or purposes of the proposed special meeting and shall be contained in the notice of such meeting.

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Section 4.03 NOTICE OF MEMBERS' MEETING

Written notice stating the place, day and hour of annual or special meetings of the members shall be given either personally or by mail, addressed to each member of record entitled to vote at the address left by such member with the Secretary of the Foundation, or at his last known Post-Office address, at least ten (10) days before the date set for such meeting. Notices of meetings need not be published in the newspapers except when necessary to comply with certain mandatory requirements of the Corporation Law.

Section 4.04 VOTING AT MEETING OF MEMBERS

Clause 4.041. RIGHT TO VOTE - Except as otherwise withheld by the Corporation Law, by the provisions of the Articles of Incorporation, or by this Code of By-laws, every member shall be entitled to vote in person or by proxy on all questions before any and all membership meetings.

Clause 4.042. PROXIES - A member may vote by proxy executed in writing by the member. Such proxy shall be filed with the Secretary of the Foundation at least forty-eight (48) hours before the time of the meeting. No proxy shall be valid unless it shall designate the particular meeting at which it is to be voted, and no proxy shall be voted at any meeting other than the one so designated or any adjournment thereof. The presence of a member at a meeting shall revoke a proxy theretofore executed by him and such member shall be entitled to vote at such meeting in the same manner and with the same effect as if he had not executed a proxy.

Clause 4.043. VOTING PROCEDURE - Except as otherwise specified in these By-laws, voting shall be by voice, but the Chairman may require a show of hands, a standing vote, or a rollcall vote while one-third of the members present in person or by proxy, may require a secret ballot.

Trustees shall be elected by secret ballot. Each member may vote for as many nominees as there are Trustees to be elected, but may not cast more than one vote for each nominee, and the nominees equal to the number of Trustees to be elected who have received the highest number of votes shall be declared elected.

Clause 4.044. PROHIBITION AGAINST VOTING - No member shall be permitted to vote at any meeting under the following circumstances:

Item 4.0441. Unpaid installment on contribution - Where any installment is due and unpaid on a sponsorship contribution, the sponsor concerned shall not be permitted to vote on any or all questions before any meeting.

Item 4.0442. End of Member's term - Any regular member who fails to renew his annual membership status and any associate member who does not qualify and get admitted either as sponsor or regular member on or before the expiration of his term as such member, shall lose his voting rights.

Clause 4.045. FIXING OF RECORD DATE TO DETERMINE MEMBERS ENTITLED TO VOTE - The Board of Trustees is authorized to fix a date not exceeding thirty (30) days preceding the date of any members' meeting as a record date for determination of members entitled to notice of and to vote at such meeting, and only members of record on such date, and no others, shall be entitled to notice of and to vote at such meeting.

Clause 4.046. VOTING LISTS - A complete list of members entitled to vote at any meeting of members, arranged in alphabetical order, with the address of each, shall be on file at the principal office of the Foundation and subject to inspection by any member. Such list shall be produced and kept open at the time and place of any such meeting and subject to the inspection of any member during the holding of such meeting.

The Secretary of the Foundation, who may call on any officer or employee of the Foundation for assistance, shall make all necessary and appropriate arrangements for the meetings of the members, receive all proxies, and ascertain and report to each meeting of the members the number of members present in person or by proxy and entitled to vote at such meeting.

Clause 4.047. QUORUM - A quorum for any meeting of the members shall consist of a majority of the total number of members of record entitled to vote, and a majority of such quorum shall decide any question at the meeting, save and except in those matters where the Corporation Law requires the affirmative vote of a greater proportion.

Clause 4.048. ORDER OF BUSINESS - The order of business at the annual meeting of the members and, so far as appropriate, at all other meetings of the members, shall be essentially as follows:

Item 4.0481. Proof of due notice of meeting.

Item 4.0482. Call of roll.

Item 4.0483. Reading and disposal of any unapproved minutes.

Item 4.0484. Annual reports of officers and committees.

Item 4.0485. Unfinished business.

Item 4.0486. New business.

Item 4.0487. Election of Trustees.

Item 4.0488. Adjournment.

## ARTICLE V

### BOARD OF TRUSTEES

#### Section 5.01 GENERAL POWERS

The Board of Trustees in its corporate capacity shall have general supervision and control of the business and the affairs of the Foundation, and shall make all rules and regulations not inconsistent with law or with those by-laws for the management of the business and the guidance of the members, officers, employees and agents of the Foundation.

#### Section 5.02 AGREEMENTS WITH MEMBERS

The Board of Trustees shall have the power to carry out all agreements of the Foundation with its members in every way advantageous to the Foundation representing the members collectively. In all contractual arrangements with the members or clients of the Foundation, the Board shall provide such needful measures as are calculated to maintain the confidence of the relationship and the results.

#### Section 5.03 NUMBER AND TENURE OF OFFICE

The Foundation shall have a Board of Trustees of fifteen (15) members. During the initial period of operation and before the first annual meeting of the members can be held, those that compose the Steering Committee which was formed for the purpose of promoting and organizing the Foundation shall act as the ad-interim Board of Trustees. At the first annual meeting of the members of the Foundation the regular Board of Trustees shall be elected and they shall hold office until the next annual meeting, or until their respective successors are chosen and qualified.

#### Section 5.04 PROCEDURE FOR NOMINATION

Not less than twenty (20) days before the annual meeting at which trustees are to be elected, the Chairman of the Board of Trustees shall appoint a nominating committee of 3 or more members, none of whom is a trustee.

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The Committee shall prepare and report to the Chairman of the Board a list of nominees three days before the members' meeting which list shall consist of at least twice the number of trustees to be elected and shall as much as practicable be representative of the financial, business, agricultural, and industrial sectors. Additional nominees may be entertained before the start of the members' meeting upon request in writing submitted by at least three members in good standing. Compliance with this procedure shall not however, be mandatory for the election of a Trustee to fill a vacancy as hereinafter provided.

**Section 5.05      VACANCIES**

Whenever a vacancy occurs in the Board of Trustees, other than from the expiration of a term of office, the remaining trustees shall appoint a member to fill the vacancy until the next annual meeting of the members.

**Section 5.06      REGULAR BOARD MEETINGS**

The regular meetings of the Board of Trustees shall be held quarterly or at such other times and at such places as the Board may determine.

**Section 5.07      SPECIAL BOARD MEETINGS**

A special meeting of the Board of Trustees shall be held whenever called by the President or by a majority of the Trustees. Notices of all special meetings of the Board of Trustees shall be mailed to each trustee at his last known post-office address, or delivered to him personally, or transmitted by telegraph or telephone at least twenty-four (24) hours previous to the date fixed for the meeting.

**Section 5.08      Q U O R U M**

A majority of the Board of Trustees shall constitute a quorum at any meeting of the Board.

**Section 5.09      COMPENSATION**

The compensation, if any, of the members of the Board of the Trustees shall be determined by the members of the Foundation at any annual or special meeting of the Foundation.

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## ARTICLE VI

### EXECUTIVE COMMITTEE

#### Section 6.01 DESIGNATION OF EXECUTIVE COMMITTEE

The Board of Trustees, by resolution adopted by a majority of the whole Board, may designate five or more of its number (including the Chairman of the Board who shall be its presiding officer), to constitute an Executive Committee, which committee, to the extent provided in such resolution, shall have and exercise all of the authority of the Board of Trustees in the management of the Foundation. No member of the Executive Committee shall continue to be a member thereof after he ceases to be a trustee of the Foundation. The Board of Trustees shall have the power at any time to increase or diminish the number of members of the Executive Committee, to fill vacancies thereon, to change any member thereof, and to change the functions or terminate the existence thereof.

#### Section 5.02 POWERS OF THE EXECUTIVE COMMITTEE

During the intervals between meetings of the Board of Trustees, and subject to such limitations as may be required by law or by resolution of the Board of Trustees, the Executive Committee shall have and may exercise all of the powers of the Board of Trustees and the management of the business and affairs of the Foundation, including power to authorize the seal of the Foundation to be affixed to all papers which may require it. The Executive Committee shall keep minutes of its proceedings and shall report the same to the Board at the meeting next succeeding, and any action by the Executive Committee shall be subject to revision and alteration by the Board, provided that no rights of third persons shall be affected by any such revision or alteration.

#### Section 6.03 MEETINGS, QUORUM

The Chairman of the Board shall, if present, act as Chairman at all meetings of the Executive Committee, and the Secretary of the Foundation shall, if present, act as secretary of the meeting. In case of the absence from any meeting of the Executive Committee of the Chairman of the Board or the Secretary of the Foundation, the Executive Committee shall appoint a chairman, or secretary to constitute a quorum for the transaction of any business, and the act of a majority of the members present at a meeting at which a quorum exists shall be the act of the Committee.

**Section 6.04**

**NOTICE OF MEETINGS, ETC.**

Regular meetings of the Executive Committee, of which no notice shall be necessary, shall be fixed by resolution adopted by a majority of the Committee. Special meetings of the Executive Committee shall be called at the request of any member of the Committee. Written notice of each special meeting of the Executive Committee shall be sent by the Secretary to each member thereof by letter, telegram, or radiogram, at such time that, in regular course, the notice would reach such place not later than the day immediately preceding the day for such meetings; or may be delivered by the Secretary to a member personally at any time during such immediately preceding day. Notice of any such meeting need not be given to any member of the Executive Committee who has waived such notice either in writing or by telegram or radiogram, arriving either before or after such meeting, or who shall be present at the meeting. Any meeting of the Executive Committee shall be a legal meeting, without notice thereof having been given, if all the members of the Executive Committee who have not waived notice thereof in writing or by telegram or radiogram shall be present in person. The Board of Trustees may vote to the members of the Executive Committee a reasonable fee as compensation for attendance at meetings of such committee.

**ARTICLE VII**

**OFFICERS OF THE FOUNDATION**

**Section 7.01**

**ELECTION OF OFFICERS**

Immediately following each election of Trustees, the Board shall convene and elect from among their number a Chairman, a President and a Treasurer. The Board shall also appoint an Executive Vice President, if found necessary, and a Secretary who shall be a resident and citizen of the Philippines.

**Section 7.02**

**OTHER OFFICERS AND AGENTS**

The Board may appoint such other officers and agents as it shall deem necessary, who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined by the Board. The Board may, from time to time, authorize the Executive Committee or any officer to appoint and remove subordinate officers and agents and prescribe their duties.

**Section 7.03 DUTIES OF THE CHAIRMAN**

The Chairman of the Board of Trustees shall preside at all meetings of the members and of the Board of Trustees, including all meetings of the Executive Committee. He shall sign certificates of membership of the Foundation, and to perform other duties as may be determined by the Board.

**Section 7.03-A DUTIES OF THE PRESIDENT**

The President shall be the Chief Executive Officer of the Foundation. He shall sign all contracts, documents and evidence of indebtedness, securing the same, for and in the name of the Foundation, and perform such other duties as the Board may authorize and direct and those which are incidental to such office. The Board of Trustees may, however, authorize any other officer of the Foundation to sign checks, contracts and other instruments in writing on behalf of the Foundation.

During the absence or temporary incapacity of the Chairman of the Board of Trustees, the President shall act as acting Chairman and shall discharge the duties incumbent in such office. The President shall, likewise, become IPSO FACTO member of the Executive Committee.

**Section 7.04 DUTIES OF THE EXECUTIVE VICE-PRESIDENT**

The Executive Vice-President shall have such powers and perform such duties as the Board of Trustees may from time to time prescribe or as the President may from time to time delegate to him. Subject to the direction of the President, he shall have general charge of the ordinary and usual business operations of the Foundation. During the President's absence or inability to act, he shall temporarily act in his place.

**Section 7.05 DUTIES OF THE TREASURER**

The Treasurer shall be the financial officer of the Foundation. He shall perform such duties with respect to the finances of the Foundation as may be prescribed by the Board of Trustees.

**Section 7.06 DUTIES OF THE SECRETARY**

The Secretary shall record the attendance and proceedings of all meetings of the members of the Board or of the Executive Committee. He shall see to it that all notices are duly given in accordance with those By-laws or as required by law. He shall be the custodian of the seal of the Foundation which shall be affixed to such instruments as may require it and thereupon be attested by his signature or that of the Treasurer. He shall keep a register of the names and post office address of all members and keep on file at all times a complete copy of the certificate of incorporation and by-laws of the Foundation. In general, he is to perform all duties incident to the office of the Secretary.

The Foundation, thru the Secretary, shall also furnish the National Science Development Board a certified true copy of the minutes of, and resolutions adopted in all meetings of the Board of Trustees, committees or members of the Foundation within thirty (30) days after such meeting.

**Section 7.07**     COMPENSATION OF THE OFFICERS

The compensation of all officers of the Foundation shall be fixed by the Board of Trustees.

**ARTICLE VIII**

**FINANCIAL TRANSACTIONS**

**Section 8.01**     NON-PROFIT REQUIREMENTS

No part of the net income of the Foundation shall inure to the benefit of any of its members.

**Section 8.02**     CAPITAL FUND

A Capital Fund for investment, the net return from which shall be utilized to conduct and carry out the economic, scientific, and technological research and counselling activities of the Foundation shall be created and maintained under the supervision and control of the Board of Trustees. Said Capital Fund shall consist of the contribution of Sponsors, long term loans that may be arranged by the Board, endowments from public and private institutions in the Philippines or elsewhere.

**Section 8.03**     DEPOSITORY

The Board of Trustees shall have power to select one or more banks to act as depositories of the funds of the Foundation and to determine the manner of receiving, depositing, and disbursing the funds of the Foundation and the form of checks and the person or persons by whom they shall be signed, with the power to change such bank and the person or persons signing such checks and the form thereof at will.

**Section 8.04**     AUDITORS

At least once in each year the Board of Trustees shall secure the services of a competent and disinterested accounting firm which shall make a careful audit of the books and accounts of the Foundation and render a report thereon in writing which report shall be submitted to the members of the Foundation at their annual meeting.

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ARTICLE IX

AMENDMENTS

Section 9.01 AMENDMENTS

"Any proposed amendments to this code of By-laws shall take effect immediately upon approval and ratification by the majority vote of the members present during the annual or special meeting of members called for the purpose".

ARTICLE X

DISSOLUTION

Section 10.01 DISSOLUTION OF ASSETS ON DISSOLUTION

In case of dissolution of the Foundation, all its debts and liabilities shall first be paid according to their respective priorities. Any property remaining after discharging the debts and liabilities of the Foundation shall be turned over to another Foundation dedicated to scientific pursuit of its choice or to the Republic of the Philippines or any of its agencies, instrumentalities or political sub-divisions.

C E R T I F I C A T I O N

We, the undersigned officers of the Economic Development Foundation, pursuant to the requirements of Section 23 of Act No. 1459, as amended, do hereby certify to be true and correct the foregoing copy of the Revised Code of By-laws of the Economic Development Foundation, Inc. and that the same is in accordance with a resolution adopted by the Board of Trustees on December 22, 1980, amending Sections 7.01, 7.03 and 9.01 of said By-laws to conform with the provisions of NSDB Regulations No. 1 dated January 17, 1967, governing the organization and operation of scientific foundations, and for other purposes.

December 22, 1980, Makati, Metro Manila, Philippines.

CESAR N. SARINO  
Trustee/President

GREGORIO S IMPERIAL, JR.  
Trustee

ERNESTO ABOITIZ  
Trustee

VICENTE R. JAYME  
Trustee

JEAN PIERRE BAILLEUX  
Trustee

CLAUDIO DE LUZURRIAGA  
Trustee

CESAR BUENAVENTURA  
Trustee

ANTONIO V. DEL ROSARIO  
Trustee

PEDRO COJUANGCO  
Trustee

GERARDO P. SICAT  
Trustee

ROMAN CRUZ, JR.  
Trustee

RICARDO SILVERIO, SR.  
Trustee

JOSE FERNANDEZ, JR.  
Trustee/Treasurer

RAMON L. SIY  
Trustee

DON EMILIO ABELLO  
Trustee  
Board Chairman

SENON B. POSADAS  
Secretary