

ELECTRIC POWER TRANSMISSION AND DISTRIBUTION PROGRAM

(UR-0022)

EXECUTIVE SUMMARY

**BORROWER AND
EXECUTING AGENCY:** Administración Nacional de Usinas y Transmisiones
Eléctricas [National Electric Power Generation and
Transmission Authority] (UTE)

GUARANTOR: The Republic of Uruguay

AMOUNT AND SOURCE: IDB: US\$54 million (OC)
Local contribution: US\$35 million
Total: US\$89 million

**FINANCIAL
TERMS AND
CONDITIONS:** Amortization period: 20 years
Disbursement period: 4 years
Interest rate: variable
Inspection and supervision: 1%
Credit fee: 0.75%

OBJECTIVES: The general objective of the program is to achieve more efficiency in electric power service in the context of increasingly broader regional integration. The objectives of the projects comprising the program are as follows: (i) to contribute to optimal use of energy resources in Uruguay and Brazil by diversifying the markets and sources of supply in the Uruguayan electricity sector; (ii) to render the flows of energy more efficient and modernize the transmission system's operating conditions; (iii) to enhance the reliability and quality of electric power supplies and reduce technical losses in Uruguay's principal cities; and (iv) to reduce nontechnical losses and raise the rates for energy supplied.

DESCRIPTION: The following components are included as the means of attaining the foregoing objectives: (i) **inter-connection project with Brazil (Rivera-Livramento)**; calls for construction of a frequency-converter station and related transformer and reactive compensating equipment and a 13-km transmission line to link the power station with the electric systems to be interconnected. This will be the first high-voltage project to interconnect with Brazil and will provide savings in generation costs for both countries as a result of a more efficient use of both systems; (ii) **project to modernize the national load dispatcher (NLD) and install Area Service Centers**

(ARCs): includes renovation of NLD equipment and control systems and procurement of control systems for the ARCs. The present NLD goes back to 1970 and its technology is not responsive to the requirements of a system that will soon be integrated with those of other countries in the framework of a growing regional integration of electric power facilities. The new system will permit a more efficient management of the energy-transport system, with the NLD controlling the transmission system's main grid and the ARCs (which will be teledirected) controlling interconnected subsystems; (iii) project for the rehabilitation of distribution networks in the interior: this project is aimed at enhancing the reliability, quality, and operating conditions of electric power utilities within the country and envisages the modernization of distribution systems in its principal towns, with populations ranging from 10,000 to 67,000 inhabitants. The project will make it possible to address the problem of outages at the individual-supply level and of voltage-drops in the beneficiary towns, along with reducing power losses and providing adequately for growth in demand; and (iv) project to install low-voltage meters: calls for the acquisition of 60,000 low-voltage active-energy meters and their installation for final consumers whose present meters have reached the end of their useful life. This project, which is part of a broader plan calling for replacement of the 300,000 oldest meters (more than 29% of the total number installed) over a five-year period, will make it possible to strengthen the program for the reduction of losses and increase UTE's revenue.

**ENVIRONMENTAL
CLASSIFICATION:**

The Environment Committee, at its meeting of March 22, 1994, classified this as a Category III operation, and approved the environmental summary on September 14, 1995.

BENEFITS:

The program will provide a number of benefits as a result of the operation of its various components, i.e.: (i) a frequency-converter station (from 50 to 60 Hz) able to accommodate exchanges of up to 70 MW will go into operation in January 1998; (ii) under average operating conditions, energy exchanges via the converter station will total at least 1,500 GWh over the period from January 1998 through December 2002; (iii) the renovated NLD will be operational and its energy management and control systems installed by January 1999, and by January 2000 control systems will be in place for all ARCs installed; (iv) the time for repairing interconnected-system breakdowns involving

more than 20% of the power corresponding to peak yearly demand will drop from 60 minutes in 1994-95 to 47 minutes beginning in the year 2000; and, in the case of minor outages, the frequency of those lasting less than five minutes will decline from 3.2 outages per station per year in 1994-95 to 2.5 from 2000 onward; (v) by December 1999, installed transformer capacity will increase by 83,000 kVA and a total of 1,810 km of low-voltage lines will be replaced in 14 cities; (vi) total outage time per customer in the same 14 towns will diminish to no more than five hours, compared to 12.5 hours in 1994; (vii) by the end of 1999 at least 60,000 meters will have been installed, 85% of which will be single-phase and 15% three-phase; and (viii) billings for power supplied to residential and commercial costumers whose meters are replaced in 1997 will rise by 33,500 MWh in 1998; and billings, in 1999 for residential and commercial costumers whose meters are replaced in 1998 will rise by 17,000 MWh.

RISKS:

The program presents no noteworthy risks from the technical, environmental, or implementational stand point. The only project involving a special situation is the one pertaining to exchanges of energy with Brazil, which requires the signing of a technical and trade agreement, now being negotiated.

**THE BANK'S
COUNTRY AND
SECTOR STRATEGY:**

The new administration that took office in 1995 identified two cornerstones of Uruguay's development strategy: (i) export-sector-based growth; and (ii) reform of the State. These objectives entail, as priority-action areas, a reduction of inflation and an improvement in the competitiveness of exports; a reform of social security; greater operating efficiency in the management of the central administration and government enterprises; and education reform. The Bank's strategy for Uruguay is directed toward: (i) supporting the government's efforts to consolidate structural reforms, with emphasis on measures to rationalize the public sector and make it more efficient; (ii) providing support to the private sector, especially small, export-oriented companies, to help them improve their productivity and competitiveness, which entails, as a priority, addressing the physical- and financial-infrastructure constraints; and (iii) supporting reforms aimed at improving the efficiency and fairness of social spending.

The proposed program extends support to the Bank's strategy of contributing to the financing of investments aimed at building up the meager reliability and quality of public electric power supplies, reducing losses and integrating Uruguay

more closely within the regional electricity market. This strategy is consistent with one of the Bank's priority-action areas, which is to foster an increase in the competitiveness of industrial production by reducing its costs through greater efficiency in the supply of its inputs, including electricity. The program thereby seeks to improve the competitiveness of production, particularly with respect to the development of MERCOSUR and the globalization of the economy.

In a broader context, both this operation and another parallel operation by the World Bank are consistent with the government's strategy for the sector. These operations are designed to foster investments needed for improving the system's operating conditions and addressing the growing demand while also promoting the development of a new regulatory and institutional framework to facilitate integration of regional markets and encourage private-sector participation in the electric power industry. In this sense, both operations fall neatly within a context of sector reform, regional electric-power market integration and reorganization of the UTE, since they provide support for actions calculated to modernize the sector and make it more efficient.

**POLICY CRITERIA ON
POVERTY AND SOCIAL
ASPECTS:**

Pursuant to the Eighth Replenishment document (AB-1704), it has been determined that the proposed program does not possess the characteristics of a program focused on low-income groups, either geographically or in terms of its beneficiaries and is not addressed specifically to women.

**SPECIAL
CONTRACTUAL
CONDITIONS:**

- a. Prior to proceeding with the call for bids for the contract for construction of the converter station for the interconnection with Brazil, the borrower shall submit evidence satisfactory to the Bank that an agreement has been signed with ELETROSUL of Brazil to regulate the exchange of electric power through this interconnection (paragraphs 2.7 and 5.30).
- b. Prior to the calls for bids on works for any of the program projects, the borrower will submit the Environmental Management Plan for the project, in accordance with the guidelines set forth in the environmental impact assessment the summary of which was approved by the Bank's Environment Committee (paragraph 3.26). This obligation may also be met by submitting a single Environmental Management Plan for the entire program provided that the plan is submitted prior

to the call for bids on the first of the program works.

- c. The borrower shall submit its financial statements to the Bank throughout the life of the loan contract and those of the program throughout the program execution period, in both cases audited by the National Accounting Office (paragraph 4.6).
- d. Throughout the life of the loan contract, the borrower and the guarantor will ensure that funds from UTE's internal cash generation are sufficient to cover its operating costs and debt service and also to finance a reasonable proportion of its investment program. This proportion will be agreed upon annually with the Bank at least three months in advance of the start of each fiscal year (paragraph 4.23.a).
- e. During the life of the loan contract, the borrower will:
 - (i) submit evidence each year of having collected, as a minimum, 85% of the amounts due and payable during the year in question, including initial balances (paragraph 4.23.b).
 - (ii) refrain from incurring any new long-term debt that would result in: (i) a long-term debt to net worth ratio of more than one; or (ii) a long-term debt-service coverage index of less than 1.45 (paragraph 4.23.c).
- f. The borrower undertakes to implement an action plan designed to improve the productivity level of the personnel of the company in accordance with the guidelines agreed upon with the Bank (paragraph 4.23.d).
- g. The amounts above which acquisitions for this program are to be made through international public bidding will be US\$1 million in the case of works and US\$250,000 in the case of goods (paragraph 3.8).
- h. Within the three months following the close of the first year after the date of the loan contract, the borrower and the Bank are to hold the first of a series of periodic consultative meetings, with participation of the guarantor. These meetings will review the overall progress

of the program and developments in sector policy, including such topics as rate policy, the status of the plan for enhancing UTE staff productivity, ways to reduce losses and ensure rational use of electricity, and any other issues that the parties feel are important for achieving the program's objectives. The meetings would be held once a year initially, although the parties may agree to meet more often (paragraph 5.31).

I. GENERAL FRAMEWORK OF THE PROGRAM

A. The energy sector in Uruguay

- 1.1 Uruguay's energy situation is unusual in the sense that virtually all of its energy resources are renewable, with hydropower accounting for 59% of its energy reserves, firewood for 34% and biomass for the remaining 7%. The country has no known hydrocarbon deposits and no economically exploitable coal reserves. Meanwhile, its hydroelectric potential is being tapped nearly to the full and its supply of firewood is being intensively utilized on a commercial scale. The components of the energy matrix are, in order of importance, petroleum derivatives (55%), firewood (24%), electricity (18%) and others (3%).
- 1.2 In terms of the sectoral composition of final energy consumption, the leading user is the residential sector (31%), followed by industry (29%), transportation (27%), and other sectors (13%). In comparative terms, with 5.1 million barrels petroleum equivalent per inhabitant (bpe/inh.) per year of final consumption, Uruguay is below the average for the region as a whole (5.5 bpe/inh.). Energy efficiency, however, has been rising steadily over the past decade and is now above the regional average, Uruguay's indicator of energy intensity now standing at 2.1 as against 2.8 for the region as a whole. 1/
- 1.3 Considering the possible alternatives for supply of the energy market in the future, the factor that will doubtless have the strongest impact on energy supply and demand is the integration process at the level of the Southern Cone Common Market (MERCOSUR), particularly as regards the electricity and natural gas sectors, a process that in a broader context includes also Bolivia and Chile. Uruguay and Argentina already make up a single electric power system from a physical point of view and are in the process of setting up a common market as well, while consideration is also being given to establishing a high-voltage interconnection with Brazil.
- 1.4 In regard to fuels, the potential importation of natural gas from Argentina is a key element that could, in the long run, improve the makeup of the energy matrix by replacing other imported fuels and economically inefficient uses of electricity with a more efficient fuel. Moreover, the government is examining measures aimed at deregulating the distribution of fuels with the expectation that closer integration of the regional energy market will facilitate progressive deregulation and lead to greater competition.

1/ This indicator is obtained by dividing total final energy consumption by the gross domestic product (bpe/GDP in US\$000s).

B. The electricity sector: principal characteristics and problems

- 1.5 Uruguay has one of the highest rates of electricity service coverage in the region (93% of the population served), as well as one of the highest levels of consumption per capita (approximately 1,500 kWh/inh./year in 1994). The demand for electricity has grown in recent years by 4.5% per annum and is projected to continue growing at close to 4% a year over the long term.
- 1.6 As a result of the rate policy that has been in place since the 1980s (based on the economic costs of supply), the current rate structure comprises differential rates determined by levels of usage, voltage, and hours of use. This structure tends to reflect adequately the cost of service. The various rates are generally in line with the system's marginal long-term costs, and the average rate level is also in keeping with those costs.
- 1.7 Uruguay's electric power system has an installed capacity of 1,979 MW, 69% of which is hydropower and the balance thermoelectric power. The leading facility is the Salto Grande Hydroelectric Station (CHSG), a joint undertaking with Argentina, of which Uruguay's share of the energy output accounts for 40% of the country's installed capacity. Production in 1994 came to 6,121 GWh, nearly all of which was hydroelectricity. Sales of electricity in the domestic market amounted to 4,655 GWh in 1994, with a maximum domestic demand of 1,167 MW.
- 1.8 The country's existing energy plant is sufficient to cover peak demand. Indeed, under normal conditions hydroelectricity output is sufficient to cover domestic demand and generate a surplus for export. However, given the limited possibilities for the regulation of water resources, under critical hydrological conditions the system lacks the requisite thermal support for meeting all energy requirements. This has led to severe constraints on demand in recent years.
- 1.9 The sector will require significant investments in transmission and distribution in the years ahead. In the case of transmission, the increased demand in the Montevideo area and in industrial and tourist areas within the country makes it necessary to expand and strengthen the system.
- 1.10 The existing distribution grids have generally exceeded their useful life, and as a result the frequency and duration of service outages to consumers fall well below international standards. Indeed, the low reliability of electrical service has been identified as one of the major constraints on the manufacturing

sector, a problem compounded by high energy losses (about 19%) 2/ and by inadequate safety conditions at many of the medium-and low-voltage installations.

C. Present organization of the electricity sector

- 1.11 Public electric power service in all areas of generation, transmission and distribution is a responsibility of the Administración Nacional de Usinas y Transmisiones Eléctricas [National Electric Power Generation and Transmission Authority] (UTE). UTE, a branch of the Ministry of Industry, Energy, and Mines, is responsible for setting policies and shaping plans for the sector and approving price for the various fuels through its National Energy Directorate. UTE's investment plans and external-debt proposals are subject to approval by the Planning and Budget Office, which is advised in matters pertaining to regulation and prices by the Comisión Técnica de Energía [Technical Commission on Energy].
- 1.12 The other important electric-sector institution is the Comisión Técnica Mixta de Salto Grande [Salto Grande Joint Technical Commission] (CTMSG), a binational entity in charge of operating the Uruguay River power station, which is shared with Argentina. The CTMSG sells the plant's energy output to UTE or exports it to Argentina.

D. Integration with the Argentine electric power market

- 1.13 An important feature of the Uruguayan electric power system is the close interconnection with the Argentine system through the CHSG, as a result of which the two systems virtually constitute a single system from the point of view of the supply of electricity. While their performance varies in step with changes in hydrology and in Argentina's energy supply, the exchanges of energy often rise to significant levels. For example, in 1992 exports to Argentina absorbed 30% of Uruguay's energy output.
- 1.14 Given the complementarity of the two systems and the opportunity of making optimal investments in new generating capacity, Uruguay would benefit significantly from closer integration with the electric power systems of Argentina and southern Brazil. The alternatives for the expansion of generating capacity are accordingly being reviewed at this time in the light of closer regional integration and, in the near term, with the Argentine electric power market. In fact, UTE is already participating in

2/ The level of total losses is relatively high vis-à-vis those in other comparable countries of the region. (Chile's and Paraguay's are around 15%.) As a favorable point it should be noted that the level of non-technical losses is low compared with those in other countries at a similar level of development.

the Argentine wholesale electric power market, and energy sales from both systems are being programmed jointly. As part of this trend toward the establishment of a regional electric power market, the Uruguayan government commissioned, with IDB funding, a feasibility study on the extra-high-voltage interconnection with Brazil.

E. Strategy of the government in the electricity sector

- 1.15 The policy of the Uruguayan government in the electricity sector pursues two complementary and mutually-reinforcing strategy lines: (i) establishment of a policy framework that clearly separates the regulatory and entrepreneurial functions of the State and makes it possible to establish a competitive environment and encourage the entry of private operators into the sector; and (ii) closer integration with the systems in neighboring countries so as to achieve greater efficiency and optimize investments through operation in a market of regional scope.
- 1.16 In order to foster reforms in the electricity sector, the government has submitted to the Congress a proposed Electricity Sector Regulatory Framework Law based on studies carried out with the assistance of the World Bank and input from the IDB.
- 1.17 The new regulatory framework would establish a wholesale electric power market, wepm encourage competition, and private participation in the area of generation, and transfer the management of the national load dispatcher from UTE to an autonomous entity; allow free access to transmission facilities by authorizing major consumers to negotiate freely for their supply of electricity with any power generator; lay the groundwork for setting up various distribution zones, to be operated by UTE or by private concessionaires in some areas; and provide for UTE to establish separate accounting records for generating, transmission and distribution activities so as to give the sector a greater degree of transparency.
- 1.18 The new regulatory scheme would establish conditions in the Uruguayan electricity sector which are compatible with those in the Argentine market-extensive privatization and rigorous competition. Indeed, integration with the Argentine market is regarded as a decisive factor in encouraging competition and the entry of private operators into the Uruguayan system, even though, given the general conditions prevailing in the country and the electric sector, it is considered likely that the public sector, through UTE, will continue to play a predominant role in the electricity sector for the foreseeable future.
- 1.19 The government would continue to receive the support of the IDB and the World Bank in implementing these reforms. The World Bank would provide assistance for the development of certain aspects of the new regulatory framework, particularly for activities to improve

the management of UTE, including, most notably, its reorganization into business units, continuation of the plans to reduce losses, implementation of a program for the rational use of energy, and a plan to improve the productivity of the company's personnel. The IDB would cooperate by providing support to the government through a Multilateral Investment Fund (MIF) project complementary to the operation proposed herein. The project would finance other activities related to implementation of the new regulatory framework for the electricity sector, especially strengthening of the regulatory bodies, and would also assist the government in connection with the reform of the hydrocarbons sector with the aim of creating conditions favoring private-sector participation in the fuels area and in the development of the natural gas industry in Uruguay.

F. The sector investment plan and multilateral banks

- 1.20 In this context, the government is seeking to promote investments in activities needed for the purpose of modernizing the electric power system and removing obstacles to attainment of a level of efficiency that can accommodate the growth of demand. This investment plan, agreed upon by UTE with the Planning and Budget Office (OPP) within the limits of foreign investment and debt suggested by the latter agency, amounts to some US\$730 million in investments over the period from 1996 to 2000 and would be financed in part by means of separate but complementary World Bank and IDB loan operations. It is worth noting that the consideration of macroeconomic constraints within the framework of the new government policy led to a division of the program originally considered by the IDB into two stages, the first of which is the operation proposed herein.

G. IDB strategy for Uruguay and basis for the Bank's participation

- 1.21 The new administration that took office in early 1995 identified two key areas for Uruguay's development strategy: (i) export-sector-based growth; and (ii) reform of the State. These objectives entail, as priority-action areas, a reduction of inflation and an improvement in the competitiveness of exports; a reform of social security; greater operating efficiency in the management of the central administration and publicly-owned enterprises; and education reform. The Bank's strategy for Uruguay centers on: (i) supporting the government's efforts to consolidate structural reforms, with emphasis on measures to rationalize the public sector and make it more efficient; (ii) providing support to the private sector, especially small, export-oriented companies, to help them improve their productivity and competitiveness, which entails, as a priority, addressing the physical- and financial-infrastructure constraints; and (iii) supporting reforms aimed at improving the efficiency and fairness of social spending.
- 1.22 The proposed program extends support to the Bank's strategy of contributing to the financing of investments aimed at building up

the meager reliability and quality of public electric power supplies, reducing losses and integrating Uruguay more closely in the regional electricity market. This strategy is consistent with one of the Bank's priority-action areas, which is to foster an increase in the competitiveness of industrial production by reducing its costs through greater efficiency in the supply of inputs, including electricity. The program thereby seeks to improve the competitiveness of production, particularly with respect to the development of MERCOSUR and the globalization of the economy.

- 1.23 In a broader context, the operations of both the IDB and the World Bank are consistent with the government's strategy for the sector. These operations are designed to foster investments needed for improving the system's operating conditions and addressing growing demand while also promoting the development of a new regulatory and institutional framework to facilitate integration of regional markets and foster private-sector participation in the electric-power industry. In this sense, both operations fall neatly within a context of sector reform, regional electric-power market integration and reorganization of UTE, since they provide support for actions directed to modernizing the sector and making it more efficient.

H. Experience of the IDB and the World Bank in the sector

- 1.24 The IDB has made a substantial contribution to the development of Uruguay's electricity sector, and this operation would enable it to resume this cooperation after a lapse of several years. The Bank made three loans - in 1972, 1974, and 1976 (240/OC-RG, 275/OC-RG and 3/AF-UR, respectively - for a total of US\$195 million to finance the Salto Grande dam between Argentina and Uruguay and the 500-kV transmission system on the Uruguayan side, and also provided support for the construction of the feeder power grids in the country's rice-growing and dairy regions. In addition, in 1980 it granted UTE a loan (379/OC-UR for US\$25 million) which made it possible to bring all of the country's major power-consumption centers into the national integrated system. All of these projects were accomplished without any problems, and the performance of UTE as executing agency was satisfactory. The World Bank has played a leading role in Uruguay's electricity sector, having granted UTE eight loans for a total of US\$211.4 million, six of which have been fully disbursed, with the pertinent projects completed.

II. THE PROGRAM

A. Electricity sector investment plan

- 2.1 The sector investment plan for 1996-2000 includes a series of works designed to accommodate the growing demand and make the system more efficient and reliable. To help finance a portion of these investments, the cost of which comes to US\$400 million, UTE, with the government's guarantee, requested a loan from the World Bank and one from the IDB. These investments involve:
- a. expansion of two 500-kV substations in Montevideo and Punta del Este and an extension of the 150-kV transmission line in the city of Montevideo;
 - b. the first stage of the change of voltage in the medium- and low-voltage grid in the city of Montevideo;
 - c. expansion of the transmission system within the country through the construction of a 150-kV line between Mercedes and Nueva Palmira, and installation of a frequency converter station and transmission line for interconnection with the electricity system of Brazil;
 - d. modernization of the national loan dispatcher and establishment of Area Service Centers to control high-voltage substations in the interconnected system;
 - e. renovation of low-voltage grids in two districts of Montevideo, renovation of medium-voltage equipment at various substations, and installation of a distribution control center, also in Montevideo; and
 - f. renovation of medium- and low-voltage grids in various towns around the country and installation of low-voltage meters.
- 2.2 The World Bank is close to approving a US\$125 million loan to finance the investments cited in points 2.1 a. and 2.1 b. above, the total cost of which comes to US\$230 million, plus a component to support the reorganization of UTE into business units and institute an energy-conservation program.
- 2.3 The IDB has processed and examined the investments referred to above in points 2.1 c., 2.1 d., 2.1 e., and 2.1 f., which total US\$170 million. For macroeconomic reasons, the government asked the Bank to divide this investment program into two stages. Stage one corresponds to the operation proposed herein and includes a portion of the investments referred to above in subparagraph 2.1 c. (the interconnection with Brazil) and all those referred to in subparagraphs 2.1 d. and 2.1 f. It should be noted that all the

investments in both the first and the second stage have been analyzed and found to be justified both technically and economically.

B. Objectives of the program

- 2.4 The general objective of the program to be financed by the Bank is to achieve greater efficiency in public power supplies in the context of increasingly broader regional integration. The objectives of the projects comprised in the program are as follows: (i) to contribute to the optimal use of energy resources in Uruguay and Brazil by diversifying the markets of the Uruguayan electricity sector; (ii) to render the flows of energy more efficient and modernize the transmission system's operating conditions; (iii) to enhance the reliability and quality of public power supplies and reduce technical losses in the distribution networks of the country's principal cities; and (iv) to reduce nontechnical losses and increase the billing for energy supplied.

C. Goals

- 2.5 The goals listed below will be gradually attained as the various components of each project go into service (see Annex II-1, logical framework):
- a. In January 1998, a 50-Hz to 60-Hz frequency-converter station with a capacity to accommodate exchanges of up to 70 MW will go into operation.
 - b. Under average operating conditions, energy exchanges through the converter station will total at least 1,500 GWh during the period from January 1998 through December 2002.
 - c. The renovated national load dispatcher will be operational in January 1999, with the energy control and management systems in place, and by January 2000 the Area Service Center control systems will be operational.
 - d. The time for restoring service after outages in the interconnected system that involve more than 20% of power corresponding to maximum yearly demand will be reduced from 60 minutes in 1994-95 to 47 minutes in the year 2000, and in the case of lesser outages the frequency of those lasting less than five minutes will be reduced from 3.2 per station per year in 1994-95 to 2.5 by the year 2000.
 - e. By December 1999 installed transformer capacity will have risen by 83,000 kVA, and 1,810 km of low-voltage lines will have been replaced in 14 towns around the country.

- f. By the year 2000, total outage time per customer in these same towns will have been reduced to no more than five hours, compared with 12.5 hrs in 1994.
- g. By the end of 1999, 60,000 meters will have been installed, 85% of which will be single-phase and 15% three-phase meters.
- h. Billing for the kWh supplied to residential and commercial customers whose meters are replaced in 1997 will rise by 33,500 MWh in 1998; and billings in 1999 to residential and commercial customers whose meters are replaced in 1998 will rise by 17,000 MWh.

D. Description of the program

- 2.6 The following components are included for the purpose of attaining the foregoing objectives:
 - 1. Interconnection project with Brazil (Riviera-Livramento) (US\$27,765,000)
- 2.7 This project calls for construction of a frequency-converter station in Riviera and related transformer and reactive compensating equipment and a 13-km, 230-kV transmission line to interconnect the existing transmission systems. This is the first high-voltage interconnection project with Brazil and it will provide savings in generation costs for both countries as a result of more efficient use of both systems. While the project is covered by international agreements between the two countries, its implementation will require the signing of an interconnection contract and supplemental agreements between the companies to be interconnected (UTE and ELETROSUL). These documents - which will govern the works-implementation phase, including financing and technical and commercial aspects, and the question of guarantees pertaining to the operation of the converter station - are in the final stages of negotiation.
 - 2. Project to modernize the national load dispatcher and install ARCs (US\$3,864,000)
- 2.8 This project includes renovation of NLD equipment and control systems and procurement of control systems for the ARCs. The present NLD goes back to 1970 and its technology is not responsive to the requirements of a system that will soon be integrated with those of other countries as part of the growing regional integration of electric power facilities. The new system will permit more efficient management of the energy-transport system, with the NLD controlling the transmission system's main grid and the ARCs (which will be teledirected) controlling interconnected subsystems.

3. Project for the rehabilitation of distribution networks in Uruguay (US\$30,112,000)

- 2.9 This project calls for modernization of the distribution system in the principal towns, generally departmental capitals, with populations ranging from 10,000 to 70,000 inhabitants. It is designed to bring about an improvement in the reliability, quality, and operating conditions of public electrical utilities in the country and will make it possible to address the problems of outages at the individual-supply level and of voltage-drops in the beneficiary towns, along with reducing technical losses and providing adequately for the growth in demand.

4. Project to install low-voltage meters (US\$2,475,000)

- 2.10 This project calls for the acquisition of 60,000 low-voltage active-energy meters and their installation for final consumers whose present meters have reached the end of their useful life. The project, which is part of a broader plan calling for replacement of the 300,000 oldest meters (roughly 29% of the total number installed) over a five-year period, will make it possible to strengthen the loss reduction program and increase UTE billings.

E. Cost and financing of the program

TABLE OF PROGRAM COSTS (in US\$000s)				
	DESCRIPTION	TOTAL	BANK	UTE
1.	ENGINEERING AND ADMINISTRATION	5,286	150	5,136
1.1	Engineering and construction	3,981	150	3,831
1.2	Administration	1,305	0	1,305
2.	DIRECT CONSTRUCTION COSTS	64,216	48,399	15,817
2.1	Transmission	31,629	31,029	600
2.1.1	- Rivera-Livramento interconnection project	27,765	27,765	0
2.1.2	- NLD and ARC	3,864	3,264	600
2.2	Distribution	32,586	17,370	15,217
2.2.1	- Rehabilitation of internal distribution networks	30,112	15,024	15,088
2.2.2	- Installation of low-voltage meters	2,475	2,346	129
3.	CONCURRENT COSTS	200	200	0
3.1	Support studies	200	200	0
4.	UNALLOCATED COSTS	10,784	4,711	6,073
4.1	Contingencies	5,077	3,371	1,706
4.2	Escalation	5,707	1,340	4,367
5.	FINANCIAL COSTS	8,514	540	7,974
5.1	Inspection and supervision	540	540	0
5.2	Interest	7,114	0	7,114
5.3	Credit fee	860	0	860
TOTAL		89,000	54,000	35,000
Percentages		100.0	60.7	39.3

2.11 The following paragraphs discuss the assumptions underlying the cost estimates for each of the categories shown in the foregoing table:

1. Engineering and administration (US\$5,286,000)

a. Engineering and construction management

2.12 This category includes the completion of designs to be incorporated in the bidding documents and supervision of construction works under the various program components. All of this work will be done by UTE technical staff having wide experience in projects of this type. Outside consultants will be hired, at a cost of US\$150,000, to define the technical specifications for the national load dispatcher equipment. With respect to the converter station, the supplier of the equipment will be responsible for its installation.

b. Administration and overhead

2.13 This item includes the costs of the Program Coordinating Unit (PCU), which is already set up, and of UTE staff that will participate in the administrative and accounting tasks involved in the program execution.

2. Direct costs (US\$64,216,000)

2.14 The estimates making up this direct cost are based on pro forma quotations from manufacturers, in the case of the converter station and the national load dispatcher; in the case of the Area Service Centers, the prices are based on those for the centers for which contracts were recently awarded, and which are now being set up; purchases of meters are recurrent from year to year and there is accordingly a good deal of information for estimating their costs; for distribution facilities in the country, current information on purchases and construction contracts similar to those in the program which were recently implemented by UTE's regional offices in Montevideo and the rest of the country is available in UTE's Supplies Division.

3. Concurrent costs (US\$200,000)

2.15 The funding under this category will be used for technical studies on equipping and improving the Gabriel Terra hydroelectric power station and for improving the maintenance of distribution facilities through the introduction of comprehensive maintenance techniques. Its cost was estimated on the basis of the terms of reference prepared.

4. Contingencies (US\$10,784,000)

- 2.16 The allocation for contingencies was set at a percentage of the cost of specific works, to the extent such works were defined, and at 5% of the multiple-works component, which is regarded as ample for works of this type. The rates estimated by the Bank for Uruguay were used for price escalation.

5. Financial costs (US\$8,514,000)

- 2.17 These costs were reckoned on the basis of the current conditions for loans by the IDB, which is the only financier of this program.
- 2.18 The financing arrangement calls for a loan of US\$54 million, which is slightly more than 60% of the total investment. The loan would finance the outside engineering services, the installation of the converter station in its entirety, a variable percentage of the other components, technical assistance, a share of contingency costs, and the IDB inspection and supervision fee. The local contribution of US\$35 million would be financed by UTE with funds of its own and would cover the local engineering and administration costs, a share of the direct costs and the IDB interest and commitment fee.

III. EXECUTION OF THE PROGRAM

A. The borrower and executing agency

- 3.1 The borrower and executing agency for the program will be UTE, an autonomous, State-owned entity linked to the Executive Branch through the Ministry of Industry, Energy, and Mines (MIEM). The responsibility for administering the program will fall on the Program Coordinating Unit (PCU). PCU, which reports to the División de Planificación y Recursos [Planning and Resources Division], will be responsible for all day-to-day activities involved in the supervision of contracts and implementation schedules, the processing of disbursements, and all matters pertaining to compliance with the conditions of the loan contract. This PCU, the organization and functions of which, as described, are considered adequate, is experienced in work of this type, having done similar work in the implementation of projects financed by the World Bank. Supervision on behalf of the IDB will be in the hands of the IDB Country Office in Uruguay.

B. Degree of readiness of the program

- 3.2 The degree of readiness of the designs for the program components is as follows:

1. Interconnection project with Brazil (Rivera-Livramento)

- 3.3 The technical documents have been completed. They were prepared with the cooperation of a consultant hired with nonreimbursable funds from the Bank's Project Preparation Facility (PPF) and the assistance of technical staff of the Brazilian firm ELETROSUL, which is the owner of the installations to be interconnected with those of UTE. Prior to the call for bids, it will be necessary for UTE and ELETROSUL to sign an interconnection agreement describing the exchanges to be carried out, the prices and penalties, and the conditions of repayment and guarantees to UTE, which is financing this component.

2. Project to modernize the national load dispatcher (NLD) and set up Area Service Centers (ARCs)

- 3.4 Insofar as the NLD is concerned, a consulting firm is needed to prepare the technical specifications for the equipment and systems to be acquired. The Bank has already approved the terms of reference for this consultancy; UTE is opening the competition and by mid-1996 should be able to call for bids to select the supplier, which in addition will be in charge of installing the equipment. In regard to the ARCs, the bidding documents would be the same as those for procurement of the first three ARCs, two of which are already installed, with the third in process of being assembled.

3. Project for the rehabilitation of distribution networks in the country

- 3.5 Of the 14 localities to be included in this component, working documents are already available for two, which had been chosen as part of the sample. Those for the other 12 localities are being developed in accordance with a schedule agreed upon with the Bank which envisages carrying out the bidding procedures in the course of 1996. The documents for procurement of equipment and materials will be those used by UTE for recurrent purchases.

4. Project to install low-voltage meters

- 3.6 The bidding documents are those normally used by UTE for its purchase of meters.

5. Support studies

- 3.7 Terms of reference are already available for the consulting services, which will be contracted out in accordance with IDB policies.

C. Bidding and implementation procedures

- 3.8 All goods will be purchased and construction contracts will be awarded in accordance with the procedures specified in Annex B to the loan contract. International public bidding will be mandatory for procurement in amounts exceeding US\$250,000 in the case of goods and US\$1 million in the case of construction works. These thresholds are justified by the fact that foreign bidders have shown an interest in competing for similar contracts in Uruguay when the levels involved are above these levels. Bidding on amounts below these thresholds will proceed in accordance with the pertinent Uruguayan legislation, which is compatible with the Bank's procedures.
- 3.9 Contracts for both supply and assembly will be awarded for NLD and ARC components, given the highly specialized nature and complexity of these purchases, which makes it advisable to centralize this responsibility in the hands of a single supplier.
- 3.10 The meters will be acquired through two calls for tenders spaced out over time, the first for 60% of the units and the second for the remaining 40%. Installation will be the responsibility of UTE.
- 3.11 The materials and equipment for the distribution lines within the country will be procured in four packages. The first will consist of cables and accessories; the second of equipment for the substations; the third of low-voltage panels; and the fourth of power transformers.

- 3.12 These purchases will be divided into two sets of bids which will be timed to coincide with completion of the working documents for the various towns. The first bid will cover procurement of 60% of the goods estimated and the second will cover the rest, once the quantities to be used have been precisely determined.
- 3.13 Construction and assembly services will be divided into four bidding packages, one for each of the four regions where UTE has a regional office. Each of these bids will include as many items as there are towns selected within the region in question and may be awarded for a single town or a group of towns.
- 3.14 A table listing the various bids to be conducted in implementing the program and indicating the dates of the invitations to bid and the estimated amounts of the contracts is appended hereto as Annex III-1.

D. Works and disbursements timetable

- 3.15 The program would start in the last quarter of 1995 with preparation of the documents setting out the conditions to govern the purchases contemplated for the various components. Completion of the program is scheduled for the close of 1999, the implementation period being approximately 48 months. Detailed timetables covering the preparation of bidding documents, the bidding process, and the construction work for each component are available in the technical file.
- 3.16 Disbursements will start in 1996 with the payment of advances for the contractor in charge of building the converter station and will cover engineering and administration costs. It is not expected that expenses will be incurred prior to approval of the loan. Disbursements will continue until the end of 1999. Following is a summary schedule of costs by source of funds. The same schedule, broken down by component and source of financing, is found in Annex III-2.

Source	1996	1997	1998	1999	Total
IDB	5,005	24,233	19,438	5,324	54,000
UTE	1,842	11,096	12,090	9,973	35,000
TOTAL	6,847	35,329	31,528	15,296	89,000
%	7.7	39.7	35.4	17.2	100.0

E. Land and easements

- 3.17 The land for the converter station for the interconnection project with Brazil is already owned by UTE, and the right-of-way for the

line is in hand. All of the other works will be carried out at substations owned by UTE or located along a public right-of way.

F. Operation and maintenance

- 3.18 All the facilities to be built as part of the distribution networks component will be operated by UTE. The regional offices of UTE will be responsible for providing the service in the various zones of the country. As for the national load dispatcher system and the Area Service Centers, UTE has extensive experience in the operation and maintenance of facilities of this type.
- 3.19 Nevertheless, it is recommended that, during the first five years after completion of each of the program components, UTE submit an annual report, acceptable to the Bank, on maintenance of the facilities and equipment, including results, the organization employed, and the physical and human resources required for performing the maintenance activities for the year in question.

G. Environmental aspects of the program

- 3.20 The impacts of the power-line construction activities on the natural environment will be limited in scope and significance, given that, even in the construction of transmission lines the work will be done in areas that have been transformed by human activity over hundreds of years retaining few vestiges of ecosystems in their natural, or a slightly modified, state.
- 3.21 The modernized distribution lines will occupy the same positions and areas as they do today in the towns. Their impacts will affect the human environment, especially local businesses, vehicle and pedestrian flows, employment, and economic activities. These effects, however, will be short in duration because of the temporary nature of the works and activities causing them.
- 3.22 Construction of the electric power interconnection with Brazil will yield net positive impacts because the project will contribute to better utilization of water surpluses from both countries and make it possible to reduce the production of thermoelectric power, with a consequent reduction in gaseous emissions, particles, and noise pollution (noise levels at the Montevideo thermal power plants). The areas to be traversed by the short stretch of transmission line that will have to be built are mostly pasture lands. Consequently, their use will not change significantly as a result of construction and operation of the line.
- 3.23 The modernization of the distribution systems in the cities in Uruguay will not have any major impacts because the project calls only for a remodeling of the civil works and replacement of obsolete conductors that have outlived their useful life. Accordingly, the effects will be localized and limited. Outdated parts (e.g. conductors) and waste materials such as plastics, metals, and

other items will be recovered for subsequent recycling where economically feasible and reasonable. Organic and inert waste materials will be disposed of properly in sanitary landfills meeting all the requirements set by the environmental and health authorities, with the sole exception of transformers containing polychlorinated biphenyl, which will be shipped outside the country for final disposal (recovery treatment or total or partial elimination) at specially designed facilities.

- 3.24 From an environmental point of view, the remodeling of the national load dispatcher has no environmental consequences of any significance, involving as it does only a renewal of data-processing and communications equipment. The Area Service Centers call for the use of land set aside for this purpose, and the civil construction will have only a very localized environmental impact on sites of no ecological value.
- 3.25 There are few recommendations based on environmental management considerations because the program was created in response to social and development needs and is primarily designed to benefit the human environment, with little significant impact on the physical and biotic environments. The principal measures involved have to do with the collection, handling and proper disposal of waste upon conclusion of the work, reforestation of areas equivalent to the timberland that inevitably has to be cleared, proper signage, and timely advance notification to the public regarding the construction to be carried out and any activities that might affect it.
- 3.26 It is recommended in this regard that, prior to the calls for bids on works included in any of the program projects, UTE be required to submit the Environmental Management Plan for the project in question. The plan should adhere to the guidelines laid down in the environmental impact assessment whose summary was approved by the Environment Committee on September 14, 1995, and should include: (i) a plan to prevent, mitigate, or neutralize negative impacts, to correct such harmful and potentially harmful effects; (ii) a plan for prevention of risks or contingencies; and (iii) an environmental inspection, monitoring, and audit plan.

H. Ex post evaluation

- 3.27 Pursuant to IDB policy, the Bank, in consultation with the borrower and executing agency, decided not to include an ex post evaluation as part of the program activities. It should be mentioned, nonetheless, that such an evaluation would not pose a problem, since the information required for a study of this type (i.e. information on the market, costs and performance of program projects and on the economic parameters) would be available.

IV. THE BORROWER AND EXECUTING AGENCY

A. Legal framework of UTE

- 4.1 UTE was established in 1912 by Law 4,273 as an autonomous corporate entity authorized to perform specified functions with respect to the production, transmission, distribution, and marketing of electricity and endowed with monopoly powers over the supply of electricity. By subsequent laws, UTE's monopoly was eliminated and provisions were adopted by virtue of which UTE was authorized to participate outside the country in the various stages of the electric-power industry and in advisory and technical-assistance services, alone or in association with public or private, national or foreign concerns.

B. Organization

- 4.2 UTE is supervised by a five-member board of directors. Its management is in the hands of a general manager who reports directly to its president and is assisted by a deputy general manager and three area managers.
- 4.3 In 1988 the company launched an ambitious management-improvement project that continues today. The management improvement program (PMG), as it is currently called, made it possible to enhance the effectiveness and efficiency of management and improve the quality of the service provided to customers. Each of the management systems instituted is a basic tool used in the performance of its different functions: management, business, economics, and finance, distribution, supply, human resources, and industrial operations. By the end of 1992 virtually all of the company's present information systems were in use. Strategic and comprehensive planning systems were added in 1993. In a second stage, now under way, UTE, with financial support from the World Bank, is conducting studies with a view to achieving continued improvement in its operating efficiency and adjusting its structure to the new context of sector adjustments.

C. Personnel

- 4.4 As of December 31, 1994, UTE had 10,625 permanent employees. The size of the present staff is disproportionate to the company's operational requirements. This has led to a freeze on the filling of vacancies and to the adoption of incentive programs to encourage voluntary retirements. The latest such program resulted in the retirement of 754 employees between September 1994 and March 1995. The company plans to continue applying this mechanism as part of the process of further rationalization.

- 4.5 In spite of the actions taken by UTE to reduce the size of its staff, the present figures are still too high. This is reflected in the staff productivity rates, which, while showing some improvement, remain at levels comparing unfavorably with those of other companies in the region. Accordingly, it is felt that the loan contract should include a plan of action for improving the company's operating efficiency, with an eye to remedying this situation within a reasonable time. The IDB considers the plan of action agreed upon by UTE and the World Bank for the loan operation currently under consideration by the World Bank to be satisfactory and therefore recommends that the measures proposed in that plan be adopted.

D. Audit

- 4.6 The financial statements of UTE are subject to audit by the Tribunal de Cuentas [National Auditing Office] (TC), which has the legal authority to audit purchases and payments made by any State-owned enterprise. The UTE audit reports prepared by the TC have been found to be of acceptable quality and reflect generally accepted auditing standards and procedures. Nonetheless, there have been significant delays in the submission of audit reports. It is hoped that this situation will be remedied through the implementation of the measures to be taken under the Bank's recently approved reimbursable technical-cooperation operation 827/OC-UR, aimed at upgrading the TC. The borrower is to submit its audited financial statements to the Bank during the life of the loan contract, and it is to submit audited financial statements for the program throughout the implementation period.

E. Insurance

- 4.7 UTE's policy with respect to insurance is consistent with the practice in this type of activity. The outside insurance covers the risks to fixed assets and inventory with the exception of transmission line towers and transmission substations at voltages higher than 66 kV. For these assets, the company established a self-insurance provision, chargeable to operating results. The provision is calculated on the basis of the estimated cost of the goods the company considers subject to maximum risk in the event of loss.

F. Taxes

- 4.8 The company's profits are subject to a 30% tax on profits. Its imports are subject to import duties ranging from 10% to 30%, and with the exception of fuel purchased from ANCAP and energy from CTM, its purchases are subject to the 23% value added tax (VAT). Since May 1995 the company's sales of electricity are subject to the 23% VAT, which replaced the 10% special internal tax. In addition, UTE is required by law to transfer certain amounts to the government as financial surpluses. These amounts are determined at

the time the national budget is considered and are calculated on the basis of balances available to the company after it meets its operating costs, debt service requirements, and the cost of the investment programs not financed by other sources and ensures that an adequate level of liquidity is maintained.

G. Billing and collections

- 4.9 As a result of the management improvement program, the company has a commercial management system with highly efficient billing and collection procedures. Bills for usage are issued monthly by 57 distribution offices throughout the country, and the amount of time between the meter reading and the issuance of the bill is only 24 hours. The bill is sent out four days after the reading and is due and payable two weeks from the date of issue. Average time for collection from private consumers is approximately 20 days. For accounts collectable from official entities, a clearinghouse system has been set up whereby the participating entities offset the amounts reciprocally owed and settle any balance outstanding.

H. Historical financial analysis

- 4.10 The analysis of UTE's financial statements showed that its revenues from domestic and export sales were sufficient to cover all of its operating costs and generate a return on capital ranging from 3% in 1993 to 9% in 1994. The rates charged by UTE are in line with the marginal costs of the system but are high in comparison with those in other countries of the region.
- 4.11 The operating costs reflect a heavy impact of payroll expenses, which accounted, on average, for 29% of total operating expenses. Outlays for purchases of energy from Salto Grande varied inversely with UTE's internal generating capacity, averaging 24% of the total. Other representative costs were charges for depreciation (19%), overhead and administration (18%), and fuel costs (6%).
- 4.12 The resources generated by the company over the past five years enabled it to cover all of its debt-service obligations and attain a level of self-financing of approximately 51%. These indices are regarded as extremely satisfactory for a public electrical utility. The company derives the rest of its financing from loans obtained from various foreign and domestic sources.
- 4.13 UTE's principal economic and financial indicators show that as of the close of fiscal 1994 the company had a level of liquidity of 1.66, which should be rated as highly satisfactory, a debt ratio of 0.56, relatively low for an entity of this type, a debt-service coverage level of 2.28, indicative fact that the company has the funds to cover obligations of principal and interest, the level of net internally generated resources to fund the construction program is 75%, and a 9.4% return on capital. These ratios as a whole

indicate that the company is in sound economic and financial condition. It should be borne in mind that the high level of self-financing reflects not only the level of rates but also the cutback in UTE's investment plan in keeping with the steps the government has been taking since 1994 in the area of investment-policy adjustment.

- 4.14 In spite of this excellent financial picture, the company is subject to risks resulting from potential changes in the exchange rate of the local currency which could exert a significant impact on the level of UTE's outstanding commitments stemming from its foreign exchange debt and from its energy purchases from the Salto Grande Joint Technical Commission. This will require adjusting the level of rates to reflect any significant changes in the exchange value of Uruguay's currency unit. Such adjustments would be authorized by the rate clause to be included in the loan contract, compliance with which would provide adequate coverage of this risk.
- 4.15 Electricity rates are approved by the Ministry of Industry, Energy, and Mines on the basis of proposals submitted by the Planning and Budget Office. Such proposals are developed in the course of bimonthly OPP consultations with UTE at which the latter's financial program is reviewed and the requisite rate levels, including any necessary adjustments to current levels, are determined.

I. Projected financial condition

- 4.16 Based on the historical financial statements and applying various assumptions reviewed with the Bank, UTE developed a set of financial projections in constant U.S. dollars covering a period of 10 years. An analysis of the figures in those projections supports the following comments and recommendations.
- 4.17 The company's sales revenue would grow as a result of increases in the volume of sales based on the anticipated growth in demand, estimated at roughly 4% a year. The financial projections also reflect the prospective revenue impact of the energy-loss reduction program, which would enable UTE to reduce the losses from the current level of 19.5% to 17% by the year 2000. UTE is implementing an energy-loss reduction program which is regarded as appropriate. The sales prices would be kept at their current levels, which are sufficient to cover the company's requirements. The revenues calculated on that basis would be adequate to cover all of UTE's operating expenses, including depreciation, and would yield net operating income that would translate into a return on capital of approximately 6% per annum.
- 4.18 In this calculation, the company estimated that total personnel costs would diminish by 1.5% a year, in real terms, as a result of the implementation of the staff reduction program. The operating costs for energy and fuel purchases are related to the projected

energy balance. Unit costs for purchases were projected based on zero growth (at half the spot price on the wholesale market in Argentina) for 1996 and 1997 and conservatively (at the spot price) from 1998 onward.

- 4.19 The nonoperating revenues include interest accruing on the government's debt to UTE on account of the National Energy Fund, a debt amounting to US\$163 million repayable over 10 years beginning in 1995. In addition, starting in 1996 billings of approximately US\$5 million a year would be included as part of this item to reflect projected revenues from consulting services to be provided by UTE in other countries.
- 4.20 Also taken into account in determining the final results of the projection were the financial operating costs, which were calculated on the basis of the terms agreed upon for loans currently outstanding and on the following specific assumptions with respect to future borrowings: a 30% income tax on taxable income, and a surcharge on income [versión de resultados] to supplement the tax payments in the form of a financial surplus contribution to the government. Based on the past performance of these taxes, it is assumed that the total payment for income tax and the surcharge would not exceed US\$40 million per year.
- 4.21 During the period under review, UTE would generate sufficient internal funds to cover its debt-service requirements comfortably, since its debt-service ratio would not at any time fall below 1.5:1. In addition, the company plans to maintain consistently high levels of self-financing, which together with projected revenues from third-party financings would enable it to meet its investment program requirements and to pay all of its other obligations on a timely basis.
- 4.22 The situation described above provides the company with a favorable net-worth structure, one in which the level of indebtedness, measured as the ratio of long-term debt to average equity, declines steadily throughout the entire period, to a level that is low for this type of economic activity. The liquidity ratio follows a trend that reflects a sound financial condition resulting from adequate rate levels, good business management, a suitable debt profile, and a conservative investment plan. The following table shows the projected performance of UTE's major economic and financial indicators for the period 1995-2000.

Ratios	1995	1996	1997	1998	1999	2000
Debt	0.51	0.46	0.42	0.37	0.32	0.28
Debt service coverage	1.79	1.80	1.89	1.52	1.57	1.48
Liquidity	1.65	2.01	1.81	1.87	1.86	1.76
Self-financing	69%	83%	77%	62%	60%	49%
Return on fixed assets	8%	8.5%	6.7%	6.6%	6.5%	5.8%
Return on equity	6%	7%	5%	5%	5%	4%

4.23 The foregoing table indicates that UTE would remain in a comfortable financial condition, with adequate financial ratios, throughout the period under analysis. However, in order to consolidate these results, there must be assurances that the operating and financial policies underlying the projections will be kept in place. To this end, it is recommended that:

- a. UTE's internal cash generation be sufficient to cover its operating costs and the service of its debt and also to finance a reasonable proportion of its investment program. This proportion will be agreed upon annually with the Bank at least three months in advance of the start of each fiscal year.
- b. UTE submit evidence each year of having collected, as a minimum, 85% of the amounts due and payable during the year in question, including initial balances.
- c. UTE will refrain from incurring any new long-term indebtedness that would result in: (i) a long-term debt to equity ratio of more than one; or (ii) a long-term debt-service coverage ratio of less than 1.45.
- d. UTE undertake to implement an action plan designed to improve the company's productivity (paragraph 4.5).

V. FEASIBILITY OF THE PROGRAM

A. Technical feasibility

- 5.1 The definition and designs of the various components of the program were worked out, for the most part, by the UTE technical units, which have extensive experience with facilities of this type. Those for the converter plant and for modernization of the NLD - jobs which are new to UTE and which require sophisticated and more complex studies - were developed with the help of outside consultants. In every instance the least-cost technical solution for the program component in question was adopted.
- 5.2 The costs of the program were estimated on the basis of pro forma quotations in the case of the converter plant and the NLD because these were special projects of a type on which UTE lacked the necessary data. For all the other components, extensive and current information on both material prices and civil works and assembly contracts is available in UTE's Supply Management Unit.
- 5.3 Obtaining rights-of-way and easements for construction of the facilities planned is not expected to pose any problem, given the existence of provisions that authorize this construction.
- 5.4 The implementation schedule is regarded as realistic and feasible because of the advanced stage of the work on preparation of designs and specifications for calls for bids on the various components. Moreover, there are a large number of contractors in the region who are capable of completing the construction jobs within the periods allotted, since most of the works are simple and the materials to be used have been standardized by UTE.
- 5.5 With reference to operation and maintenance, UTE has experienced staff who are capable of performing these functions, which can be regarded as routine activities because of the size of the company's distribution system in Uruguay. As for the more complex components, UTE has been satisfactorily operating and maintaining its generating plants (hydroelectric and thermoelectric) and transmission lines for many years and will receive the necessary training from the manufacturer on the operation of the new equipment to be purchased.

B. Institutional feasibility

- 5.6 UTE will bear the technical, administrative, and financial responsibility for implementing the program. The company has been an efficient implementer of projects financed in the past by the Bank and other international institutions and has the necessary experience and capacity to carry out the proposed project in a timely manner and within the budgets prepared.

- 5.7 The PCU has an appropriate structure, with qualified staff experienced in the execution of projects backed by international-organization financing.

C. Financial feasibility

- 5.8 The financial projections support the assumption that UTE would generate sufficient funds during the project implementation period to cover the counterpart requirements; moreover, the investment and financing strategy would enable it to maintain a comfortable financial position. The only risks are those derived from the possible impact of a substantial change in the exchange rate of the Uruguayan currency unit on the company's financial situation. Should such a change occur, the company would need to adjust its rates in order to maintain the real value of its revenues and be able to make the larger outlays resulting from its foreign-currency commitments.

- 5.9 Chapter IV outlines several recommendations aimed at ensuring that both the rates and financial policies of UTE remain within the parameters agreed upon with the Bank. Compliance with those recommendations should be given special attention in the course of monitoring the program. If this is done, the program would be adequately financed and the company would continue to operate with reasonable financial policies consistent with the pertinent operating policies of the Bank.

D. Economic feasibility

- 5.10 The economic evaluation of the program was done separately for each project, taking its costs and benefits into account. The economic analysis began with a study of the least-cost solution in each case, which served as a basis for the cost-benefit analysis of each project. Since all the projects are framed within the program's overall objective of increasing the efficiency of the service provided by public electrical utilities, an aggregate evaluation for the entire program was also made, resulting in a net present value (NPV) of US\$70.4 million and an internal economic rate of return (EIRR) of 38.2%. The principal recommendations of the economic analysis of each project are summarized below.

1. Interconnection project with Brazil (Rivera-Livramento)

- 5.11 This project will provide a savings in transport costs for Uruguay and Brazil because of the more efficient use of both countries' systems. The project is feasible because there are differences in the marginal costs of electricity in the two countries. Exchanges take place whenever either country finds that it is cheaper to import energy from the other than to ration or produce it in its own system and, simultaneously, the other country finds it beneficial to export because of the opportunity cost of its energy.

- 5.12 This project is particularly attractive because of the favorable characteristics of its location and the different seasonal patterns of consumption in Uruguay and the neighboring border region of southern Brazil, which allow exchanges to be made without the need for substantial investments in transmission systems.
- 5.13 The indicators of the project's economic merit are high, reflecting an NPV of US\$23 million and an EIRR of 30.3% for Uruguay. The project is also highly attractive from an economic standpoint for Brazil, the economic indicators in this case being an NPV of US\$35 million and an EIRR of 35%.
- 5.14 The sensitivity analysis of the evaluation indicates that the project is exceptionally strong, with major independent changes in the principal variables that determine its economic merit resulting in every case in a high NPV and EIRR. The investment-timing finds that the project is appropriately timed to go into service at the earliest possible date. A one-year delay would result in a loss of nearly US\$4 million in NPV for Uruguay. Brazil would also suffer a loss in NPV.

2. Project to modernize the NLD and install ARCs

- 5.15 The objective of this project is to make the energy activities more efficient and endow the interconnection system with modern operating conditions. Installation of the new energy control and management systems will make it possible to link up the energy dispatch centers of Uruguay and Argentina, thereby facilitating joint operations by them.
- 5.16 The costs of the project include those of consulting services for preparing the bidding conditions, the cost of the new control systems for the NLDs, the investment in control systems for the ARCs, the retrofitting of 24 stations to enable them to be telecontrolled, and the cost of communications equipment.
- 5.17 This project is highly favorable because it makes it possible, with only a relatively small investment, to reduce the cost associated with power outages (by reducing their frequency and the length of time required for restoring service) and to reduce the costs associated with energy losses (through the installation of loss-minimization programs that are not supported by the present system). The project will also benefit from lower operating costs since the present NLD is very costly to maintain because of its outdated technology and the difficulty of obtaining replacement parts. Other benefits will accrue from the installation of the ARCs, which will lead to a decline in personnel costs.
- 5.18 The project's NPV was estimated at US\$3.4 million and its EIRR was calculated at 59.1%. The sensitivity analysis showed that the results of this project are only slightly affected by changes in the investment costs, in operation and maintenance or energy costs,

or in expected demand. The timing analysis confirmed that 1996 was the most appropriate time for starting the project.

3. Project for the rehabilitation of distribution networks within the country

- 5.19 Many of Uruguay's distribution systems show the effects of serious obsolescence and deterioration. This is reflected in the high levels of losses and in the number and frequency of service outages, the largest number of which are due to problems between the public feeder line and the customer's meter.
- 5.20 Another important aspect of service quality has to do with voltage regulation. The vast majority of towns and population centers are subject to significant voltage drops. The project would make it possible to address this problem, particularly as it relates to individual supplies in the beneficiary cities and to unacceptable voltage drops.
- 5.21 In preparing this component, a specific methodology was developed for use in the diagnosis, 15-year planning and design of projects for rehabilitating the networks of the prospective beneficiary localities. The project was treated as a multiple-works program, and a universe of 25 cities was defined (the 18 departmental capitals plus some of the major towns, including Pando, Ciudad de la Costa, and La Paz-Las Piedras). Three towns were selected for detailed study (Salto, San José and El Pinar), and once the detailed projects for those towns and the corresponding budgets were completed, the results were extrapolated to the rest of the towns. Finally, a definitive list was drawn up of works in 14 towns compatible with the project's budgetary constraints.
- 5.22 Construction will begin in the localities of Salto and San José, which are part of the representative sample of towns for which work plans are in hand. The other 12 towns, for which a work plan is also available, are: Canelones, Florida, Maldonado, Ciudad de la Costa Sur, Tacuarembó, Mercedes, La Paz-Las Piedras, Trinidad, Fray Bentos, Colonia, Treinta y Tres, and Rocha.
- 5.23 The incremental benefits of the project are determined by comparing the situation with and without the project in each locality. The following benefits would be produced: the supply of energy generated under the project will be able to offset the system limitations of a without-project scenario, as concerns increased demand and equipment that has reached the end of its useful life; technical losses will be reduced; energy supply will increase because of the higher voltage level; and there will be fewer outages. While technical studies were carried out to assess the impact of the improved supply voltage, only the benefits associated with incremental demand and the reduction of losses were considered in the economic evaluation of the project, the reason being a shortage of data for arriving at a reasonable estimate of the other

benefits. This is a conservative option, since it penalizes the project.

- 5.24 The project as a whole yields an NPV of US\$45.7 million and an EIRR of 46.7%, with the EIRRs for the various cases studied ranging from 16% to 73%. The sensitivity analysis showed that the project would be affected only marginally by changes in the costs or in demand: a 30% increase in the investment costs would reduce the EIRR to 38%, and a 30% decrease in the demand would result in an EIRR of 35%. A timing analysis was also performed in each case, showing the earliest date of entry into service to be the most favorable.

4. Project to install low-voltage meters

- 5.25 The meters to be purchased for the project will be used to replace meters which are obsolete or in poor condition. This will supplement the company's normal program of meter replacement and installation. Twenty years is usually regarded as the useful life of a meter, and even if a useful life of 30 years were acceptable, UTE would have some 300,000 obsolete meters, many of which go back to the 1940s or 1950s and are working poorly.
- 5.26 The economic evaluation was done on the project to replace 300,000 meters. The project to be financed by the IDB is a homogenous subset of this one. From the economic point of view, the costs of the project arise from the investment and a reduction in consumption by customers, the value of which is estimated on the basis of the consumers' willingness to pay. The benefits associated with the replacement of meters are measured in terms of the savings in supply costs as a result of energy consumption forgone. From the time a new meter is installed, the customer becomes subject to the normal schedule of rates for electricity, which is higher than the rate he had been paying until then and accordingly reduces his or her consumption of electricity.
- 5.27 The overall project yields an NPV of US\$3.8 million and an EIRR of 18.8%. The sensitivity analysis was done for various assumptions: an increase in investments, a decline in the cost of energy, a decline in demand, and an increase in rates. The sensitivity to a lower-than-anticipated level of consumption following meter replacement was also examined. The findings show that, in general, the project is fairly resistant to change. The analysis of the timing of the investment shows that as the investment is delayed the project's net benefit falls progressively lower, which makes it advisable to implement it at the earliest possible time.

E. Environmental feasibility

- 5.28 Once the impacts of the program and its projects are determined and characterized, the remedial actions evaluated and the environmental management strategy designed, an overall evaluation of the program was carried out on the assumption that all the environmental

management measures recommended in the environmental impact assessment (EIA) would be implemented. The findings from the evaluation indicate that the project is environmentally feasible. This conclusion is based on the fact that the program's environmental impact is limited in scope and significance, mostly temporary and reversible, and, in the case of long lasting and irreversible effects, mitigating and compensatory measures can be adopted to minimize them.

- 5.29 The EIA of the program served as a basis for preparing the information required under article 4 of the Environmental Assessment Regulations in effect in Uruguay and for preparing the official notice to the Dirección Nacional de Medio Ambiente [National Directorate for the Environment] (DINAMA), the agency having exercising environmental authority in the construction of the Rivera-Brazilian border transmission line. It should be noted that this transmission line is the only project requiring special authorization under Uruguayan law.

F. Risks

- 5.30 The program presents no noteworthy risks from the technical, environmental, or implementational standpoint. The only project involving a special situation is the one pertaining to exchanges of energy with Brazil, which requires the signing of agreements now being negotiated (see paragraph 2.7). It is recommended that the call for bids for this component be subject to submission of the agreement by the executing agency.

G. Monitoring

- 5.31 As a means of following the overall progress of this program and developments in sector policy, it is recommended that the borrower, the government authorities, and the Bank hold periodic consultative meetings, the first of which would take place within three months of the close of the first year following the date of the loan contract. The meetings would discuss, among other topics, the rate policy, progress in the implementation of the plan to improve the productivity of UTE staff, measures for reducing losses and for rational use of electricity and, in general, other matters which in the judgment of the parties are relevant to attainment of the program's objectives. The meetings would be held at least once a year although the parties may agree to meet more regularly if considered advisable.

LOGICAL FRAMEWORK
TRANSMISSION AND DISTRIBUTION PROGRAM
(UR-0022)

PROGRAM	INTERCONNECTION PROJECT WITH BRAZIL (RIVERA- LIVRAMENTO)	PROJECT TO MODERNIZE THE NLD AND INSTALL ARCs	PROJECT TO REHABILITATE DISTRIBUTION NETWORKS IN URUGUAY	PROJECT TO IN VOLTAGE I
Improvement in the quality of electricity supply and the efficiency of the producing sectors.				
Efficiency in public electricity service through progressively closer regional integration.	AIM Increase efficiency in public electricity service through progressively closer regional integration.	AIM Increase efficiency in public electricity service through progressively closer regional integration.	AIM Increase efficiency in public electricity service through progressively closer regional integration.	AIM Increase efficiency in public electricity service through progressively closer regional integration.
TAKEING UP THE	OBJECTIVE	OBJECTIVE	OBJECTIVE	OBJECTIVE
Interconnection project with Brazil (Riviera-Livramento).	Contribute to optimal use of both countries' energy resources by diversifying the markets and supply sources in the Uruguayan electricity sector.	Make the energy flows more efficient and endow the system with updated operating conditions.	Increase the reliability and quality of public electricity service and reduce technical losses in the distribution networks in the principal towns within the country.	Reduce non-technical losses by increasing the billing accuracy of electricity supplied.
Modernize the NLD and install ARCs.	COMPONENTS	COMPONENTS	COMPONENTS	COMPONENTS
Rehabilitate distribution networks in Uruguay.	Frequency converter station to increase exchanges of electricity with Brazil constructed and in operation.	National load dispatcher (NLD) modernized and Area Service Centers (ARCs) installed.	Distribution networks in 14 cities in the country rehabilitated.	60,000 new meters in operation.
Install low-voltage meters.				

LOGICAL FRAMEWORK

INTERCONNECTION PROJECT WITH BRAZIL (RIVERA-LIVRAMENTO)

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	MAJOR ASSUMPTIONS
Efficiency in public electricity service Progressively closer regional integration.			
to optimal use of both countries' resources by diversifying the markets and forces in the Uruguayan electricity	1.1 Under normal operating conditions, energy exchanges through the converter station from January 1998 through December 2002 will not be less than 1,500 GWh.	1.1 Records of the national load dispatcher.	
converter station and supplementary expand high-voltage electricity with Brazil constructed and in	1.1 A frequency converter station (50 Hz to 60 Hz) with the capability of processing exchanges of up to 70 MW, including ancillary equipment, will go into service in January 1998.	1.1 UTE technical report on inspection of works.	
n and supplementary works: g study and design. cess. and supply-testing of the converter. and supply-testing of the line. of converter. of the line. d entry into service.	See detailed project budget.	1.1 Accounting records of the UTE Coordinating Unit responsible for supervising the project.	1. Timely implementation of requisite works on the B in accordance with the c down in the relevant inter contract and supplementary agreements.

LOGICAL FRAMEWORK

PROJECT TO MODERNIZE THE NATIONAL LOAD DISPATCHER (NLD) AND INSTALL THE AREA SERVICE CENTERS (ARCs)

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	MAJOR ASSUMPTIONS
Efficiency in public electricity service Progressively closer regional integration.			
Energy flows more efficient and the operating conditions of the n system.	1.1 The time for restoring service after breakdowns in the interconnected system involving more than 20% of the power corresponding to peak yearly demand will diminish from 60 minutes in 1994-95 to 47 minutes in the year 2000, and in the case of less severe breakdowns the frequency of those lasting less than five minutes will be reduced from 3.2 breakdowns per station per year in 1994-95 to 2.5 in the year 2000.	1.1 Records of the NLD.	
ment for the NLD installed and in led and in operation. modeled and in operation.	1.1 By January 1999 the renovated NLD will be in operation, with its new energy control and management systems installed, and by January 2000 the ARC control systems installed will be operational.	1.1 UTE technical reports on inspection of works.	
consultants to draft bidding documents. ess. of equipment and systems. of stations.	See detailed project budget.	1.1 Accounting records of the coordinating unit in charge of supervising the project.	

LOGICAL FRAMEWORK
PROJECT FOR REHABILITATION OF DISTRIBUTION NETWORKS IN URUGUAY

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	MAJOR ASSUMPTIONS
efficiency in public electricity service progressively closer regional integration.			
the reliability and quality of public service and reduce technical losses in distribution networks in the country's principal	1.1 The total duration of interruptions per customer in towns served by the project drops from 12.5 hrs/year in 1994 to 5 hrs/year by the year 2000.	1.1 UTE management reports	
TS on networks in 14 towns in Uruguay d and in operation.	1.1 By December 1999 installed transformer capacity will rise by 83,000 kVA and 1,810 km of low-voltage lines will be upgraded.	1.1 Reports of the UTE Coordinating Unit in charge of supervising the project.	
project by city. contract award process. of materials. -contract award process by city. of assembly contract. (see project implementation timetable).	RESOURCES See detailed project budget.	1.1 Accounting records of the UTE Coordinating Unit in charge of supervising the project.	

**LOGICAL FRAMEWORK
LOW-VOLTAGE METER INSTALLATION PROJECT**

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	MAJOR ASSUMPTIONS
efficiency in public electricity service progressively closer regional integration.			
non-technical losses by increasing the energy supplied.	1.1 The billing for Kwh corresponding to residential and commercial customers whose meters are replaced in 1997 will have risen by 33,500 MWh in 1998, and the billing to residential and commercial customers whose meters are replaced in 1998 will have risen by 17,000 MWh in 1999.	1.1 UTE technical reports.	
meters installed and in operation.	1.1 By 12-31-99, 60,000 meters will have been installed, 85% of which will be single-phase and 15% three-phase.	1.1 Report of the UTE management office in charge of executing the project.	
of bidding documents. cess. of contract and delivery of meters. (see project implementation	See detailed project budget.	1.1 Accounting records of the UTE Coordinating Unit in charge of supervising the project.	

TENTATIVE PROCUREMENT PLAN

MAJOR PROCUREMENT UNDER THE PROGRAM	FINANCING		METHOD	DATE AEA
	IDB	UTE		
National load dispatcher consulting services 1 competitive bidding Total cost: US\$150,000	100%		ICB*	III/95
Uruguay-Brazil interconnection project 1 call for bids Total cost: US\$27,765,000	100%		ICB	IV/95
National load dispatcher 1 call for bids Total cost: US\$2,030,000	100%		ICB	III/96
Area Service Centers 1 call for bids Total cost: US\$1,834,000	67%	33%	ICB	IV/95
Low-voltage meters 2 calls for bids Total cost: US\$2,475,000	95%	5%	ICB	I/96 I/97
Conductors and accessories 2 calls for bids Total cost: US\$7,670,000	50%	50%	ICB	I/96 III/97
Equipment for stations 2 calls for bids Total cost: US\$172,000	50%	50%	ICB	I/96 III/97
Low-voltage panels 2 calls for bids Total cost: US\$2,706,000	50%	50%	ICB	II/96 III/97
Transformers 2 calls for bids Total cost: US\$4,476,000	50%	50%	ICB	II/96 III/97
Assembly, Ciudad de la Costa Sur 3 calls for bids Total cost: US\$3,216,000	50%	50%	ICB	III/96 I/97 III/97
Assembly, Florida 1 call for bids Total cost: US\$414,000	50%	50%	ICB	I/97

MAJOR PROCUREMENT UNDER THE PROGRAM	FINANCING		METHOD	DATE AEA
	IDB	UTE		
Assembly, La Paz/Las Piedra 1 call for bids Total cost: US\$1,462,000	50%	50%	ICB	III/97
Assembly, Maldonado 1 call for bids Total cost: US\$1,081,000	50%	50%	ICB	I/96
Assembly, Treinta y Tres 1 call for bids Total cost: US\$921,000	50%	50%	ICB	I/98
Assembly, Rocha 1 call for bids Total cost: US\$1,063,000	50%	50%	ICB	I/98
Assembly, Tacuarembó 1 call for bids Total cost: US\$1,168,000	50%	50%	ICB	III/96
Assembly, Salto 1 call for bids Total cost: US\$1,963,000	50%	50%	ICB	I/96
Assembly, Mercedes 1 call for bids Total cost: US\$1,294,000	50%	50%	ICB	II/96
Assembly, Trinidad 1 call for bids Total cost: US\$1,184,000	50%	50%	ICB	I/97
Assembly, Fray Bentos 1 call for bids Total cost: US\$598,000	50%	50%	ICB	I/98
Assembly, San José 1 call for bids Total cost: US\$723,000	50%	50%	ICB	I/96
ICB*: International competitive bidding for consultants ICB: International competitive bidding				

TRANSMISSION AND DISTRIBUTION PROGRAM - UTE
TABLE OF COSTS AND FINANCING, BY YEAR (IN US\$ THOUSANDS)

	1996			1997			1998			1999			TOTAL		
	IDB	UTE	TOTAL	IDB	UTE	TOTAL	IDB	UTE	TOTAL	IDB	UTE	TOTAL	IDB	UTE	TOTAL
1. Engineering and administration															
1.1 Engineering and construction management	150	690	840	0	1,588	1,588	0	1,277	1,277	0	276	276	150	3,831	3,981
1.2 Administration	0	254	254	0	463	463	0	409	409	0	179	179	0	1,305	1,305
Total engineering and administration	150	944	1,094	0	2,051	2,051	0	1,686	1,686	0	455	455	150	5,136	5,286
2. Direct construction cost															
2.2 Transmission															
Rivera-Livramento interconnection project	4,000	0	4,000	13,176	0	13,176	10,589	0	10,589	0	0	0	27,765	0	27,765
National load dispatcher and ARCs	158	150	308	1,376	150	1,526	1,271	150	1,421	459	150	609	3,264	600	3,864
Total transmission	4,158	150	4,308	14,552	150	14,702	11,860	150	12,010	459	150	609	31,029	600	31,629
2.3 Distribution															
Installation of low-voltage meters	0	0	0	1,720	86	1,806	626	43	669	0	0	0	2,346	129	2,475
Rehabilitation of distribution networks in Uruguay	0	0	0	5,259	4,894	10,153	5,257	5,494	10,751	4,508	4,700	9,208	15,024	15,088	30,112
Total distribution	0	0	0	6,979	4,980	11,959	5,883	5,537	11,420	4,508	4,700	9,208	17,370	15,217	32,587
Total direct construction costs	4,158	150	4,308	21,531	5,130	26,661	17,743	5,687	23,430	4,967	4,850	9,817	48,399	15,817	64,216
3. Concurrent costs															
3.1 Technical assistance	0	0	0	200	0	200	0	0	0	0	0	0	200	0	200
4. Unallocated															
4.1 Contingencies	425	52	477	1,757	591	2,348	1,132	635	1,767	57	428	485	3,371	1,706	5,077
4.2 Escalation	137	163	300	610	1,955	2,565	428	1,455	1,883	165	794	959	1,340	4,367	5,707
Total unallocated	562	215	777	2,367	2,546	4,913	1,560	2,090	3,650	222	1,222	1,444	4,711	6,073	10,784
5. Financing expenses															
5.1 Inspection and supervision	135	0	135	135	0	135	135	0	135	135	0	135	540	0	540
5.2 Interest	0	144	144	0	1,084	1,084	0	2,499	2,499	0	3,387	3,387	0	7,114	7,114
5.3 Commitment fee	0	389	389	0	285	285	0	128	128	0	58	58	0	860	860
Total financing expenses	135	533	668	135	1,369	1,504	135	2,627	2,762	135	3,445	3,590	540	7,974	8,514
TOTAL	5,005	1,842	6,847	24,233	11,096	35,329	19,438	12,090	31,528	5,324	9,972	15,296	54,000	35,000	89,000

PROPOSED RESOLUTION

URUGUAY. LOAN ____/OC-UR. TO Administración Nacional de
Usinas y Trasmisiones Eléctricas (UTE)
(Electrical transmission and distribution Program)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Administración Nacional de Usinas y Trasmisiones Eléctricas (UTE), as Borrower, and the República Oriental del Uruguay, as Guarantor, for the purpose of granting the former a financing to cooperate in the execution of a Program for electrical transmission and distribution. Such financing will be for the amount of up to US\$54.000.000, or its equivalent in other currencies, except that of Uruguay, which are part of Ordinary Capital resources of the Bank, and will be subject to the "Terms and Financial Conditions" and the "Special Contractual Conditions" of the Executive Summary of the Loan Proposal.