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REPORT AND RECOMMENDATION
OF THE
PRESIDENT OF THE
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
TO THE
EXECUTIVE DIRECTORS
ON A
PROPOSED LOAN
TO
COMPANHIA PARANAENSE DE ENERGIA ELETRICA - COPEL
WITH THE GUARANTEE
OF THE
FEDERATIVE REPUBLIC OF BRAZIL
FOR A
POWER DISTRIBUTION PROJECT

April 28, 1976

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CURRENCY EQUIVALENTS

(as of April 13, 1976)

Currency Unit	=	Cruzeiro (Cr\$)
US\$1	=	Cr\$10.27
Cr\$1	=	US\$0.97
Cr\$1,000	=	US\$97.37
Cr\$1,000,000	=	US\$97,371

REPORT AND RECOMMENDATION OF THE PRESIDENT
TO THE EXECUTIVE DIRECTORS ON A PROPOSED LOAN
TO COMPANHIA PARANAENSE DE ENERGIA ELETRICA (COPEL)
WITH THE GUARANTEE OF THE FEDERATIVE REPUBLIC OF
BRAZIL FOR A POWER DISTRIBUTION PROJECT

1. I submit the following report and recommendation on a proposed loan to Companhia Paranaense de Energia Eletrica (COPEL) with the guarantee of the Federative Republic of Brazil for the equivalent of US\$52.0 million to help finance a power distribution project. The loan would have a term of 20 years, including 3-1/2 years of grace, with interest at 8-1/2% per annum.

PART I - THE ECONOMY 1/

2. A report, entitled "Economic Memorandum on Brazil" (812-BR), dated July 7, 1975, was distributed to the Executive Directors on July 21, 1975. Country data sheets are attached as Annex I.

3. During 1967-74 the combination of excellent domestic economic management and buoyant world economic environment produced a period of high and sustained income growth, strong balance of payments performance and gradually decelerating inflation. Brazil's average annual rate of growth of about 10% over this period resulted in a 60% increase in per capita income, a 130% increase in manufacturing output and a 380% increase in the US dollar value of exports. However, international economic events in 1974 and 1975 have forced at least a temporary slowdown in the pace of economic growth. With the sharp deterioration of the country's terms of trade and the disruption of the world capital market, the balance of payments is proving to be a severe constraint on Brazil's growth. As a result, the pace of growth has dropped sharply, into the 4-5% range during 1975-76.

4. The fourfold increase in the price of crude oil (adding some US\$2 billion to the import bill), the steep rise in the price of most imported raw materials, as well as the hardening of terms of external financial credits, made management of external sector difficult in 1974-75. These factors caught Brazil at the time when its economy was overheated and growth of import demand was very high, because after a prolonged period of rapid growth some key industrial sectors were approaching capacity levels of output. The current account deficit, which averaged just US\$1 billion in 1969-73, or 2% of GDP, widened to about US\$7 billion or 7% of GDP in 1974, reflecting the sizeable differential between import growth (about 100%) and export growth (roughly 30%) and the increasing level of interest payments on debt. The bulk of the deficit was financed by a large increase in the inflow of external financial credits of considerably shorter maturity than was generally available during 1971-73.

5. The Government attempted to narrow the balance-of-payments current account deficit in 1975. It was successful in keeping imports somewhat below

1/ This section is reprinted from the President's Report on the Agricultural Research project for Brazil (No. P-1813-BR), dated April 13, 1976.

the level in 1974 in nominal terms by maintaining a balanced budget, continuing the crawling peg exchange rate policy and by introducing direct import controls. This implied a substantial reduction in the real level of imports and was accompanied by a decline in the rate of GDP growth to 4%. Export growth of about 9% was somewhat disappointing, largely due to the frost in southern Brazil in July 1975, which adversely affected production of some key crops, including coffee and sugar, and a slowdown in manufactured export growth as a consequence of the recession in the consuming countries. Nevertheless, because of import restraint the trade deficit declined from US\$4.7 billion in 1974 to US\$3.5 billion in 1975. However, improvement in the trade account was virtually offset by a large increase in interest payments reflecting the growth of the external debt and higher Eurodollar interest rates.

6. The Government monitored the balance-of-payments situation very closely and in the second half of 1975 adopted several new measures designed to produce a further contraction of imports in 1976. The new measures established advance import deposit requirements on approximately 40% of merchandise imports, further increased import duties, increased gasoline prices 25% and continued restriction of public sector imports. In addition, as a longer term measure, the Government has given the state petroleum monopoly, PETROBRAS, permission to undertake service contracts with foreign oil companies. It is clear, however, that despite these measures 1976 will be another difficult year for balance of payments management as prospects are for a relatively small gain in exports and, as a result, economic growth can again be expected to be in the 4% range.

7. Adverse development during 1975-76 reflect the fact that in recent years, Brazil has become more closely integrated into the world economy and its growth has become more dependent upon and vulnerable to changes in the world economic situation. The slowdown in the rate of growth of the world economy has, with some lag, had an adverse impact on prices of Brazil's primary exports and on the rate of growth of its exports of manufactures, and, through the balance of payments, on the overall growth of the economy. It now appears that world economic conditions will not permit Brazil to grow during 1975-80 at the 10% pace attained in the preceding years. However, despite the reduced pace of growth in 1975-76 a growth path averaging 6% per annum is still feasible for 1975-80 as a whole. It is estimated that to attain such a growth path, the average annual net inflow of medium- and long-term capital (that is, capital other than direct investments and financial credits) required for the 1975-80 period will be substantial, about US\$1.8 billion, or three times the average for the 1970-74 period.

8. At the end of 1975, Brazil's public external debt reached about US\$11 billion. The public debt service ratio for 1975 is estimated at around 16.7% which is in line with that of other countries at a similar stage of development. Brazil's total (public and private) external debt reached about US\$22 billion at the end of 1975, of which about two-thirds, or US\$15 billion was in the form of financial credits. The debt service ratio during 1975 on this total external debt was about 38%, or about the same as the average for 1969-73.

However, it should be noted that net foreign exchange reserves at the end of 1975 were still large, about US\$4.6 billion, equivalent to some four months of the 1975 imports of goods and non-factor services. While total debt service ratio can be expected to rise somewhat in 1976, if an export growth rate of around 17% per year in dollar terms (compared to 30% in 1970-74) can be maintained over the 1975-80 period and if average maturities of new financial credits gradually improve from six to eight years, the debt service ratio in 1980 can be expected to return to the level prevailing in the 1969-73 period. Despite Brazil's heavy debt service burden, the large foreign exchange reserves accumulated over the past several years ensure that the country will have the liquidity to meet its debt service obligations in the short term, while the country's record of high caliber financial management provides grounds for confidence in the maintenance of creditworthiness over the longer run.

9. Despite its recent growth and vast potential, Brazil is still a country with a very unequal distribution of income and extensive absolute poverty. The present Government acknowledges the gravity of the country's income distribution problem and accepts the responsibility for its alleviation. While like the previous Government it believes that a high rate of growth is necessary to increase the income of the poor, it does not believe that the "trickle down" effects of rapid growth are enough and is shaping a new positive policy which could be labeled as "redistribution along with growth". To this end, in addition to pursuing some of the social programs initiated by its predecessor, the Government is also working on new measures for improving income distribution. These can be classified into three broad areas: (a) regional development; (b) provision of social services; and (c) wage policy. In addition, recent tax changes have tended to have a favorable, although marginal, impact on income distribution.

10. As one of its measures to help promote development in poorer regions, the Government has formulated a program known as POLONORDESTE for rural development in the Northeast. The program envisages investment expenditures of about US\$2.5 billion during 1975-79 and is designed to raise the productivity and incomes of small farmers through, inter alia, formulation and execution of integrated rural development projects, which are likely in some cases to include changes in land tenure. POLONORDESTE is based on the assumption that the rural Northeast cannot be regarded as a homogeneous whole and, therefore, standardized programs are inadequate. The Government identified 28 sub-regions covering large portions of the Northeast on which POLONORDESTE funds would be used initially. The recently approved Rio Grande do Norte project is one of the first under POLONORDESTE, and the Government intends to present additional similar projects for Bank consideration in the future. Active consideration is being given to a major modification in the state value added tax system to redistribute fiscal resources from the richer to the poorer states, in order to give the latter the fiscal resources which they badly need to accelerate social programs, particularly in education. In the area of social services, the Government has created a new Ministry of Social Security in order to consolidate its social benefit programs and to extend these programs to a larger share of the population. In 1975 it allowed under the Social Integration Program (PIS, a social security fund), the lowest paid workers

covered by PIS, with incomes previously between about US\$60 and US\$300 monthly, to withdraw up to one month's minimum wage (about US\$60) from their PIS accounts. The Government is also strengthening the nutrition program which, under the previous Government, got off to a slow start. Greater emphasis is being given by BNH (the National Housing Bank) to low-income housing, whose beneficiaries will enjoy better financial terms than in the past. BNH is also developing a site and services program to reach parts of the population even lower down the income scale. In agriculture, the recently reorganized rural extension agency (EMBRATER) will expand and strengthen its activities directed specifically toward the small-scale farmer; and the new federal agriculture research institution (EMBRAPA) is defining its program to include a selection of crops and farming-systems which will ensure that small-scale farms benefit from research efforts. Overall, the Government's recently approved public investment program for 1975-77 gives high priority to education, health, agriculture and regional development, which account for about 30% of total public investment. Finally, the Government intends to use a wage policy to improve income distribution. It has already revised the formula governing the adjustment of the union wage scale and has introduced an 8-10% increase in the real minimum wage.

PART II - BANK OPERATIONS IN BRAZIL

Bank Operations

11. By March 31, 1976, the Bank had approved 60 loans for Brazil, amounting to US\$2,563.2 million, of which 36 had not been fully disbursed. During FY65-69, disbursements averaged only US\$10 million per year, increasing to an average of US\$136 million per year during FY70-74, reaching US\$225 million in FY74, US\$248 million in FY75, and US\$127 million in the first half of FY76. Disbursements will continue to increase during the next few years. Annex II contains a summary statement of Bank loans as of March 31, 1976, and notes on the execution of ongoing projects.

12. Bank lending to Brazil was very active in FY72, when seven loans were approved totalling US\$437 million, including three loans totalling US\$192 million for the Stage II expansion of the steel industry. In FY73, six loans amounting to US\$187.7 million; in FY74 three loans totalling US\$242 million and in FY75, five loans totalling US\$426.5 million were approved. So far in FY76, six loans totalling US\$327 million have been approved: US\$60 million for the COSIPA Stage III steel expansion program; US\$75 million for the FEPASA railway rehabilitation and expansion program; US\$12 million for the Rio Grande do Norte rural development project; US\$85 million for a development banking project for small and medium-sized industries; US\$55 million for a secondary and feeder roads project; and US\$40 million for an agricultural research project. We are working actively with the Brazilians on the preparation of a nutrition project, two ammonia/urea fertilizer projects, a project in support of electric power distribution in the Northeast, a power transmission project in the South, a water and sewerage project in the State of Minas Gerais and a rural development project in the same state.

13. Of Brazil's external public debt outstanding and disbursed at the end of 1975, amounting to US\$11 billion, the Bank held about 10%. The Bank's share of the service on this debt was about 4.5%. If present trends continue as expected, the Bank's share in total external public debt outstanding would increase to 12% by 1980. The Bank's share of public debt service would rise to about 6% while its share of Brazil's total (public and private) external debt service would remain at the present level of 2.7%.

14. IFC has committed more financial resources to Brazil than to any other country. As of March 31, 1976, IFC had made 27 commitments to Brazil, totalling US\$262.9 million, of which US\$32.6 million has been cancelled, US\$20.4 million repaid and US\$126.9 million sold. Of the balance of US\$83.0 million, US\$60.6 million represents loans and US\$22.4 million equity. A summary of IFC's investments up to March 31, 1976 is given in Annex II.

Lending Strategy

15. In its lending to Brazil, the Bank has sought to help the Government achieve a number of important development objectives, which are interdependent and complementary. One of these objectives is to support institutional development and policy reform, designed inter alia to help maximize public savings and ensure that they are used economically. The proposed project will improve COPEL's operation and reduce energy losses by effecting, among other things, better inspection and maintenance of the distribution network. Support for institutional improvement has also been the central objective of the recently approved development banking and agricultural research projects. The development banking project will assist in the project appraisal and selection ability of 22 state and regional development banks. The recently approved agricultural research project will assist the Brazilian Agricultural Research Corporation, EMBRAPA, to improve the coordination and intensify the production orientation of Brazil's agricultural research efforts in the Northeast, North and Center-West of the country. The institution-building objective has also been important in our assistance to the transportation sector, where emphasis has been given to the rational selection of investments, the strengthening of railway operations and the improvement of their financial performance.

16. A second Bank lending objective in Brazil is to support the growing effort of the Government to identify and develop projects designed to increase productivity and incomes of the lowest income segments of the population, to broaden the economic opportunities open to those groups, and to alleviate poverty. The proposed electric power distribution project will enable COPEL to increase the number of consumers served from 562,000 to 746,000, an increase of 33% in 3 years. The project would be instrumental in providing service to 20,000 low-income residential households which cannot at present afford to obtain electrical connection. A similar goal is included in the proposed Northeast Power Distribution project now in the final stages of preparation. The Bank is also participating in other important development efforts in Brazil's urban areas, and the recently approved development banking project, by focusing on small and medium-sized industries, will give special support

to a segment of the industrial sector that has significant labor absorption prospects and should result in the creation of a sizeable number of new jobs in many urban areas in the country. In the agricultural sector, the agricultural research project, the Lower Sao Francisco polders project and the Rio Grande do Norte rural development project, will help develop the range of rural services necessary to ensure that improved technology is made available to small farmers. With the collaboration of Bank staff, the Government is preparing additional integrated rural development projects to increase the productivity of the small farmer and we expect to present in the future an increasing number of projects of this type. The proposed project would facilitate the continued rapid growth of agricultural processing and forestry industries in the State of Parana and would support the Brazilian Government's efforts to create growth poles outside the country's traditional industrialized areas. We are also actively associated with the preparation of new projects in the fields of water supply and sewerage, site and services, nutrition, and rural education.

17. Another important lending objective for the Bank has been to help Brazil ease the foreign exchange constraint on its development, a constraint that has become more critical since the increase in petroleum prices, by supporting projects designed to increase Brazil's export capacity and, where economical, to substitute domestic production for imports. The balance of payments would be aided by the agricultural research project as well as by the fertilizer projects and a second agro-industries project now under preparation. These projects would help Brazil reduce imports of essential foodstuffs and fertilizer or enable Brazil to export additional quantities of foodstuffs to the rest of the world. Much of the investment which the Bank has helped finance in Brazil's transport sector--railways, ports, and highways--is designed to facilitate the smooth and economical flow of exports. Also, support of the steel expansion program is helping Brazil develop output of a commodity which can be produced efficiently in Brazil owing to the country's bountiful supply of high-grade iron ore and the scale of its internal markets.

18. A final objective which applies to all Bank lending to Brazil is to provide part of the very large volume of medium- and long-term capital inflows that Brazil has needed and will continue for some years to need in order to sustain rapid growth and achieve its employment creation and regional development objectives. In some sectors, such as steel and electric power generation and transmission, the Bank's participation has helped Brazil to obtain additional bilateral suppliers' and financial credits in greater amounts and on more favorable terms than would otherwise have been possible.

PART III - THE ELECTRIC POWER SECTOR

19. The proposed loan to COPEL for the power distribution project would be the Bank's twenty-eighth for the development of the power sector in Brazil. In 1966, the Bank assisted Companhia Forca e Luz do Parana (CFLP) to finance a power distribution project (Ln. 476-BR). CFLP was merged into COPEL on August 31, 1973, and COPEL has assumed responsibility for the loan.

Energy Resources

20. Brazil has one of the largest hydroelectric potentials in the world, estimated at about 100,000 MW of which less than 15% has been utilized so far, with most of the plants located in the south and southeast regions. Coal and oil resources are not as abundant; proven reserves consist of about 3,200 million tons of bituminous and sub-bituminous coal and about 780 million barrels of petroleum. Total domestic production of crude oil was 177,000 barrels per day in 1975 representing about 18% of the country's needs. The estimated total energy consumption in 1975 was about 108 million tons of oil equivalent and is expected to grow at a rate of about 7.5% per annum during the next five years. Oil products represent about 51% of total energy consumption, coal 2%, hydroelectricity about 20%, and other fuels such as firewood, charcoal and sugarcane bagasse about 27%. The consumption of these other fuels is expected to remain stable, and their relative importance to fall steadily in the future. No economically exploitable deposit of uranium has been found so far but thorium resources in the country are among the largest in the world and in the long term may contribute to the development of nuclear power.

The Power Sector

21. The power sector is operated by a number of federal- and state-owned companies, and one large private company (LIGHT-Servicos de Eletricidade S.A.). The sector is administered by the Ministry of Mines and Energy through its Department of Water and Electric Energy (DNAEE) which performs regulatory functions, including granting licenses for hydroelectric sites, assigning concession areas, setting tariffs and approving expansion plans.

22. Centrais Electricas Brasileiras, S.A. (ELETROBRAS) is a Government enterprise under the Ministry of Mines and Energy in charge of planning, technical coordination, financing and administration of the electric power sector. Through its four regional companies, CHESF, ELETRONORTE, ELETROSUL and FURNAS, it is also responsible for power generation plants serving more than one state, transmission systems in high and extra-high voltage aimed at the integration of state systems, and transmission systems related to binational power projects, in particular, the Itaipu project which is now under construction on the Parana River between Paraguay and Brazil. For planning purposes, the power sector is divided into five regions: Southeast, Central-West, Northeast and North. When the loan for the Itumbiara hydroelectric project (Ln. 923-BR) was made, the Bank and the Government agreed on the need to coordinate the planning of electric power generation and transmission

in the South and Southeast regions which account for 87% of the total power consumption of the country. Since then, an up-to-date study of the power generation and transmission requirements for these regions up to 1990 was prepared by ELETROBRAS and submitted through the Government to the Bank.

23. ELETROBRAS is also the main source of funds for generation and major transmission projects in Brazil and this has permitted it to influence the activities of utilities, such as COPEL, in which individual states are the major shareholders. In the 1972-74 period, US\$1,748 million equivalent, or 95% of the investment funds of ELETROBRAS, derived from taxes charged to the utilities and the final consumers, while about US\$100 million or 5%, derived from foreign loans.

Power Market

24. Between 1968 and 1974, the growth in electric energy consumption was 12% per annum. The combined sales in the south and southeast regions amounted to about 60,000 GWh in 1975. As mentioned above, ELETROBRAS prepared a market study for these two regions and prepared two plans, the first covering 1975-81, and the second 1982-90, for the expansion of generating and transmission facilities. The least-cost generation and transmission expansion program for the period 1975-81 provides for 14,460 MW of hydro, 1,040 MW of thermal, and 600 MW of nuclear capacity. The program contains two hydroelectric projects for the south region scheduled for commercial operation by 1981; Salto Santiago (1,300 MW), to be built by ELETROSUL, and Foz do Areia (1,125 MW) by COPEL. Both facilities will be partially financed with recently approved loans of the Inter-American Development Bank (IDB) and bilateral credits for certain major equipment.

25. Considerable uncertainty exists about the 1982-90 program, due to such factors as the impact on power demand of the slowdown in the growth in GNP, the timing of operation of the Itaipu hydroelectric project and the degree of substitution of petroleum by electricity. A Bank mission carried out a review of the Brazilian energy sector addressed to these issues in March 1976, and its report is in preparation. However, the uncertainties referred to above would not affect the justification of the proposed project which is addressed to immediate needs for electricity in COPEL's service area.

26. In order to assure the rational operation of existing and future generating and transmission facilities in the interconnected south and south-east regional systems, the Coordinating Groups for Interconnected Operation (GCOI) was established in 1973. COPEL, ELETROSUL and FURNAS are among the members of the Executive Committee of GCOI.

Electric Power Tariffs

27. Brazilian legislation concerning the electric power sector assures that electric utilities receive sufficient funds to cover their operating

expenses (excluding financial charges), depreciation, "reversion quota," ^{1/} and a reasonable return on investment. Since 1966, annual revaluation of assets against which tariffs are calculated has been mandatory, and the tariff law of 1971 required that utilities earn a rate of return of not less than 10% and not more than 12%. In addition to the tariff, the residential and commercial consumers pay the "sole tax" (imposto unico) which, since 1972, has been assessed at the rate of about 25% and 30% of their respective tariffs (industrial consumers are exempted). As a result, the electric bill paid by the Brazilian residential and commercial consumers is among the highest in the world. The proceeds from the imposto unico are used mostly for sector investments and are distributed as follows: 37% to ELETROBRAS, 2% to DNAEE, 1% to the Ministry of Mines and Energy, 50% to the states and 10% to the municipalities. Industrial consumers are required to make a compulsory loan to ELETROBRAS by purchasing 20-year 6% ELETROBRAS bonds (which are subject to monetary correction). The amount of the compulsory loan is equivalent to about 50% of the tariff for small industrial consumers and to 58% of the tariff for large industrial consumers. Tariffs in the sector, which are consistent with sound financial and public utility practices, together with charges such as the "sole tax", enabled the sector to increase installed capacity at an average rate of 10.1% per year since 1964, reaching about 20,100 MW in 1975, and to keep pace with an average annual growth in gross consumption of 9.2% while improving reserve margins.

28. In 1974, DNAEE began to use its discretionary powers to effect progressive equalization of customer rates throughout Brazil. The result of this action was that rates of return for the comparatively higher cost utilities fell below 10%. To meet this problem, a Global Guarantee Fund (GGF) was created in December 1974, as a mechanism intended to assure qualifying utilities a return of up to 10%. At the same time, in order to increase the productivity of those utilities supported by GGF, DNAEE put into effect a number of measures which restrict the utilities from increasing their operating costs, undertaking investments, and expanding markets without DNAEE's prior approval.

29. Agreements prior to 1975 between the Bank and several Brazilian electric utilities provided that tariff rates would be set at a level that would provide the return stated in Brazilian legislation, i.e., between 10% and 12%. In recognition of the efforts of the Brazilian Government to equalize electric charges throughout the nation, it has been agreed that, if transfers from the GGF are required, they will be sufficient to bring COPEL's return up to 10% (Sections 3.02 (b) of the draft Guarantee Agreement and 5.06 (c) and 6.01 (c) of the draft Loan Agreement and the draft supplementary letter).

^{1/} The "reversion quota" is assessed at a rate of up to 5% on the value of gross utility plant in service less accumulated advances, contributions and grants; of this, 3% is lent by Government to ELETROBRAS which uses the funds to finance investments in the sector and the balance comprises the sole source of funds for the Global Guarantee Fund.

30. The present electricity tariff system results in a high level of resource mobilization while discouraging nonessential use of electricity. There are, however, some important aspects of the structure (as distinct from the level) of tariffs, that should be investigated. The Brazilian Government plans to undertake a study of the tariff structure shortly, and would present to the Bank the terms of reference and the results of the study (Section 3.03 of the draft Guarantee Agreement).

State Sub-Sector

31. In 1975, the population of the State of Parana was nine million people. Of these, 30% lived in cities of more than 10,000 inhabitants, the largest of which is Curitiba, the state capital with a population estimated at 1,000,000. Consumption of electric energy increased from 1,056 GWh in 1965 to about 2,982 GWh or 331 kWh/capita in 1975, of which 84% was supplied by COPEL, 15.6% by captive plants and the remainder by small public utilities which are expected to be absorbed by COPEL in the foreseeable future. The number of consumers increased from 255,000 in 1965 to about 562,000 in 1975. Consumption increased at the rate of 11.5% per annum during the same period due mainly to the substantial development of the industrial sector. In 1975, the relative share of the market was: industrial 54%, residential 18%, and commercial 14%, with the rest shared by public lighting, rural electrification and others. The share of the industrial consumer is expected to increase to 60% by 1979 as a consequence of continued rapid development, especially of agro-industries, while the total number of consumers is expected to increase to 746,000.

32. Of the 141,000 new residential consumers to be connected by 1979, about 20,000 (14%) would be "low-income" consumers, defined as those households within COPEL's concession area and near existing distribution circuits which are not served because of their inability to pay connection fees, presently about US\$100. COPEL has developed, in consultation with the Bank, a program to provide electrical service to low-income consumers which includes a scheme to finance the connection charges without interest, over a period of 36 months. The choice of areas for implementing this program will be coordinated with state government urban development agencies (Section 3.06 of the draft Loan Agreement and 6 of the draft Project Agreement).

PART IV - THE PROJECT

33. A report entitled "Appraisal of COPEL Distribution Project" (No. 1028b-BR dated April 22, 1976) is being circulated separately to the Executive Directors. The main features of the proposed project and loan are summarized in Annex III. The project was appraised in October 1975. Negotiations with COPEL, the Government, and the State of Parana were held in Washington from March 15, 1976 to April 8, 1976. COPEL was represented by a team headed by Mr. Edson Guimaraes, Financial Director.

The Borrower

34. COPEL was formed in 1954 as a joint-stock corporation for the purpose of planning, building and developing systems of production, transmission, distribution and sales of electric power within the State of Parana. Approximately 90% of the voting stock is owned by the state government and its agencies, and the balance by ELETROBRAS. COPEL's utility plant was valued at US\$346 million in 1975 and construction in progress at about US\$101 million. It has 4,850 employees and its facilities include installed generating capacity of 432 MW (hydro 398 MW, thermal 20 MW and diesel 14 MW).

35. COPEL's management is composed of competent professionals promoted within the utility (average age 42, average service 12 years) who have acquired sound managerial experience and have the ability to successfully execute the project. The Corporation is administered by a six-member Board of Directors which establishes policy and through the President, who is board member, directs and supervises the Corporation's business. COPEL is organized into five departments, each headed by a director: Administration, Finance, Operations, Engineering and Construction, and Distribution. The Distribution Department is organized into five regional offices, each headed by a superintendent: Curitiba, Ponta Grossa, Londrina, Maringa and Cascavel.

36. At year-end 1975, the number of customers per employee was 115 compared to 43 in 1970, despite the recent merger into COPEL of private utilities with large numbers of personnel. The customer/employee ratio should continue to increase during the project period through COPEL's retraining and selection program which is based on performance evaluations.

37. COPEL's financial performance has been satisfactory, with financial rates of return of 18%, 16% and 15% on its average net fixed assets in operation in 1973, 1974 and 1975, respectively. Almost all earnings have been reinvested. COPEL's cash management is good. Cash balances are kept at a minimum while temporary excess cash is invested in short-term securities. On December 31, 1975, COPEL had a comfortable debt/equity ratio of 37:63 which is indicative of an ample borrowing capacity.

38. COPEL's internal management information system is very good. Operating and financial reports are prepared accurately and promptly, and customer records and accounting systems are computerized. Its financial statements are audited and certified by Arthur Andersen and Company.

Project Description

39. The project consists of the construction, installation and improvement of subtransmission, distribution and auxiliary service facilities, and consultant services and training. The main features of the project are: (i) installation of 216 circuit-km of 138 kV and 69 kV lines; 2,030 km of 34.5 kV and 13.8 kV lines; 775 MVA of transformer capacity at 138 kV, 69 kV, and 34.5 kV; 4,760 transformers with a total of 260 MVA capacity; 220,000 household electric meters and 135,000 street lights; (ii) acquisition and utilization of energized-line maintenance and system protection and operation equipment; and (iii) inspection of equipment fabrication through the utilization of

consultants' services, and training of staff during such inspection. Further details of the project components are provided in Annex III. The project is expected to be completed by June 30, 1979.

Cost Estimates and Financing Plan

40. The total cost of the project, as estimated in April 1976, is US\$188.4 million equivalent with an estimated foreign exchange component of US\$52.0 million equivalent. The cost estimates are based on recent equipment quotations and the cost of current civil works contracts for installation. An allowance for physical contingencies of 5% is assumed for all electrical equipment and materials. For civil works and equipment erection, the allowance for physical contingencies varied from 10% to 15% depending on the state of preparation of final designs of individual components, and averages 11.5%. Allowances for price contingencies are 9% for 1976, and 8% per annum for foreign costs; and 20% for 1976, 15% for 1977 and 1978, and 14% for 1979 for local costs. The allowances for foreign costs are reasonable. The allowances for local costs appear high, but COPEL has adopted them on the basis of its recent experience with similar works; these allowances do not affect the size of the proposed Bank loan, which is equal to the project's estimated foreign cost.

41. COPEL's capital investment and financing plan during the project period (1976-79), in constant December 1975 prices, can be summarized as follows:

<u>Capital Investment</u>	<u>US\$ Million Equivalent</u>	<u>%</u>
Construction expenditures:		
IBRD project	144	22
Foz do Areia hydroelectric station	301	46
Other works	<u>124</u>	<u>19</u>
Total construction expenditures	569	87
Interest during construction	73	11
Increase in net working capital	<u>16</u>	<u>2</u>
Total capital requirements	<u>658</u>	<u>100</u>
 <u>Financing Plan</u>		
Internal cash generation	315	48
Less: debt service	(164)	(25)
dividends and participation	<u>(27)</u>	<u>(4)</u>
Net internal cash generation	124	19
Sole Tax	57	9
State government and municipal contributions and other sources	76	11
Borrowings:		
Proposed IBRD loan <u>/1</u>	44	7
Foz do Areia financing - ELETROBRAS	172	26
- Other sources	97	15
Other	<u>88</u>	<u>13</u>
Total borrowings	<u>401</u>	<u>61</u>
Total financing	<u>658</u>	<u>100</u>

/1 Before price contingencies.

42. Resources contributed directly by COPEL's consumers (net internal cash generation and reinvestment of the proceeds of the "sole tax") would cover a satisfactory proportion--28%--of capital requirements. As noted in paragraph 23, the resources contributed by ELETROBRAS (US\$172 million or 26% of the total capital requirements) are also derived from sector consumers, through taxes and obligation loans.

43. COPEL's financing plan for the project period includes US\$88 million equivalent of borrowing yet to be arranged for future works. COPEL is considering the possibility of obtaining the foreign exchange component of this amount (about US\$30 million) through a loan from external private lenders which would be associated with the proposed Bank loan, in a manner similar to that employed in connection with the recent Brazilian steel project (R75-103/2).

44. Construction of the Foz do Areia hydroelectric project will extend beyond 1979. It is currently estimated that, when completed in 1981, Foz do Areia will have cost US\$666.5 million at current prices (US\$483 at December 1975 prices), including interest during construction. To date, COPEL has arranged US\$74.0 million equivalent in foreign financing for this project from IDB and US\$23.0 million from bilateral credit agencies. The remainder of the cost will be financed from COPEL's cash generation and domestic loan.

45. The cost estimates and financing plans shown in paragraph 41 do not include an allowance for price contingencies. COPEL estimates that it will need an additional US\$228 million during the project period to meet price contingencies. Funds for these contingencies would come principally from future tariff increases and from additional domestic borrowing. In addition, both the proposed Bank loan and the IDB loan for Foz do Areia include amounts to cover price contingencies.

46. The State Governemnt would reinvest dividends received from COPEL through 1979 in the form of additional share capital of COPEL (Section 5 of the draft Project Agreement). COPEL's financing plan as shown above is reasonable, particularly with the support of the Federal Government through ELETROBRAS. In the event that COPEL did not have sufficient funds to assure the timely completion of the project, the State of Parana (Section 3 of the draft Project Agreement), and ultimately the Federal Government (Section 2.02 of the draft Guarantee Agreement), would be committed to provide them.

47. COPEL's financial outlook is satisfactory. It is expected that even when work-in-progress reaches the highest proportion to total assets, internal cash generation would cover debt service payments at least 1.8 times, partly because the debt/equity ratio will remain below 46:54 level and overall indebtedness is not expected to exceed 55% of COPEL's total net fixed assets. COPEL would not incur new debt if by such incurrence, total debt were to exceed 66-2/3% of COPEL's total fixed assets less depreciation. It would also not incur new debt with an original term of less than 8 years, if by so doing the total outstanding principal amount of such debt were to exceed 5% of its total fixed assets (Section 5.07 of the draft Loan Agreement).

Engineering and Project Execution

48. COPEL's own staff is expected to carry out satisfactorily the engineering designs, specifications and construction supervision of the

project. For the preparation of bidding documents for procurement through international competitive bidding and for equipment fabrication inspections, COPEL would use the services of a consulting firm, Companhia Auxiliar de Empresas Eletricas Brasileiras (CAEEB). COPEL would contract with local firms for construction of most of the project works. Equipment installation would be done in most instances by the suppliers. Some construction and equipment installation would also be performed by COPEL's own forces. A sufficient number of qualified local firms are available to handle the job satisfactorily and on schedule.

Procurement and Disbursement

49. Procurement of the equipment to be financed by the Bank would follow the Bank's Guidelines. Manufacturers whose bids contain components manufactured in Brazil equal to at least 50% of the value of the bid would be given a margin of preference equal to 15% or the applicable import duty, whichever is less. Brazilian firms are expected to win about two-thirds of the total bids because of the domestic capability to supply at competitive prices the type of equipment and materials used in the project. Special imported metering and system protection equipment estimated to cost about US\$1.8 million will be purchased directly, without international competitive bidding because of the need for standardization. Likewise, miscellaneous imported equipment aggregating up to US\$0.8 million, required in small quantities throughout project execution, will be purchased directly. Procurement of project items not financed by the Bank will be through COPEL's normal procedures, which are satisfactory.

50. Disbursements from the Bank loan would be made against appropriate documentation for 100% of foreign expenditures on imported goods or 100% of the ex-factory cost of locally manufactured goods and for 100% of foreign expenditures on equipment inspection and training abroad.

Environment

51. COPEL will carry out the project with due regard to environmental factors. In the cities of Londrina and Ponta Grossa, for example, utility poles for feeder lines in congested areas will be relocated to improve traffic safety. In Curitiba, the underground distribution network will contribute substantially toward improvement in system losses and service reliability and will also improve the appearance of the most congested zone in the state's capital.

Project Benefits and Rate of Return

52. The project would enable COPEL to meet growing service requirements in its concession area, while improving efficiency and reliability through reduction in losses and outages and better voltage regulation. The project would connect about 141,000 new consumers, including 20,000 low-income

households in the main cities of Parana. In view of the complexity of the systems effects, and of the difficulty in interpretation, an internal rate of return on the project has not been calculated. However, the rate of return on the overall investment program has been estimated to be 20%. A sensitivity analysis indicates that a reduction in sales of 10% and an increase in cost of 10% would result in a return of 17%. This indicates that the average price that consumers will pay for power will be considerably in excess of incremental system costs, and that wasteful use of electricity and unnecessary investment will be avoided.

PART V - LEGAL INSTRUMENTS AND AUTHORITY

53. The draft Loan Agreement between the Bank and Companhia Paranaense de Energia Eletrica (COPEL), the draft Guarantee Agreement between the Federative Republic of Brazil and the Bank, the draft Project Agreement between the State of Parana and the Bank, the draft supplementary letter on COPEL's rate of return, the draft Report of the Committee provided for in Article III, Section 4 (iii) of the Articles of Agreement and the text of a draft resolution approving the proposed loan are being distributed to the Executive Directors separately. Features of the draft Loan, Guarantee, and Project Agreements of special interest are referred to in paragraphs 29, 30, 32, 46 and 47 of this report.

54. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Bank.

PART VI - RECOMMENDATIONS

55. I recommend that the Executive Directors approve the proposed loan.

Robert S. McNamara
President

Attachments

April 28, 1976

TABLE 3A
SOCIAL INDICATORS DATA SHEET

	BRAZIL		MEXICO		URUGUAY		JAPAN **	
	1960	1970 HOST ESTIMATE	1960	1970 HOST ESTIMATE	1960	1970 HOST ESTIMATE	1960	1970 HOST ESTIMATE
LAND AREA (THOU SQ KM)								
TOTAL	8512.0							
ARABLE	..							
GDP PER CAPITA (US\$)		760.0		720.0		890.0		2570.0
POPULATION AND VITAL STATISTICS								
POPULATION (MID-YR, MILLION)	60.0	101.1	50.7	50.7	2.9	2.9	104.3	
POPULATION DENSITY PER SQUARE KM.	0.0	11.0	26.0	26.0	16.0	16.0	280.0	
PER SQUARE KM. ARABLE LAND	..	34.0	..	..	..	..	..
VITAL STATISTICS								
CRUDE BIRTH RATE PER THOUSAND	42.0	38.0	43.0	43.0	22.0	22.0	19.0	
CRUDE DEATH RATE PER THOUSAND	12.0	9.0	10.0	10.0	9.0	9.0	7.0	
INFANT MORTALITY RATE (/THOU)	180.0	110.0	69.0	69.0	43.0	43.0	13.1	
LIFE EXPECTANCY AT BIRTH (YRS)	50.0	61.0	63.0	63.0	69.0	69.0	72.0	
GROSS REPRODUCTION RATE	2.6	2.6	2.5	2.5	3.1	3.1	1.6	
POPULATION GROWTH RATE (%)								
TOTAL	3.0	2.9	3.5	3.5	1.3	1.3	1.0	
URBAN	5.5	5.0	5.0	5.0	..	..	2.5	
URBAN POPULATION (% OF TOTAL)	46.0	56.0	50.0	50.0	..	..	72.0	
AGE STRUCTURE (PERCENT)								
0 TO 14 YEARS	43.0	42.0	46.0	46.0	28.0	28.0	24.0	
15 TO 64 YEARS	54.0	55.0	50.0	50.0	64.0	64.0	68.9	
65 YEARS AND OVER	3.0	3.0	4.0	4.0	8.0	8.0	7.1	
AGE DEPENDENCY RATIO	0.9	0.8	1.0	1.0	0.6	0.6	0.5	
ECONOMIC DEPENDENCY RATIO	1.6	1.5	2.0	2.0	1.0	1.0	0.6	
FAMILY PLANNING-ACCEPTORS (CUMULATIVE, THOU)	..	250.0	..	..	..	..	..
USERS (% OF MARRIED WOMEN)	..	1.6	..	..	..	..	..
EMPLOYMENT								
TOTAL LABOR FORCE (THOUSAND)	27700.0	29600.0	13000.0	11000.0	53300.0	53300.0		
LABOR FORCE IN AGRICULTURE (%)	52.0	48.0	40.0	40.0	17.0	17.0	19.0	
UNEMPLOYED (% OF LABOR FORCE)	..	..	..	..	8.0	8.0	1.2	
INCOME DISTRIBUTION								
% OF PRIVATE INCOME REC'D BY-								
HIGHEST 5% OF POPULATION	28.0	35.0	37.8	37.8	19.0	19.0	14.2	
HIGHEST 20% OF POPULATION	51.0	62.0	63.2	63.2	47.5	47.5	37.6	
LOWEST 20% OF POPULATION	1.0	3.0	4.2	4.2	4.4	4.4	8.0	
LOWEST 40% OF POPULATION	12.0	10.0	10.2	10.2	14.2	14.2	22.3	
DISTRIBUTION OF LAND OWNERSHIP								
% OWNED BY TOP 10% OF OWNERS	..	45.0	..	..	..	..	..
% OWNED BY SMALLEST 10% OWNERS	..	1.5	..	..	..	..	..
HEALTH AND NUTRITION								
POPULATION PER PHYSICIAN	2170.0	1950.0	1440.0	1440.0	940.0	940.0	680.0	
POPULATION PER NURSING PERSON	..	3300.0	1370.0	1370.0	3560.0	3560.0	240.0	
POPULATION PER HOSPITAL BED	275.0	260.0	930.0	930.0	100.0	100.0	80.0	
PER CAPITA SUPPLY OF -								
CALORIES (% OF REQUIREMENTS)	102.0	109.0	110.0	110.0	107.0	107.0	106.0	
PROTEIN (GRAMS PER DAY)	61.0	64.0	65.0	65.0	96.0	96.0	76.0	
% OF WHICH ANIMAL AND PULSE	38.0	30.0	..	..	28.0	28.0	45.0	
DEATH RATE (/THOU) AGES 1-4	..	..	11.0	11.0	1.3	1.3	1.0	
EDUCATION								
ADJUSTED ENROLLMENT RATIO								
PRIMARY SCHOOL	100.0	130.0	104.0	104.0	118.0	118.0	100.0	
SECONDARY SCHOOL	11.0	27.0	23.0	23.0	56.0	56.0	90.0	
YEARS OF SCHOOLING PROVIDED (FIRST AND SECOND LEVEL)	13.0	13.0	12.0	12.0	12.0	12.0	12.0	
VOCATIONAL ENROLLMENT (% OF SECONDARY)	19.0	17.0	24.0	24.0	27.0	27.0	20.0	
ADULT LITERACY RATE (%)	61.0	68.0	76.0	76.0	91.0	91.0	99.0	
HOUSING								
PERSONS PER ROOM (AVERAGE)	..	1.0	2.2	2.2	..	..	1.0	
OCCUPIED DWELLINGS WITHOUT PIPED WATER (%)	..	73.0	67.0	67.0	..	..	5.0	
ACCESS TO ELECTRICITY (% OF ALL DWELLINGS)	..	48.0	59.0	59.0	..	..	..
RURAL DWELLINGS CONNECTED TO ELECTRICITY (%)	..	8.0	28.0	28.0	..	..	..
CONSUMPTION								
RADIO RECEIVERS (PER THOU POP)	66.0	60.0	276.0	276.0	346.0	346.0	551.0	
PASSENGER CARS (PER THOU POP)	7.0	25.0	25.0	25.0	42.0	42.0	85.0	
ELECTRICITY (KWH/YR PER CAP)	320.0	487.0	586.0	586.0	762.0	762.0	3446.0	
NEWSPRINT (KG/YR PER CAP)	3.3	2.7	3.1	3.1	7.2	7.2	18.9	

SEE NOTES AND DEFINITIONS ON REVERSE

Unless otherwise noted, data for 1960 refer to 1959-1961, for 1970 to 1968-1970, and for Most Recent Estimate to 1971-1973.

** Japan has been selected as an objective country since the Brazilian Government has shown particular interest in Japan's developmental experience; also, the two governments have conducted joint studies to identify possible future economic problems of Brazil on the basis of the experiences in Japan.

<u>BRAZIL</u>	1960	/a Economically active population,
	1970	/a Economically active population; /b Hospital personnel; /c Inside only.
		<u>MOST RECENT ESTIMATE:</u> /a Hospital personnel; /b Inside only.
<u>MEXICO</u>	1970	/a Households; /b 1964-66; /c Inside only.
<u>URUGUAY</u>	1970	/a 1967, households.
<u>JAPAN</u>	1970	/a Households.

R7, February 11, 1976

DEFINITIONS OF SOCIAL INDICATORS

Land Area (thou km²)

Total - Total surface area comprising land area and inland waters.
Arable - Most recent estimate of land area used temporarily or permanently for cultivation, pastures, market and kitchen gardens or to lie fallow.

GNP per capita (US\$) - GNP per capita estimates at market prices, calculated by same conversion method as World Bank Atlas (1972-74 basis).

Population and vital statistics

Population (mid-yr. million) - As of July first; if not available, average of two end-year estimates.

Population density - per square km - Mid-year population per square kilometer (100 hectares) of total area.

Population density - per square km of arable land - Computed as above for arable land only.

Vital statistics

Crude birth rate per thousand - Annual live births per thousand of mid-year population; usually five-year averages ending in 1960, 1970 and 1975 for developing countries.

Crude death rate per thousand - Annual deaths per thousand of mid-year population; usually five-year averages ending in 1960, 1970 and 1975 for developing countries.

Infant mortality rate (/thou) - Annual deaths of infants under one year of age per thousand live births.

Life expectancy at birth (yrs) - Average number of years of life remaining at birth; usually five-year averages ending in 1960, 1970 and 1975 for developing countries.

Gross reproduction rate - Average number of live daughters a woman will bear in her normal reproductive period if she experiences present age-specific fertility rates; usually five-year averages ending in 1960, 1970 and 1975 for developing countries.

Population growth rate (%) - total - Compound annual growth rates of mid-year population for 1950-60, 1960-70, and 1960 to most recent year.

Population growth rate (%) - urban - Computed like growth rate of total population; different definitions of urban areas may affect comparability of data among countries.

Urban population (% of total) - Ratio of urban to total population; different definitions of urban areas may affect comparability of data among countries.

Age structure (percent) - Children (0-14 years), working-age (15-64 years), and retired (65 years and over) as percentages of mid-year population.

Age dependency ratio - Ratio of population under 15 and 65 and over to those of ages 15 through 64.

Economic dependency ratio - Ratio of population under 15 and 65 and over to the labor force in age group of 15-64 years.

Family planning - acceptors (cumulative, thou) - Cumulative number of acceptors of birth-control devices under auspices of national family planning program since inception.

Family planning - users (% of married women) - Percentages of married women of child-bearing age (15-44 years) who use birth-control devices to all married women in same age group.

Employment

Total labor force (thousand) - Economically active persons, including armed forces and unemployed but excluding housewives, students, etc.; definitions in various countries are not comparable.

Labor force in agriculture (%) - Agricultural labor force (in farming, forestry, hunting and fishing) as percentage of total labor force.

Unemployed (% of labor force) - Unemployed are usually defined as persons who are able and willing to take a job, out of a job on a given day, remained out of a job, and seeking work for a specified minimum period not exceeding one week; may not be comparable between countries due to different definitions of unemployed and source of data, e.g., employment office statistics, sample surveys, compulsory unemployment insurance.

Income distribution - Percentage of private income (both in cash and kind) received by richest 5%, richest 20%, poorest 20%, and poorest 40% of population.

Distribution of land ownership - Percentages of land owned by wealthiest 10% and poorest 10% of land owners.

Health and Nutrition

Population per physician - Population divided by number of practicing physicians qualified from a medical school at university level.

Population per nursing person - Population divided by number of practicing male and female graduate nurses, "trained" or "certified" nurses, and auxiliary personnel with training or experience.

Population per hospital bed - Population divided by number of hospital beds available in public and private general and specialized hospital and rehabilitation centers; excludes nursing homes and establishments for custodial and preventive care.

Per capita supply of calories (% of requirements) - Computed from energy equivalent of net food supplies available in country per capita per day; available supplies comprise domestic production, imports less exports, and changes in stock; net supplies exclude animal feed, seeds, quantities used in food processing and losses in distribution; requirements were estimated by FAO based on physiological needs for normal activity and health considering environmental temperature, body weights, age and sex distributions of population, and allowing 10% for waste at household level.

Per capita supply of protein (grams per day) - Protein content of per capita net supply of food per day; net supply of food is defined as above; requirements for all countries established by USDA Economic Research Services provide for a minimum allowance of 60 grams of total protein per day, and 20 grams of animal and pulse protein, of which 10 grams should be animal protein; these standards are lower than those of 75 grams of total protein and 23 grams of animal protein as an average for the world, proposed by FAO in the Third World Food Survey.

Per capita protein supply from animal and pulse - Protein supply of food derived from animals and pulses in grams per day.

Death rate (/thou) ages 1-4 - Annual deaths per thousand in age group 1-4 years, to children in this age group; suggested as an indicator of malnutrition.

Education

Adjusted enrollment ratio - primary school - Enrollment of all ages as percentage of primary school-age population; includes children aged 6-11 years but adjusted for different lengths of primary education; for countries with universal education, enrollment may exceed 100% since some pupils are below or above the official school age.

Adjusted enrollment ratio - secondary school - Computed as above; secondary education requires at least four years of approved primary instruction; provides general, vocational or teacher training instructions for pupils of 12 to 17 years of age; correspondence courses are generally excluded.

Years of schooling provided (first and second levels) - Total years of schooling; at secondary level, vocational instruction may be partially or completely excluded.

Vocational enrollment (% of secondary) - Vocational institutions include technical, industrial or other programs which operate independently or as departments of secondary institutions.

Adult literacy rate (%) - Literate adults (able to read and write) as percentage of total adult population aged 15 years and over.

Housing

Persons per room (average) - Average number of persons per room in occupied conventional dwellings in urban areas; dwellings exclude non-permanent structures and unoccupied parts.

Occupied dwellings without piped water (%) - Occupied conventional dwellings in urban and rural areas without inside or outside piped water facilities as percentage of all occupied dwellings.

Access to electricity (% of all dwellings) - Conventional dwellings with electricity in living quarters as percent of total dwellings in urban and rural areas.

Rural dwellings connected to electricity (%) - Computed as above for rural dwellings only.

Consumption

Radio receivers (per thou pop) - All types of receivers for radio broadcasts to general public per thousand of population; excludes unlicensed receivers in countries and in years when registration of radio sets was in effect; data for recent years may not be comparable since most countries abolished licensing.

Passenger cars (per thou pop) - Passenger cars comprise motor cars seating less than eight persons; excludes ambulances, hearses and military vehicles.

Electricity (kwh/yr per cap) - Annual consumption of industrial, commercial, public and private electricity in kilowatt hours per capita; generally based on production data, without allowance for losses in grids but allowing for imports and exports of electricity.

Newsprint (kg/yr per cap) - Per capita annual consumption in kilograms estimated from domestic production plus net imports of newsprint.

ECONOMIC DEVELOPMENT DATA
(In millions of U.S. dollars)

ANNEX I
Page 3 of 4

	Actual		Estimated		Projected		Average Annual Growth Rates			As percent of GDY		
	1971	1972	1973	1974	1975	1980	1970-74	1974-76	1976-80	1970	1974	1980
NATIONAL ACCOUNTS /1												
Amounts in 1973 prices and exchange rates												
Gross domestic product	62,710	69,608	77,891	85,369	88,357	121,700	11.0	4.2	7.0	100.6	100.6	100.7
Gains from terms of trade (+)	- 609	- 598	-	- 469	- 965	- 819	.	.	.	- 0.6	- 0.6	- 0.7
Gross domestic income	62,101	69,010	77,891	84,900	105,278	120,881	11.0	3.7	7.1	100.0	100.0	100.0
Imports (incl. NPS)	5,199	6,357	7,577	10,073	9,183	11,264	24.0	-5.6	5.7	7.6	11.9	9.3
Exports (import capacity)	4,098	5,218	6,596	5,987	6,705	10,784	10.2	10.2	10.6	7.2	7.1	8.9
Resource gap	1,101	1,139	981	4,086	2,478	480	.	.	.	0.4	4.8	0.4
Consumption	50,437	54,547	61,529	66,578	69,020	91,586	9.7	3.0	6.5	82.2	78.4	75.8
Investment	12,765	15,602	17,343	22,408	20,910	29,775	22.0	0.5	7.1	18.2	26.4	24.6
Domestic savings	11,664	14,463	16,362	18,322	18,432	29,295	16.4	6.7	8.9	17.8	21.6	24.2
National savings	11,078	13,784	15,655	17,722	17,482	27,933	17.0	5.8	9.0	16.9	20.9	23.1
MERCHANDISE TRADE												
Annual data at current prices												
As percent of total												
Imports												
Capital goods	1,241	1,734	2,143	3,108	3,569	7,522	31.0	14.3	16.7	42.8	24.8	36.1
Intermediate goods (excl. fuels)	1,210	1,451	2,233	5,091	4,636	7,343	57.0	-5.4	12.6	35.2	40.6	35.3
Fuels and related materials	316	449	727	2,812	3,022	4,344	63.0	5.6	8.5	9.4	22.4	20.9
of which: Petroleum	251	344	605	2,495	2,650	3,711	71.0	4.3	8.1	6.9	19.9	17.8
Consumption goods	478	598	1,089	1,519	1,221	1,610	42.0	-11.0	6.7	15.0	12.1	7.7
Total merchandise imports (fob)	3,245	4,232	6,192	12,530	12,448	20,819	50.0	1.9	12.5	100.0	100.0	100.0
Exports												
Primary products (excl. fuels)	2,315	3,063	4,718	5,606	6,987	13,142	25.0	17.0	14.4	84.8	70.4	61.2
Fuels and related materials	19	36	52	65	70	101	55.0	7.4	7.7	.	0.8	0.5
of which: Petroleum	8	16	16	30	30	40	.	.	.	0.4	0.4	0.2
Manufactured goods	570	892	1,429	2,297	2,793	8,231	55.0	22.5	24.0	14.8	28.8	38.3
Total merchandise exports (fob)	2,904	3,991	6,199	7,968	9,850	21,474	31.0	18.6	17.7	100.0	100.0	100.0
Merchandise trade indices	1973=100											
Export price index	67	73	100	134	140	201	18.4	4.6	8.2	.	.	.
Import price index	77	82	100	145	158	216	14.3	7.9	6.4	.	.	.
Terms of trade index	87	89	100	93	88	93	.	.	.	.	.	.
Export volume index	71	88	100	96	113	172	10.0	13.7	8.8	.	.	.
VALUE ADDED BY SECTOR /2												
Annual data at 1973 prices and exchange rates												
As percent of GDP												
Agriculture	8,850	9,212	9,535	10,346	10,760	13,995	6.8	4.5	5.5	14.6	15.1	14.3
Industry and mining	15,875	18,066	20,776	22,480	23,222	32,805	12.0	4.2	7.7	32.7	32.8	33.6
Services	25,554	28,532	32,140	35,620	36,860	50,777	11.1	4.3	7.0	52.7	52.1	52.1
Total	50,279	55,810	62,451	68,446	70,842	97,577	11.0	4.2	7.0	100.0	100.0	100.0
PUBLIC FINANCE												
Annual data at 1973 prices and exchange rates												
(Federal Government)												
Current receipts	6,168	7,316	8,629	9,757	10,399	15,540	16.9	6.2	9.0	9.4	11.5	12.8
Current expenditures	3,553	3,558	4,227	4,577	5,032	7,107	8.5	9.1	6.9	5.9	5.4	5.9
Budgetary saving	2,615	3,758	4,402	5,180	5,367	8,433	28.0	3.5	11.0	3.5	6.1	7.0
Other public saving	3,393	3,669	4,832	5,825	6,348	10,510	15.5	9.0	10.7	5.0	6.9	8.7
Public sector fixed investment	6,404	8,037	8,705	9,667	10,344	15,198	15.8	7.5	8.0	9.8	11.4	12.6

		US\$ million at 1973 prices and ER	
		1971-74	% of Total
INVESTMENT PROGRAM			
Social Sectors		4,504	11.3
Agriculture		187	0.5
Industry and Mining		6,060	15.2
Power		5,499	13.8
Transport and Communications		7,384	18.6
Regional development		1,441	3.6
Other /3		14,712	37.0
Total expenditure		39,787	100.0
FINANCING			
Public sector savings		33,674	84.6
Foreign borrowings (net)		5,762	14.5
Domestic borrowings		351	0.9
Total financing		39,787	100.0

LABOR FORCE AND OUTPUT PER WORKER	Total labor force					Value added per worker (1970 prices & exc. rates)				
	In millions	% of total		1960-70		In U.S. dollars	% of average		1960-70	
	1960	1970	1960	1970	Growth rate	1960	1970	1960	1970	Growth rate
Agriculture	12.2	13.1	54.0	44.4	0.7	--	402	--	33	--
Industry	3.0	5.3	13.3	18.0	5.8	--	2,222	--	182	--
Service	7.4	11.1	32.7	37.6	4.1	--	1,706	--	140	--
Total	22.6	29.5	100.0	100.0	3.1	--	1,220	--	100	--

. not applicable
.. not available

/1 The national accounts data were revised in September 1974 to reflect data obtained in the 1970 census. GDP in 1970 has been revised upward by about 20%, mainly in the industrial sector. Revisions of the data for years prior to 1970 still have not been completed.

/2 Net domestic product at factor cost.

/3 Includes financial investment.

BALANCE OF PAYMENTS, EXTERNAL ASSISTANCE AND DEBT
(In millions of U.S. dollars at current prices)

	Actual			Estimated			Projected				
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1985
SUMMARY BALANCE OF PAYMENTS											
Exports (incl. NFS)	3,175	4,272	6,996	8,568	10,614	12,116	14,001	16,422	19,507	23,274	52,488
Imports (incl. NFS)	4,028	3,299	7,277	14,342	14,536	15,728	16,834	18,683	20,943	24,308	50,264
Resource balance (X-M)	- 853	- 935	- 981	- 6,017	- 3,922	- 3,112	- 2,833	- 2,261	- 1,458	- 1,034	- 2,224
Interest (net)	- 302	- 359	- 514	- 650	- 1,273	- 1,469	- 1,747	- 2,009	- 2,272	- 2,503	- 3,053
Direct investment income	- 166	- 202	- 230	- 240	- 270	- 304	- 342	- 384	- 432	- 486	- 877
Workers' remittance	-	-	-	-	-	-	-	-	-	-	-
Current transfers (net)	14	5	27	23	40	50	50	50	50	50	50
Balance on current account	- 1,307	- 1,489	- 1,558	- 6,664	- 5,425	- 4,835	- 4,897	- 4,604	- 4,113	- 3,974	- 1,656
Private direct investment	168	318	940	845	940	1,035	1,135	1,275	1,435	1,615	2,908
Medium- and long-term loans											
Disbursements	835	1,099	1,376	1,800	2,025	2,226	2,443	2,654	3,004	3,397	6,218
-Repayments	- 441	- 525	- 670	- 720	- 779	- 745	- 793	- 868	- 1,062	- 1,282	- 2,867
Net disbursements	394	574	706	1,080	1,245	1,481	1,650	1,786	1,942	2,115	3,351
Financial credits											
Disbursements	1,442	3,396	3,151	5,017	3,819	4,509	5,054	5,258	5,386	5,587	1,524
-Repayments	- 641	- 840	- 1,058	- 1,300	- 1,579	- 2,198	- 2,946	- 3,715	- 4,130	- 4,500	- 4,404
Net disbursements	801	2,556	2,093	3,717	2,240	2,311	2,107	1,543	1,255	1,087	- 2,880
Capital transactions n.e.i.	504	626	377	194	-	-	-	-	-	-	-
Change in reserves (-=increase)	- 560	- 2,545	- 2,428	1,049	1,000	-	-	-	- 519	- 836	- 1,723
GRANT AND LOAN COMMITMENTS								Actual	Actual	Estimated	
								1971	1972	1973	1974
DEBT AND DEBT SERVICE											
Medium- and long-term loans											
IBRD	256	455	199								
IDB	133	180	250								
Governments	199	249	270								
Suppliers	324	350	775								
Bonds	-	-	80								
Loans n.e.i.	121	100	110								
Total medium- and long-term loans	1,033	1,334	1,684	--							
EXTERNAL PUBLIC DEBT											
	Actual debt outstanding on March 31, 1974										
	Disbursed only		Percent								
IBRD	708		10.0		Public debt service	25.8	24.7	20.6	17.4		
IDB	252		3.6		Total debt service	43.6	40.8	34.0	31.2		
Governments	1,830		25.8		TDS + Invest. Inc.	48.8	45.6	37.3	34.0		
Suppliers	1,008		14.2		Average Terms on						
Bonds	149		2.1		Int. as % prior year DO & D	6.0	7.2	8.0	9.5		
Financial credits	2,875		40.5		Amort. as % prior year DO & D	17.4	18.4	17.3	16.6		
Public debt n.e.i.	273		3.8		IBRD debt outs. & disbursed	347	484	647	872		
Total public debt	7,095		100.0		IBRD as % public debt O & D	8.4	8.8	10.0	9.6		
					IBRD as % total debt O & D	5.2	5.0	5.1	5.0		
					IBRD as % public debt service	4.2	4.8	5.0	4.3		
					IBRD as % total debt service	2.5	2.9	2.9	2.7		

/1 Gross debt service less interest earned on reserves.

THE STATUS OF BANK GROUP OPERATIONS IN BRAZIL

A. SUMMARY STATEMENT OF LOANS
(As of March 31, 1976)

<u>Loan No.</u>	<u>Year</u>	<u>Borrower</u>	<u>Purpose</u>	<u>Amount Less Cancellations</u> (US\$ million)	<u>Undisbursed</u>
Twenty-Four Loans Fully Disbursed				656.9	
403	1965	Furnas - Centrais Eletricas Estreito I	Power	57.0	0.1
474 /1	1966	Furnas - Centrais Eletricas Estreito II	Power	39.0	0.7
565	1968	Furnas - Centrais Eletricas Porto Colombia	Power	22.3	0.6
566	1968	Centrais Eletricas de Minas Gerais - Volta Grande	Power	26.6	0.8
677	1970	Furnas - Centrais Eletricas Marimbondo	Power	80.0	5.8
728	1971	Centrais Eletricas do Sul do Brasil - Salto Osorio	Power	70.0	14.9
755	1971	Brazil	Education	8.4	4.4
756	1971	Brazil	Ports	45.0	34.6
757	1971	Superintendencia de Agua e Esgotos da Capital	Water Supply	22.0	12.6
758	1971	Companhia Metropolitana de Saneamento de Sao Paulo	Pollution Control	12.0	6.1
786	1971	Rede Ferroviaria Federal	Railways	46.0	5.2
797	1972	Companhia Siderurgica Nacional	Industry	64.5	7.4
812	1972	Usinas Siderurgicas de Minas Gerais	Industry	63.0	13.2
813	1972	Brazil	Roads	89.0	5.6
828	1972	Companhia Siderurgica Paulista	Industry	64.5	10.1
829	1972	Centrais Eletricas de Minas Gerais - Sao Simao	Power	60.0	17.3
853	1972	Brazil	Land Settl.	6.7	6.1

/1 In two tranches.

<u>Loan No.</u>	<u>Year</u>	<u>Borrower</u>	<u>Purpose</u>	<u>Amount Less Cancellations</u> (US\$ million)	<u>Undisbursed</u>
854	1972	Brazil	Roads	51.0	4.8
857	1972	Banco do Brasil	Grain Storage	23.7	6.4
868	1972	Brazil	Livestock	26.0	6.1
887	1973	LIGHT-Servicos de Eletricidade	Power	20.0	18.0
923	1973	Furnas Centrais Eletricas Itumbiara	Power	125.0	105.4
924	1973	Brazil	Agro-Indus.	54.0	40.9
1008	1974	Cia Hidro Eletricas do Sao Francisco-Paulo Afonso IV	Power	81.0	81.0
1009	1974	Banco Nacional de Habitacao	Water Supply	36.0	35.1
1067	1974	Brazil	Education	23.5	23.4
1074	1975	Rede Ferroviaria Federal	Railways	175.0	174.7
1075	1975	Brazil	Roads	110.0	104.7
1151	<u>/1</u> 1975	Companhia Siderurgica Nacional	Industry	95.0	95.0
1152	1975	Companhia Siderurgica Paulista	Industry	60.0	60.0
1153	1975	Brazil	Agriculture	23.0	23.0
1171	1975	FEPASA-Ferrovia Paulista	Railways	75.0	75.0
1195	<u>/1</u> 1976	State of Rio Grande do Norte	Rural Develop.	12.0	12.0
1206	<u>/1</u> 1976	Brazil	Develop. Bank	85.0	85.0
1207	<u>/1</u> 1976	Banco Nacional do Desenvolvimento Economico	Highways	<u>55.0</u>	<u>55.0</u>
		Total		2,563.1	<u>/2</u> 1,151.0
		Of which has been repaid to the Bank and others		<u>292.7</u>	
		Total now outstanding		2,270.4	
		Amount Sold	38.5		
		of which has been repaid	10.3	<u>28.2</u>	
		Total now held by Bank		2,242.2	
		Total undisbursed			1,151.0

/1 Not effective as of March 31, 1976.

/2 No IDA credits have been made to Brazil.

B. STATEMENT OF IFC INVESTMENTS (AS OF MARCH 31, 1976)

Year	Obligor	Type of Business	Amount in US\$ million		
			Loans	Equity	Total
1957	Siemens do Brasil Cia. de Eletricidade	Electrical Equipment	2.00	-	2.00
1958	Olinkraft, S.A. Celulose e Papel	Pulp and Paper	1.20	-	1.20
1958	D.L.R. Plasticos do Brasil, S.A.	Automotive Parts	0.45	-	0.45
1958	Willys-Overland do Brasil, S.A. Industria e Comercio	Motor Vehicles	2.45	-	2.45
1959	Companhia Mineira de Cimento Portland, S.A.	Cement	1.20	-	1.20
1959	Champion Celulose, S.A.	Pulp	4.00	-	4.00
1966/1968/ 1972	Acos Villares, S.A.	Steel	8.00	1.93	9.93
1966/1969	Papel e Celulose Catarinense, S.A.	Pulp and Paper	4.06	3.13	7.19
1967/1972	Ultrafertil, S.A. - Industria e Comercio de Fertilizantes	Fertilizers	8.22	3.03	11.25
1969	Petroquimica Uniao, S.A.	Petrochemicals	5.50	2.88	8.38
1970	Poliolefinas, S.A. Industria e Comercio	Petrochemicals	5.50	2.88	8.38
1971	Oxitenos, S.A. Industria e Comercio	Petrochemicals	4.60	1.44	6.04
1971	Industria de Celulose Borregaard, S.A.	Pulp	4.90	-	4.90
1972/1975	Companhia de Cimento Nacional de Minas	Cement	29.14	3.20	32.34
1973/1974	Companhia Siderurgica da Guanabara - COSIGUA	Steel	67.00	6.50	73.50
1973	Capital Market Development Fund - FUMCAP	Capital Market Development	5.00	-	5.00
1973	Empresa de Desenvolvimento de Recursos Minerais - CODEMIN, S.A.	Nickel Mining and Refining	26.00	4.40	30.40
1974	Industrias Villares, S.A.	Elevators and Industrial Equipment	6.00	-	6.00
1974	Fabrica de Tecidos Tatuape, S.A.	Textiles	31.00	-	31.00
1975	Capuava Carbonos Industriais Ltd.	Carbon Black	6.18	1.08	7.26
1975	Oxitenos Nordeste, S.A.	Petrochemicals	10.00	-	10.00
	Total Gross Commitments		232.40	30.47	262.87
	Less Cancellations, Terminations, Repayments and Sales		171.84	8.09	179.93
	Total Commitments Now Held by IFC		60.56	22.38	82.94
	Total Undisbursed		17.68	0.80	18.48

C. PROJECTS IN EXECUTION 1/

(As of March 31, 1976)

There are now 31 effective Bank loans under disbursement:

Loan No.

- 403/474 Estreito Hydroelectric Project: US\$57 and US\$39 million loans of February 26, 1965 and December 19, 1966; Effective Dates: July 8, 1965 and June 1, 1967; Closing Date: December 31, 1976. The project is completed and the loan is almost fully disbursed. Equipment costs were substantially below estimates. The original Closing Date was April 1, 1971.
- 565 Porto Colombia Hydroelectric Project: US\$22.3 million loan of October 23, 1968; Effective Date: February 18, 1969; Closing Date: December 31, 1975. Changes in the project layout and design have increased substantially the local cost, which will be covered by ELETROBRAS, without, however, significantly affecting the economic justification for the project. Construction work is completed. The Closing Date of the project was postponed from March 31, 1975, the original date, to December 31, 1975, to allow for disbursement of retention payments.
- 566 Volta Grande Hydroelectric Project: US\$26.6 million loan of October 23, 1968; Effective Date: February 27, 1969; Closing Date: June 30, 1976. The project was delayed six months by spillway foundation difficulties but progress has since been satisfactory. The project was completed in September 1975 with a cost overrun of US\$138 million due to foundation problems and cost increases in equipment. However, the resulting unit cost of generating capacity is still attractive. The Closing Date of the Loan was postponed a second time to June 30, 1976, to permit payments to continue on several purchases already placed. The original Closing Date was January 31, 1975.

1/ These notes are designed to inform the Executive Directors regarding the progress of projects in execution, and in particular to report any problems which are being encountered, and the action being taken to remedy them. They should be read in this sense, and with the understanding that they do not purport to present a balanced evaluation of strengths and weaknesses in project execution.

Loan No.

- 677 Marimbondo Hydroelectric Project: US\$80 million loan of May 25, 1970; Effective Date: September 29, 1970; Closing Date: May 31, 1977. Construction work is proceeding on schedule. The cost of the project has increased by US\$42 million, or 15% over the original estimate, because of increased excavation and concrete work, resulting from poor rock foundation, and increased equipment prices. This has not significantly affected the economic justification of the project.
- 728 Salto Osorio Hydroelectric Project: US\$70 million loan of April 5, 1971; Effective Date: July 19, 1971; Closing Date: May 31, 1977. The construction of the Salto Osorio hydroelectric plant is progressing satisfactorily and the first two of the planned four generating units are now in commercial operation. A cost overrun of about US\$127 million, due to increased equipment and construction costs, is foreseen, but this does not significantly affect the economic justification of the project. The cost overrun is being financed by loans from ELETROBRAS and a commercial bank. The construction of the transmission system, delayed to allow required modifications, is proceeding satisfactorily.
- 755 Education Project: US\$8.4 million loan of June 21, 1971; Effective Date: October 28, 1971; Closing Date: December 31, 1977. Progress on the construction and equipping of the project schools is now proceeding satisfactorily. However, the project implementation is behind the original schedule due to initial delays in establishing and staffing the project unit and because of subsequent changes in project content. The original Closing Date was December 31, 1975.
- 756 Santos Port Project: US\$45 million loan of June 21, 1971; Effective Date: October 29, 1971; Closing Date: June 30, 1979. Execution of the project is now proceeding satisfactorily, although there have been further delays and cost overruns which will be financed by the Borrower. The Government has approved legislation which converted DNPVN from a government agency to a public corporation, PORTOBRAS. PORTOBRAS, with the assistance of management consultants, has been improving port operations in Santos. The National Port Development Study financed under the project is now completed.
- 757 Sao Paulo Water Supply Project: US\$22 million loan of June 21, 1971; Effective Date: January 13, 1972; Closing Date: June 30, 1976. The project suffered initial delays caused by the State of Sao Paulo not furnishing the required counterpart funds, which are now included in the state budget. The Government has consolidated all the water and sewerage companies in the state into a single company, SABESP, and a loan assumption agreement with the new company was concluded on December 18, 1974. Progress of the project is expected to improve with new management of the company which took office recently. The original Closing Date was June 30, 1975.

Loan No.

- 758 Sao Paulo Pollution Control Project: US\$15 million loan of June 21, 1971; Effective Date: January 13, 1972; Closing Date: June 30, 1976
A review of the original design resulted in its modification to exclude the discharge of raw sewage and a related treatment facility. As a result of the modifications in the project, the loan amount was reduced to US\$12 million. The Government has consolidated all the water and sewerage companies in the State into a single company, SABESP, and a loan assumption agreement with the new company was concluded December 18, 1974. Progress of the project is expected to improve with new management which took office recently. The original Closing Date was June 30, 1975.
- 786 Railway Project - MBR: US\$46 million loan of August 25, 1971; Effective Date: February 4, 1972; Closing Date: March 31, 1978.
The project is now completed, except for the construction and equipping of the Borrower's main workshop at Jaceaba. The purchase of equipment for this workshop was delayed because of a change in the location of the workshop resulting from the Government's decision to build a new railway line between the cities of Belo Horizonte and Volta Redonda. To allow additional time required for the purchase of this equipment, the Closing Date, originally September 30, 1975, was postponed to March 31, 1978.
- 797 CSN Steel Expansion Project, Stage II: US\$64.5 million loan of February 8, 1972; Effective Date: August 31, 1972; Closing Date: July 1, 1976. The latest cost estimate is US\$653 million, an increase of about 65% over the appraisal estimate due to design evolution, unforeseen site works and increases in local construction costs. This cost increase will not significantly affect the economic justification of the project. The project is now 75% complete and is about ten months behind the appraisal schedule.
- 812 USIMINAS Steel Expansion Project, Stage II: US\$63 million loan of April 11, 1972; Effective Date: July 28, 1972; Closing Date: June 1, 1977. The latest cost estimate is US\$952 million, an increase of about 67% from the appraisal estimate due primarily to design evolution and increases in local construction costs. This cost increase will not significantly affect the economic justification of the project. The project is 80% complete and is about nine months behind the original schedule. Implementation of Stage III, which is not being financed by the Bank, is well underway. The original Closing Date was June 1, 1976.
- 813 Third Highway Construction Project: US\$89 million loan of April 11, 1972; Effective Date: December 4, 1972; Closing Date: June 30, 1976. Construction works are more than 98% completed but are slightly behind schedule; the estimated total contract cost is about 2% above the appraisal estimate. The feasibility studies and detailed engineering financed under the loan were

Loan No.

started later than planned, but are now completed at a cost substantially below the appraisal estimate. Disbursements are lagging behind the appraisal forecast, but have improved during the past year.

- 828 COSIPA Steel Expansion Project, Stage II: US\$64.5 million loan of June 14, 1972; Effective Date: October 5, 1972; Closing Date: January 15, 1977. The latest cost estimate is US\$733 million, an increase of about 55% over the appraisal estimate due primarily to increased local construction costs. This will not significantly affect the economic justification of the project. The project is now 70% complete and is about nine months behind the original schedule.
- 829 Sao Simao Hydroelectric Project: US\$60 million loan of June 14, 1972; Effective Date: September 20, 1972; Closing Date: September 30, 1979. Construction of the project is proceeding according to schedule. An anticipated 50% cost overrun is being covered by local and foreign borrowing.
- 853 Alto Turi Land Settlement Project: US\$6.7 million loan of July 24, 1972; Effective Date: February 15, 1973; Closing Date: December 1, 1978. COLONE has prepared revised farm development plans whose credit component, to be financed by public financial institutions, will be significantly higher than originally estimated, although still low in comparison to other settlement projects. Administrative delays in the release of public funds for farm credit and COLONE working capital requirements and difficulties in recruiting project staff delayed the start of project execution. Settlement, however, has now begun and the project should be completed in 1978 as envisaged.
- 854 Fourth Highway Construction Project: US\$51 million loan of August 4, 1972; Effective Date: March 21, 1973; Closing Date: December 31, 1976. Construction is more than 75% completed but behind schedule. However, disbursement is expected to be completed by the Closing Date. The estimated total contract cost is 11% above the appraisal estimate.
- 857 Grain Storage Project: US\$30 million loan of September 27, 1972; Effective Date: January 16, 1973; Closing Date: December 31, 1979. After some initial difficulties with the appraisal of subprojects, the project had been progressing satisfactorily. However, in April 1975 the Government adopted a national grain storage financing program involving subsidized interest rates. Therefore, on October 28, 1975, the Bank and the Borrower agreed to cancel the uncommitted balance (about 20%) of the loan. Disbursement of the loan is proceeding as scheduled.

Loan No.

- 868 Interim Second Livestock Project: US\$26 million loan of December 19, 1972; Effective Date: May 24, 1973; Closing Date: June 30, 1977. The project is proceeding normally. The loan has been fully committed and is expected to be disbursed as scheduled.
- 887 Power Distribution Project: US\$20 million loan of April 16, 1973; Effective Date: July 31, 1973; Closing Date: June 30, 1976. Principally due to difficulties encountered in preparing bidding documents and delays in deliveries of equipment and materials, the project is about two years behind schedule. Complete delivery and installation of equipment and materials to be financed by the loan will probably take until July 1977 and a postponement of the Closing Date will be required.
- 923 Itumbiara Hydroelectric Project: US\$125 million loan of August 1, 1973; Effective Date: October 30, 1973; Closing Date: December 31, 1982. Contracts for penstocks, turbines, and concrete and earth works have been awarded. Commissioning of the first generating unit is scheduled for March 1980, four months behind original schedule due to delay in awarding of the civil works contracts.
- 924 Agro-Industries Credit Project: US\$54 million loan of August 1, 1973; Effective Date: March 11, 1974; Closing Date: December 31, 1978. The Central Bank expects to complete commitment of project funds by mid-1976.
- 1008 Paulo Afonso IV Hydroelectric Power Project: US\$81 million loan of June 17, 1974; Effective Date: April 15, 1975; Closing Date: December 31, 1978. A Bank mission recently reviewed the progress of the preparation and implementation of plans for resettlement of the 9,700 families to be displaced by the Sobradinho reservoir. Execution of these plans is underway, and construction of new towns to house the urban portion of the population has begun. The rural population is being offered the opportunity of resettlement in a promising new agricultural area in the Corrente River region in the western part of the State of Bahia. Those who prefer to remain near their present houses will be resettled in new villages on the edge of the future reservoir. The construction of the underground power station and Sobradinho Dam is proceeding on schedule.
- 1009 Minas Gerais Water Supply Project: US\$36 million loan of June 17, 1974; Effective Date: January 9, 1975; Closing Date: August 15, 1977. The State Water Supply Company changed its name from Companhia Mineira de Agua e Esgotos (COMAG) to Companhia de Saneamento de Minas Gerais (COPASA-MG). The project is progressing on schedule and the loan has been fully committed.

Loan No.

- 1067 Second Education Project: US\$23.5 million loan of December 27, 1974; Effective Date: April 17, 1975; Closing Date: December 31, 1979. Project execution has started reasonably well, and is expected to be completed by the target date. Project implementation units have been established in all eight project states and these, together with the main project unit, PREMEN, are working well. The pre-investment studies in the Northeast, financed under the loan, are underway and are expected to yield useful information for future sector investment planning.
- 1074 Second Railway Project: US\$175 million loan of January 17, 1975; Effective Date: June 17, 1975; Closing Date: December 31, 1979. Project execution is progressing reasonably well and appropriate steps are being taken to strengthen project management and control. Cost estimates for the Investment Plan, of which the project is a part, have increased substantially on several items. The Borrower is therefore preparing a revised Plan in which items with low priority will be postponed or scaled-down. This revision is not expected to affect the project items. Tendering for Bank-financed items is on schedule.
- 1075 Fifth Highway Project: US\$110 million loan of January 17, 1975; Effective Date: May 15, 1975; Closing Date: December 31, 1979. Project execution is proceeding satisfactorily. Contracts for civil works for all 21 lots have now been awarded and construction works are proceeding according to schedule. Implementation of the road maintenance component of the project is slightly delayed due to protracted negotiations for the hiring of consultants.
- 1152 COSIPA Steel Expansion Project - Stage III: US\$60.0 million loan of August 4, 1975; Effective Date: March 4, 1976; Closing Date: June 30, 1980. Project is proceeding according to schedule. Bidding for equipment is underway.
- 1153 Lower Sao Francisco Polders Project: US\$23.0 million loan of August 4, 1975; Effective Date: November 25, 1975; Closing Date: December 31, 1979. Construction of dikes and the irrigation and drainage system for the Betume varzea has begun. Bidding for most of the other civil works and equipment procurement is underway. Preliminary estimates, prior to bid evaluation, are that project costs might increase considerably over the appraisal estimate due to partial design changes and more rapid than expected increases in equipment and construction prices and in costs of land expropriation. The emergency works

Loan No.

remain the least cost way to offset the effects on the project area population of the hydroelectric developments upstream. Nevertheless, further possible modifications in the design of emergency and irrigation works are being studied by CODEVASF and its consultants with a view to limiting cost increases.

1171 Third Railway Project (FEPASA): US\$75.0 million loan of November 12, 1975; Effective Date: March 24, 1976; Closing Date: June 30, 1979.
Project execution is proceeding satisfactorily.

BRAZIL

COPEL POWER DISTRIBUTION PROJECT

Loan and Project Summary

Borrower: Companhia Paranaense de Energia Eletrica (COPEL).
Guarantor: Federative Republic of Brazil.
Amount: US\$52 million equivalent.
Terms: Payable in 20 years, including 3-1/2 years of grace and 8-1/2% interest per annum.

Project

Description:

The project consists of COPEL's distribution expansion facilities to be initiated from July 1, 1976, and to be completed by June 30, 1979. It includes investments in subtransmission and distribution needed to meet increased demands on the utility's system; related inspection and training and acquisition of laboratory maintenance and system operation equipment as follows: (i) installation of 50 circuit-km of 138 kV tie lines; (ii) construction, expansion or improvements of nine 138 kV substations, including addition of 305 MVA transformer capacity; (iii) installation of 390 MVA transformer capacity at 69 kV and 80 MVA transformer capacity at 34.5 kV; (iv) installation of 166 circuit-km of 69 kV lines, 130 km of 13.8 kV feeders, 1,040 km of 34.5 kV lines and 860 km of 13.8 kV lines, 4,560 transformers (13.5 kV/220 - 120 V) and 200 transformers (34.5 kV/220-120 V) with an aggregate capacity of 260 MVA; 3,100 circuits of 34.5 kV and 13.8 kV (340 m average length); 145,000 electric meters; 135,000 street lights; (v) improvement of 1630 existing circuits of 34.5 kV and 13.8 kV (340 m average length); (vi) replacement of 85,000 electric meters; (vii) expansion of meter laboratory facilities and equipment; (viii) supplementary equipment for maintenance and operation including energized-line maintenance and system protection and operation equipment; and (ix) inspection of equipment fabrication, through the utilization of consultants' services, (60 man-months), and training of staff during such inspection (128 man-months).

Estimated Cost: (in US\$ million equivalent)

<u>Category</u>	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
Substation 69 kV	12.1	9.0	21.1
Substations 34.5/13.8 kV	3.9	2.4	6.3
Subtransmission Lines	3.8	1.0	4.8
Distribution	50.4	18.1	68.5
Auxiliary Services	0.9	11.0	11.9
Physical Contingency	9.3	1.9	11.2
Engineering and Administration	19.9	-	19.9
Training	-	0.3	0.3
Fabrication Inspection	-	0.4	0.4
Price Contingency	<u>36.1</u>	<u>7.9</u>	<u>44.0</u>
 Total Project Cost	 136.4	 52.0	 188.4

Financing Plan: (in US\$ million equivalent)

Net internal cash generation and contributions	136.4
IBRD loan	<u>52.0</u>
 Total Project Cost	 188.4

Estimated Disbursements: (in US\$ thousand equivalent)

<u>Fiscal Year</u>	<u>Annually</u>	<u>Cumulative</u>
77	9,000	9,000
78	17,000	26,000
79	19,000	45,000
80	7,000	52,000

Procurement Arrangement:

Equipment and materials to be financed by the recommended Bank loan would be procured on the basis of international competitive bidding under the Bank's Guidelines; the manufacturers whose bids contain components manufactured in Brazil equal to at least 50% of the value of the bid being given a 15% margin of preference or the applicable import duties, whichever is lower. Special imported metering and system protection equipment (about US\$1.8 million) and miscellaneous imported equipment required in small quantities (about US\$0.8 million) will be purchased directly.

Rate of Return: 20% for COPEL's overall investment program.

Appraisal Report: Report No. 1028b-BR of April 22, 1976.

