

**COMPLEMENTARY FEASIBILITY STUDIES AND SUPPORT
FOR THE CENTRAL AMERICAN POWER GRID**

(TC-95-09-24)

EXECUTIVE SUMMARY

REQUESTER: Consejo de Electrificación de América Central
[Central American Electrification Council] (CEAC).

EXECUTING AGENCY: CEAC, through the Executive Secretariat of the SIEPAC project which is headquartered in Costa Rica.

BENEFICIARIES: The six countries of the Central American isthmus: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama.

FINANCING: IDB:

Foreign exchange	US\$385,000 (SF)
FSO Region II	
Trust Funds:	
Danish Fund	US\$800,000
U.S. Evergreen Fund	US\$339,920
Other sources:	
Government of Spain	US\$500,000
Other	US\$590,000
Local counterpart funding:	US\$100,000
Total:	US\$2,714,920

TERMS: Execution period: 15 months
Disbursement period: 18 months

ENVIRONMENTAL CLASSIFICATION: The Environment Committee has classified this operation in Category III.

OBJECTIVES: To provide support for the complementary feasibility studies needed in order to determine the best interconnection alternative for the Central American power grid, including technical, economic, institutional and environmental evaluation, and a decision on the form of ownership for the project.

DESCRIPTION: This technical cooperation will support execution of the following activities: (i) preparation of additional technical and economic feasibility studies (including environmental impact assessment) and the preliminary design work for the project; (ii) examination of legal, regulatory and institutional conditions and the barriers to a regional energy-exchange market; (iii) definition of national

concessions and institutional arrangements (including the regional legislative and regulatory framework), the company that will operate and own the system, and the financial impact on the companies of the region; (iv) publicity campaigns and seminars concerning the project; and (v) support for the region by covering part of the operating costs of the project's Executive Secretariat.

BENEFITS:

This technical cooperation is expected to produce the following benefits: (i) specification of and agreement on the level of coordination that the countries are prepared to endorse for the development and operation of their power grids; (ii) determination of the economic benefits that implementation of the SIEPAC project would bring to the region; and (iii) design of the legal and institutional components and dimensioning of infrastructure so the Bank will be able to process the operation.

RISKS:

The main risks of this technical cooperation are: (i) from an execution standpoint, there is the risk that the Executive Secretariat will not be set up on time; from the standpoint of technical capacity and resources, there is the risk that the Secretariat will not have the requisite capacity to manage and supervise the studies and coordinate the countries' work to ensure proper study execution; (ii) regarding the availability of funding for the studies, there is the risk that the CABEI financing may not be available when needed, since these are contingent-recovery funds and there might be delays in securing the guarantees required by CABEI.

To mitigate these risks: (i) the establishment of the Executive Secretariat is being supported by means of the present operation and it has been agreed with CEAC that the Secretariat will be granted the necessary legal powers to carry out the technical cooperation on its behalf. The Secretariat is planned to be operational with its initial basic structure in place before this operation is submitted to the Bank's Board of Executive Directors. The support necessary to provide the Secretariat with the basic technical staff it needs in order to perform its functions is included in the operation. In view of the SIEPAC project's complexity, the project team will closely monitor the progress of the studies and agreements; (ii) regarding the CABEI financing, the possibility is being explored that these funds might be made available in grant form and that some flexibility might be introduced into the guarantee required by CABEI. Alternatively, an attempt will be

made to locate other sources within the Bank; if need be, consideration will be given to reducing the scope of the work.

**THE BANK'S
STRATEGY:**

Support for subregional integration processes is one of the priority objectives under the Eighth Replenishment. In this connection, the regional programming paper for Central America and the Bank's regional strategy for the region view the SIEPAC project as one of the chief catalysts for consolidating regional integration.

**SPECIAL
CONTRACTUAL
CONDITIONS:**

Prior to first disbursement, evidence is to be furnished that: (i) CEAC has granted the pertinent powers to the project's Executive Secretariat for it to manage and administer the technical cooperation on CEAC's behalf (see paragraph 5.2); and (ii) the Executive Secretariat has been set up and that, as a minimum, its executive director has been appointed (see paragraph 5.3).

I. BACKGROUND

A. Introduction

- 1.1 This technical cooperation is intended to support the financing of the complementary technical and economic feasibility studies and other studies needed to determine the best alternative for electrical interconnection on the Central American isthmus, which has been under evaluation as part of the Electrical Interconnection System for the Countries of Central America (SIEPAC) project.

B. Frame of reference

1. Recent developments in the Central American electricity sector

- 1.2 Between 1985 and 1995, the new generating capacity added to Central America's power grids was marginal, maintenance of thermoelectric facilities was inadequate, rates deteriorated markedly in real terms, and the majority of the power companies suffered from inefficient management (high electricity losses, protracted collection delays and overstaffing), all as a result of the considerable degree of political interference and the lack of corporatization and freedom of action.
- 1.3 The consequences of this situation, combined with low water flows during 1990-1994, were: (i) rationing, which became unavoidable in almost all the countries in the early years of the decade, with Honduras having been hit the hardest (1994); (ii) the financial crises that have beset most of the power companies; (iii) the growing use of hydrocarbon fuels to generate electricity; (iv) long-term contracts with private generators, in some cases at high prices and limited operating flexibility; and (v) very marginal exchanges of electricity owing to a lack of installed capacity and a weak, unreliable power grid.
- 1.4 To surmount the above-described situation, the governments of the six countries are implementing reforms in their electricity sectors. In all cases, the aim is to make management more efficient, restore the companies' financial health, ensure a supply of electricity at reasonable rates, and create conditions conducive to private sector participation, especially for the construction of new generating plants. Efforts are also being made to spur electric power integration at the regional level.

2. The Central American Electrification Council

- 1.5 Starting in 1979, the national power companies of the Central American isthmus began to work toward setting up the Consejo de Electrificación de América Central [Central American Electrification Council] (CEAC). The agreement establishing the council was approved in 1985 and was subsequently ratified by the legislatures

of the six participating countries. The protocol of agreement was deposited with the United Nations and with the Organization of American States, which establishes it as an international body possessing autonomy and juridical personality. The six Central American power companies that make up CEAC would be the ones participating in the SIEPAC interconnection project. Because of the companies' financial difficulties, they agreed that CEAC's Secretariat would be funded by the host country: They decided to entrust the Executive Secretariat of CEAC to one of their permanent officers, and agreed that the headquarters would rotate every two years among the countries. As of August 1, 1995, CEAC headquarters has been at the Empresa Nacional de Energía Eléctrica of Honduras.

- 1.6 CEAC has formulated, executed or coordinated, with good results to date, various regional technical cooperation projects, including those sponsored by the Regional Consultative Group for Central America and those financed by NORDEL. To enhance its effectiveness, in March 1994 CEAC adopted an organizational structure based on subcommittees with full delegation and participation of the six power companies.

3. The Electrical Interconnection System for the Countries of Central America (SIEPAC) investment project

- a. Background

- 1.7 As originally submitted to the IDB, the SIEPAC project was to be carried out in two stages, based on the studies conducted. The first stage was to include construction of a 500-kV trunk line, energized initially at 230 kV and approximately 1,680 km in length between Guatemala and Panama, plus other investments to upgrade transmission systems between the countries. The second stage provided for the construction of substations in the six participating countries in order to operate the line at 500 kV. The total estimated cost of the project was US\$498 million.
 - 1.8 In April 1995 the Bank undertook a review of the existing technical and economic feasibility studies for the SIEPAC electrical interconnection project. The conclusion reached by the Bank, which was reiterated in a second round of comments in August 1995, was that -- for a combination of technical, economic and institutional reasons -- the analysis of alternative interconnection arrangements needed to be pursued in greater depth, including the possibility of building one or more 230-kV lines. As a result of this recommendation, technical specialists from the region's power companies met in San José, Costa Rica, in September 1995, and agreed on terms of reference for complementary feasibility studies for the project. At a high-level meeting held at IDB headquarters in Washington in October 1995, with presidential delegates of the six countries, the desirability of conducting the additional project feasibility studies was confirmed and the technical assistance requirements for completing the preparation of the

project were defined, and form the subject of the present technical cooperation.

b. Objectives and priority of the SIEPAC project

- 1.9 The purpose of the SIEPAC project is to upgrade the electric power interconnection between the countries of Central America so as to: (i) make more efficient use of the region's natural resources in combination with imported energy resources; (ii) increase the reliability of the regional electricity system; (iii) improve the security and quality of services to end consumers at reasonable rates; and (iv) further the economic development and integration of the region.
- 1.10 The creation of a regional electricity market is of vital importance both for the region and for securing the benefits that will accrue from the SIEPAC interconnection project. This will require the countries reaching the necessary political agreements and defining the degree of electric power integration they are prepared to endorse. These political agreements should be set down in a treaty to be concluded between the governments and ratified by the legislature of each country, as well as in an interconnection agreement between the governments. The potential savings and benefits to be obtained from an expanded electricity market at the regional level will depend on the degree of coordination achieved in the operation of the generating systems and in the increases in generating capacity decided on by the countries. This will produce economies of scale and savings, in terms of operating costs (especially fuel) and investment costs, while improving the security and quality of services to end consumers.
- 1.11 In addition to establishing the degree of coordination desired by the countries, the treaty will also create a regional regulatory agency (the Interconnection Commission) and the system's operating agency, and will define the basic guidelines for the company that will own the system.
- 1.12 As part of the efforts directed toward regional integration, the SIEPAC project will help to consolidate the economic integration process already taking place in the region. This project enjoys political support at the highest level in each of the beneficiary countries, and is a recurring topic on the agendas of summit meetings of the Presidents of Central America and Panama. At the summit held in San Pedro Sula, Honduras, on December 13-15, 1995, the countries reiterated their support for this initiative, as well as the desirability of implementing the project in order to strengthen the electricity market and regional integration processes. At that meeting, the Presidents agreed to bring ministerial-level representatives into the negotiation of the interconnection treaty, and that - in association with power company representatives - they would set up the Coordination

Council, which will be the topmost regional-level authority for implementing the SIEPAC project.

- 1.13 The IDB solidly supports this integration initiative. The project's profile II summary was approved in August 1994, and a loan operation is expected to be submitted to the Board of Executive Directors in late 1996 or early 1997, with cofinancing and possible participation by other international agencies.

C. Bank activities in Central American integration

- 1.14 The Regional Consultative Group for Central America (GCR-CA), which operates under the Bank's aegis, was established in response to a request made by the Presidents of the Central American countries and Panama in 1990. The body that guides the GCR-CA's activities is the Multilateral Management Committee, made up of ministers appointed by the Central American economic authorities, the IDB, the International Monetary Fund, the World Bank and the United Nations Development Programme. The Committee has met on five occasions.
- 1.15 In support of the regional integration process, in 1992 the Bank granted regional technical cooperation funding through an operation entitled Support Program for the Development and Integration of Central America (PRADIC). The first component of the program, which included specific support for three main activities (trade, macroeconomic convergence and analysis of industrial competitiveness), was executed in full. Under the support program's second component, organized by GCR-CA, a general diagnostic study was made of the situation of integration-oriented institutions. Numerous problems were detected and it was concluded that a more detailed study of their mandates and institutional capacity was required and that it would be desirable to have an action plan that enjoyed broad-based political support.
- 1.16 In the electricity subsector, the GCR-CA's initiative resulted in the identification and designing of seven regional technical cooperation projects for strengthening electric power integration. As of the end of 1995, financing had been secured for four of these projects and for part of a fifth, and negotiations were at an advanced stage for the remaining two. Most of these projects include technology transfer to the six power companies, and together they form a comprehensive strategy that dovetails with the design and analytical capacity of the SIEPAC project.
- 1.17 One of the main efforts to enhance coordinated operation of the region's power grids was the Program of Regional Activities in the Central American Electricity Subsector (PARSEICA). The purpose of the program is to: (a) strengthen the power companies' capacity to operate the powergrids of Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama in a secure, economical and coordinated fashion, and (b) promote integrated operation of these

grids. Despite the fact that PARSEICA's original studies as well as subsequent ones carried out under the program have concluded that the power companies could obtain significant economic benefits from coordinating the operation of their grids, a variety of factors - including the companies' lack of freedom to function under a commercial system - have prevented implementation of this mode of operation.

- 1.18 In the electricity subsector, the Bank has acted to encourage integration of the region's markets, and recently approved financing for the construction of a 230-kV interconnection between El Salvador and Honduras that is scheduled to enter into operation in 1999. The Bank has also approved (as part of an operation for Costa Rica) financing for upgrading the San José loop to 230 kV. With the entry into operation of these upgrades (scheduled for the end of the decade), the interconnection of all six countries' power grids at 230 kV will be completed.
- 1.19 Support for subregional integration processes is one of the priority objectives of the Bank's Eighth Replenishment. In this connection, the regional programming paper for Central America and the Bank's regional strategy for Central America view the SIEPAC project as one of the main catalysts for consolidating regional integration.

II. OBJECTIVES

- 2.1 The objective of this technical cooperation is to determine the best electric power interconnection alternative for the Central American isthmus. To do this, it will be necessary to:
(i) conduct additional technical and economic feasibility studies (including environmental impact assessments) and draft the preliminary designs; (ii) examine legal, regulatory and institutional conditions and the barriers to a regional energy-exchange market; (iii) define national concessions and institutional arrangements, the company that will own and operate the system, and the financial impact on the companies of the region; and (iv) support the region by funding part of the operating expenses of the project's Executive Secretariat.

III. DESCRIPTION OF THE PROJECT

- 3.1 The proposed technical cooperation will provide financing for the following principal activities:

1. Additional technical and economic feasibility studies

- 3.2 The services of an international consulting firm specialized in technical and economic studies on expanding electricity generation, transmission systems and international power grids will be required in order to perform the following main tasks: (i) preparing and updating least-cost expansion plans, taking into account the different degrees of coordination considered and the assessment of the benefits to be gained from coordinated planning and operation; (ii) preparing electric power and reliability studies; (iii) reviewing costs and benefits for the region and by country, taking into account the coordination criteria adopted by the countries; and (iv) conducting the economic evaluation of the project and identifying the investment strategy that will maximize the net economic benefits, bearing in mind the most significant risks facing the project.
- 3.3 Technical and economic studies will be done both on the expansion of electricity generation and on the expansion of transmission and improvement of reliability. The former will be carried out by the Instituto de Investigaciones Tecnológicas [Technology Research Institute] (ITT) of Madrid University and will be financed on a grant basis by the Spanish government. The IIT has already done studies of this sort in earlier analyses. The transmission studies will be done by the U.S. consulting firm of Power Technologies, Inc. (PTI) and will be financed by the U.S. Evergreen Fund. PTI worked with the Bank in reviewing the feasibility study and its report was distributed to and discussed with the Central American power companies. The companies have asked the Bank that the IIT and PTI also be selected to do the studies on boosting generation and economic appraisal, as well as the transmission (electric power) and reliability studies. Both the Spanish government and the U.S. Evergreen Fund, respectively, are in agreement about retaining the IIT and PTI. In this way, the knowhow and expertise that the IIT and PTI have acquired on this project can be utilized and delays and selection costs can be avoided.
- 3.4 Since the generation and transmission studies have to be continually updated and since the use of common criteria and tools would facilitate work under the agreements that underpin the SIEPAC project, both the power companies and the project team feel that the studies should use tools that are available to the region's power companies. Accordingly, it has been agreed that the Unified Regional Electrical Planning System model developed by the Latin American Energy Organization (OLADE) - with Bank assistance (SUPER OLADE/IDB model) - will be used for the studies on boosting generation. For the electricity transmission studies, the PSS/E model developed and owned by PTI will be used. Because of budget constraints, financing for transfer of the two models to the power companies has not been included in this operation; however, a project has been formulated with support from GCR-CA (funding pending), which will make it possible to manage technical

cooperation resources for financing the transfer of this technology.

2. Preliminary project designs

- 3.5 On the basis of the results of the feasibility studies, a consulting firm will be retained to prepare the preliminary designs for the various works making up the SIEPAC project, such as transmission lines, substations, reactive compensation equipment, communications system and protection systems. The specific route and preliminary topography of the line will be prepared by the power companies and provided to the contractor, under the coordination of the project's Executive Secretariat.
- 3.6 The consultant will compile and analyze the data and prepare recommendations on the proposed routes, taking into account protected areas and physical characteristics (geology, lightning-strike frequency, etc.). The consultant will design the transmission lines, substations and other ancillary facilities, in light of the results, premises and criteria resulting from the technical and economic feasibility studies and the agreements concluded by the Central American power companies for implementing the project. The designs are to include: (i) a detailed budget for the works, including calculation records; (ii) diagrams and specifications for all equipment and facilities; (iii) a tentative execution schedule; (iv) specific recommendations, by country, for resolving any easement problems; and (v) terms of reference and bidding documents for contracting the final designs.

3. Environmental impact assessment

- 3.7 A consulting firm and/or individual consultants will be retained to review and complete the environmental impact studies in conjunction with the power companies and the pertinent authorities. At the same time, they will verify that the studies are consistent with individual country standards and they will identify the project's direct and indirect environmental impacts, together with the remedial actions envisaged and the costs entailed. An environmental summary will also be prepared.
- 3.8 The purpose of an environmental impact assessment for the SIEPAC project is to identify and quantify the impact on the environment (including duration) caused by the various project actions during the construction and operation stages; to formulate the mitigation measures needed to minimize this impact; to determine the project's environmental feasibility taking these measures into account; and to draw up an environmental management plan for the project.
- 3.9 The consultant will receive the environmental impact study for the project from the Executive Secretariat, including the detailed description of the route to be followed by line(s) decided on under the SIEPAC project. The consultant will review and complete the

environmental impact assessment in close coordination with the power companies, the Executive Secretariat and the Bank.

4. Legal frameworks of the countries and the interconnection treaty and agreement

- 3.10 This activity requires the advisory services of individual consultants to prepare the legislative and regulatory framework for the regional power grid, including drafting of the treaty between the countries and the interconnection agreement and preparation of the draft versions of the national concessions that will be needed for implementing the project (development and operation of the power grids, etc.).
- 3.11 The support of one or more individual consultants will also be needed for analyzing the barriers – local policies, tariffs, taxes, foreign exchange requirements, payment systems, pricing and taxes on fuels; budget and financial management of State-owned companies and their political control; and other legal problems associated with the various legal frameworks – that might hamper development of a regional energy-exchange market for electric power, and develop a proposal and a schedule for convergence.
- 3.12 The output of this consultancy will be: (i) a description of the barriers impeding the functioning of an electricity exchange market; (ii) a proposal and possible schedule for eliminating these barriers; (iii) inclusion in the treaty of the characteristics of the regional electricity market as agreed on; and (iv) tentative drafts of the treaty and the interconnection agreement.

5. Studies to define the company that will own the system

- 3.13 The objective of this consultancy is to assess different options for the formation and structure of the company that will be the owner of the regional grid, its corporate, legal and financial structure, alternatives for private sector participation in its capital and in financing the project, and the arrangements for the future transfer of the shares originally subscribed by the national governments.
- 3.14 An individual consultant or consultants will be retained for this work, which will involve reviewing the draft proposals to be provided by the Executive Secretariat for establishing and structuring the company. On the basis of this review and in light of the definitions that the countries arrive at concerning the regional electricity market, alternatives for the company that will own the system will be proposed, taking into account the general context of the power grid as set forth in the interconnection treaty to be signed by the countries, and the interconnection agreements.

6. Financial evaluation of the power companies

- 3.15 This activity will involve conducting a forward financial analysis and evaluating the financial impact of the proposed interconnection project on each of the region's six power companies. To do this, once the optimum interconnection alternative has been defined (which will be the output of the complementary feasibility studies covered herein), its financial impact on the companies will be evaluated considering the situation with and without the project.
- 3.16 An individual consultant or consultants will be retained for this task and will receive direct support from the financial specialist that will be part of the Executive Secretariat. The consultant will coordinate his activities with the specialist and with the Bank's project team. The analysis will be based on financial planning models that are to be uniform for all the companies, taking into account the planning and expansion criteria included in the interconnection project feasibility study.

7. Support for the project's Executive Secretariat

- 3.17 An Executive Secretariat will be set up for a specific, limited period, to oversee coordination and administration of the interconnection project in the region and to give the countries a more active role in the control and administration of the project and the complementary studies that are the subject of this operation. The secretariat will be established in San José, Costa Rica, as a temporary regional agency, as decided at the Summit of Presidents of Central America held in Honduras in December 1995.
- 3.18 Project funds will be used to cover the fees of individual consultants and the Executive Director (individual consultant), plus travel expenses and transfers required by these individuals during the project definition process. Local expenses, e.g., the costs of physical facilities, equipment, logistic and secretarial support, and local operating expenses, will be covered by Costa Rica's ICE. The Secretariat and its functions will subsequently be absorbed by the company that is to own the system, once it is formed.
- 3.19 Fifty percent of the financing of the foreign exchange component will be covered by nonreimbursable funds from the Spanish government through that country's Ministry of Trade and Tourism, who have already expressed their consent to this financing and would immediately disburse the funds needed to make the Secretariat operational. The remaining 50% will be financed in foreign exchange by the IDB on a nonreimbursable basis.

8. Publicity seminars

- 3.20 As a large-scale initiative in the region, the SIEPAC project should be appropriately publicized and justified to opinion-makers.

Publicity campaigns targeting different segments of the general public will also be mounted. Seminars should be held in each of the countries in order to ensure that the public is fully informed.

- 3.21 The main activities of this component will be carried out by the Secretariat's Executive Director and support consultants, through seminars and meetings to be organized at different levels in each country; the region's power companies will contribute to these meetings to hold the costs down. Publicity will also be required for the project, as well as financing for travel expenses and transfers to the countries of the region, and instructional materials for executing this component.

IV. COST AND FINANCING

- 4.1 Details regarding the sources of financing for this operation are presented in Annex 1, along with the estimated cost of each component. The total cost of the operation is put at US\$2,715,000 equivalent. A summary of the main components of the proposed technical cooperation is given in the following table:

	ACTIVITY	Amount (in US\$)
01	Complementary project feasibility studies, preliminary designs, environmental impact, institutional, legal and financial studies	2,089,920
02	Support for the Executive Secretariat's expenditures, including local contribution estimated at US\$100,000	450,000
03	Other items: seminars and publicity campaign	100,000
04	Contingencies	75,000
	Total	2,714,920

- 4.2 As regards the sources of financing, the IDB will furnish US\$1,524,920, of which US\$385,000 will be provided from its own resources on a nonreimbursable basis and US\$1,139,920 equivalent will be provided by trust funds administered by the Bank, also on a nonreimbursable basis. ^{1/} The Spanish government has committed US\$500,000 through its Ministry of Trade and Tourism.

^{1/} Approval for this financing has been given by the Danish Fund (US\$800,000) and the U.S. Evergreen Fund (US\$339,920).

Nonreimbursable technical cooperation funding is also being negotiated from the Bank-administered Norwegian Fund - together with funds from the Central American Bank for Economic Integration (CABEI) - for a total of US\$590,000 equivalent.

V. EXECUTION OF THE TECHNICAL COOPERATION

A. Execution plan

- 5.1 The Bank's financing for this operation will be channeled through the Central American Electrification Council (CEAC), a regional body set up in 1985 by the six countries of the Central American isthmus, who will be the countries that will benefit from the SIEPAC project. As noted earlier, CEAC has full legal capacity to acquire rights and assume obligations, and under its charter it is allowed to carry out the type of operation proposed in this document.
- 5.2 In order to streamline and centralize administration and supervision of this operation, the intention is that the entire administration and management process, together with the hiring and supervising consultants and supervising study execution, be carried out by the project's Executive Secretariat. This decision based on CEAC's personnel constraints and also the advantages of having the entire execution process centralized in a single executing unit. To this end, CEAC's Executive Secretariat, which is currently headquartered in Honduras, would grant the project's Executive Secretariat power of attorney to manage and administer the operation described herein on CEAC's behalf. This arrangement is in accordance with CEAC's bylaws and has its approval. It is recommended as a condition precedent to submission to first disbursement that satisfactory evidence be submitted to the Bank to the effect that CEAC has granted the necessary powers.

B. The executing agency

- 5.3 The operation will be executed by the project's Executive Secretariat, which will be located in Costa Rica. The Bank will hire the consultancy services using trust fund resources and will administer these resources. The Executive Secretariat will have a technical team especially formed for this purpose, made up of an Executive Director and a group of professionals who will provide their services as individual consultants. Secretarial and logistic support will be furnished by the Instituto Costarricense de Electrificación as a local contribution to the technical cooperation. Consultants can also be retained for short periods for any specific tasks that may be required. As a condition precedent to first disbursement, satisfactory evidence must be submitted to the Bank that the Project's Executive Secretariat has

been set up and that, as a minimum, its Executive Director has been appointed.

- 5.4 In the performance of its activities, the Project's Executive Secretariat will be assisted by the Study Coordination Committee, which is made up of coordinators appointed by the power companies of each of the countries under the SIEPAC project. This committee has been meeting bimonthly, basically, and will probably continue meeting with at least that frequency during execution of the operation in order to evaluate the progress of the studies and reports and the recommendations made in them. In addition, throughout the evaluation of the SIEPAC project and in view of its complexity, the project team will closely monitor the progress of all studies.
- 5.5 It should also be noted that as part of the evaluation process for the SIEPAC project, the Presidents of the countries, at their summit held in Honduras in mid-December 1995, approved the inclusion of a ministerial-level representative from each country who, in association with the power company representatives, would form a Coordinating Council to assist in decision-making in the project's Executive Secretariat. The countries are presently in the process of appointing their respective representatives.

C. Sequencing of the studies

- 5.6 The sequencing and priorities of each of the studies are presented in Annex 2. Priority will be assigned to carrying out institutional studies and the complementary technical and economic studies, which will be started almost simultaneously. Inputs from these will be needed for the rest of the studies, which will be started later, thus leaving some margin for defining their financing.

D. Procurement of goods and services

- 5.7 Bank procedures and the current rules for the Bank-administered trust funds will be followed for contracting the consultancy services required under this technical cooperation. The selection and hiring of consulting firms and individual consultants will be done with the support and supervision of the Bank's Country Office in Costa Rica.

E. Reports

- 5.8 Once they have completed their work, all consulting firms and individual consultants will be required to submit a report detailing their findings, as specified in the terms of reference in Annex 3. All reports and recommendations will be reviewed and discussed by the project's Executive Secretariat and the Bank team responsible for the SIEPAC project.

F. Audit

- 5.9 During the execution period of the technical cooperation, CEAC is to submit financial statements on execution, duly audited by a firm of independent auditors, pursuant to applicable Bank procedures.

VI. BENEFITS AND RISKS

1. Benefits

- 6.1 The following benefits are expected from this technical cooperation: (i) determination and agreement on the level of coordination that the countries are prepared to endorse for the development and operation of their power grids; (ii) determination of the economic benefits that implementation of the SIEPAC project would bring to the region; (iii) design of legal and institutional components and dimensioning of infrastructure so that the Bank will be able to process the operation. This operation will also provide sufficient technical and economic data for determining the best electric power interconnection alternative for the region.

2. Risks

- 6.2 The main risks of this technical cooperation are: (i) from an execution standpoint, there is the risk that the Executive Secretariat will not be set up on time; from the standpoint of technical capacity and resources, there is the risk that the Secretariat will not have the requisite capacity to manage and supervise the studies and coordinate the countries' work to ensure proper study execution; (ii) regarding the availability of funding for the studies, there is the risk that the CABEI financing may not be available when needed, since these are contingent-recovery funds and there might be delays in securing the guarantees required by CABEI.
- 6.3 To mitigate these risks: (i) the establishment of the Executive Secretariat is being supported by means of the present operation of and it has been agreed with CEAC that the Secretariat will be granted the necessary legal powers to carry out the technical cooperation on its behalf. The Secretariat is planned to be operational with its initial basic structure in place before this operation is submitted to the Bank's Board of Executive Directors. The support necessary to provide the Secretariat with the basic technical staff it needs in order to perform its functions is included in the operation. In view of the SIEPAC project's complexity, the project team will closely monitor the progress of the studies and agreements; (ii) regarding the CABEI financing, the possibility is being explored that these funds might be made available in grant form that some flexibility might be introduced

into the guarantee required by CABEI. Alternatively, an attempt will be made to locate other sources within the Bank; if need be consideration will be given to reducing the scope of the work.

VII. SPECIAL CONSIDERATIONS

A. Bank resources

- 7.1 The Bank resources for financing up to US\$385,000 in foreign exchange, on a nonreimbursable basis, will be provided from nonreimbursable FSO resources allocated to Region II.

B. Other financing

- 7.2 The financing approved in principle by CABEI would be provided on a contingent-recovery basis. CABEI has not yet defined the guarantee mechanism for this operation. It is thought that the securing of the guarantees required by CABEI from the countries and/or the power companies could give rise to delays, so that, as already noted, there is a potential risk that these funds may not be available when needed. CABEI has been approached about arranging a meeting of its Board in order to explore the possibility of obtaining nonreimbursable resources.

SUMMARY TABLE OF COSTS AND FINANCING
(in thousands of U.S. dollars)

DESCRIPTION	IDB/TC FUNDS				OTHER SOURCES			TOTAL
	Danish Fund	U.S. Evergreen Fund	IDB	TOTAL IDB	Spanish Government	Other 1/	Local contribution	
Executive Secretariat (in Costa Rica): Fees and travel of one executive director and professionals for approx. 12 months to set up the project office in the region, and publicize the project. Local support staff, office expenses and local transportation.			175	175	175		100	350
Complementary studies: Complementary project technical and economic feasibility studies. Additional studies for completing the environmental impact assessment. Constitutional studies and agreements, including the design, discussion, drafting and negotiating of the treaty between the countries and the agreement between the companies. Study to define the alternatives for the legal establishment and structure of the company that will own the system. Preliminary designs, cost estimates, execution programs and construction method to be used for the interconnection line. Individual consultant to advise on the financial analysis of the project and its financial impact on the companies of the region.	150	340	25	365	325	50		690
			160	160		100		260
	650			650		200		850
						90		90
Other: Publicity campaigns, including seminars to inform the public about the project.						100		100
Contingencies			25	25		50		75
TOTALS	800	340	385	1525	500	590	100	2715

Financing from CABEL and the Bank-administered Norwegian Fund are in the process of being negotiated.

PROPOSED RESOLUTION

REGIONAL. NONREIMBURSABLE TECHNICAL COOPERATION FOR THE PROGRAM OF
COMPLEMENTARY FEASIBILITY STUDIES AND SUPPORT FOR THE ELECTRIC
NETWORK SYSTEM FOR THE COUNTRIES OF CENTRAL AMERICA

The Board of Executive Directors

RESOLVES:

1. That the President of the Inter-American Development Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such agreements as may be necessary and to take such additional measures as may be pertinent for the execution of the plan of operations referred to in Document AT- with respect to a nonreimbursable technical cooperation with the Consejo de Electrificación de América Central, for the execution of a program of Complementary Feasibility Studies And Support for the Electric Network System for the Countries of Central America.

2. That up to the equivalent of US\$385,000 in foreign exchange, is authorized for the purpose of this resolution, chargeable to the net income of the Fund for Special Operations.

3. That the above-mentioned sum is to be provided on a nonreimbursable basis.

PROPOSED RESOLUTION

REGIONAL. NONREIMBURSABLE TECHNICAL COOPERATION FOR THE PROGRAM OF
COMPLEMENTARY FEASIBILITY STUDIES AND SUPPORT FOR THE ELECTRIC
NETWORK SYSTEM FOR THE COUNTRIES OF CENTRAL AMERICA

The Board of Executive Directors

RESOLVES:

1. That the President of the Inter-American Development Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such agreements as may be necessary and to take such additional measures as may be pertinent for the execution of the plan of operations referred to in Document AT- with respect to a nonreimbursable technical cooperation with the Consejo de Electrificación de América Central, for the execution of a program of Complementary Feasibility Studies And Support for the Electric Network System for the Countries of Central America.

2. That up to the sum of US\$800,000, is authorized for the purpose of this resolution, chargeable to the resources of the Danish Consultants Fund.

3. That the above-mentioned sum is to be provided on a nonreimbursable basis.

PROPOSED RESOLUTION

REGIONAL. NONREIMBURSABLE TECHNICAL COOPERATION FOR THE PROGRAM OF
COMPLEMENTARY FEASIBILITY STUDIES AND SUPPORT FOR THE ELECTRIC
NETWORK SYSTEM FOR THE COUNTRIES OF CENTRAL AMERICA

The Board of Executive Directors

RESOLVES:

1. That the President of the Inter-American Development Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such agreements as may be necessary and to take such additional measures as may be pertinent for the execution of the plan of operations referred to in Document AT- with respect to a nonreimbursable technical cooperation with the Consejo de Electrificación de América Central for the execution of a program of Complementary Feasibility Studies And Support for the Electric Network System for the Countries of Central America.

2. That up to the sum of US\$339,920, is authorized for the purpose of this resolution, chargeable to the resources of the U.S. Evergreen Fund for Consultants.

3. That the above-mentioned sum is to be provided on a nonreimbursable basis.