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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

REPORT AND RECOMMENDATION OF THE PRESIDENT TO THE EXECUTIVE DIRECTORS ON A PROPOSED LOAN TO CENTRAIS ELETRICAS DE MINAS GERAIS, S.A. FOR THE JAGUARA POWER PROJECT

February 25, 1966

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REPORT AND RECOMMENDATION OF THE PRESIDENT TO THE EXECUTIVE DIRECTORS ON THE PROPOSED LOAN TO CENTRAIS ELETRICAS DE MINAS GERAIS, S.A. FOR THE JAGUARA POWER PROJECT

1. I submit the following report and recommendation on a proposed loan in an amount in various currencies equivalent to US$ 49 million to Centrais Eletricas de Minas Gerais, S.A. (CEMIG), to finance part of the cost of the Jaguara hydroelectric project in Brazil.

PART I. Introduction

2. In 1953 the Bank made a loan to CEMIG and CEARG[1/] of $7.3 million to assist in financing the 48 MW Itutinga hydroelectric project, commissioned in 1959/60. Since then CEMIG has greatly expanded its facilities and service and now has 17 plants with a capacity of about 528 MW, together with transmission and distribution facilities throughout the State of Minas Gerais.

3. The Jaguara development was thoroughly studied by CEMIG and its consultants and was also recommended as of highest priority in an integrated program of power expansion for the South-Central region of Brazil prepared by CANAMBRA, a consortium of engineering consultants working under a United Nations Special Fund grant for which the Bank acts as Executing Agency. In July 1965, CEMIG and the government requested the Bank to lend $49 million for the Jaguara plant. This plant and the remainder of CEMIG's expansion program, were appraised by a Bank mission which visited Brazil in October 1965.

4. Formal negotiations for the proposed loan began on January 18 and were concluded on February 2, 1966. The government was represented by Mr. Castro Vianna, Brazilian Treasury Delegate in New York; CEMIG was represented by its President, Mr. Celso Mello de Azevedo, by its Vice President, Mr. Mario Penna Bhering, and by its Legal adviser, Mr. Walter Alvares; the State of Minas Gerais was represented by Messrs. Azevedo and Bhering of CEMIG.

1/ CEARG - Companhia Eletrica de Alto Rio Grande - was absorbed by CEMIG on April 30, 1963.

5. The proposed loan would increase Bank lending to Brazil from \$346.5 million to \$395.5 million, net of cancellations. The position at January 31, 1966 was as follows:

Year	Borrower	Purpose		Millions of \$ Amount (net of Cancellations)	Millions of \$ Undisbursed
1958	Furnas	Furnas power development		73.0	0.2 1/
1965	Furnas	Estreito I power development		57.0	56.8
1965	Uselpa	Xavantes power development		22.5	22.5 2/
Sub-total, loans not fully disbursed				152.5	79.5
Fully disbursed loans				194.0	
Total (net of cancellations)				346.5	
Of which has been repaid				96.6	
Total outstanding				249.9	
Amount sold			6.9		
Of which has been repaid			5.4	1.5	
Total held by Bank				248.4	

6. The Bank also has under consideration two additional projects: a loan for the transmission phase of Furnas' Estreito project, and loans for expansion of distribution facilities of certain Eletrobras companies; these loans are expected to be presented to the Executive Directors within the next few months.

1/ This loan was fully disbursed in February 1966.

2/ This loan is not yet effective. The delay in effectiveness has been due to the need for special enabling legislation by the State of Sao Paulo, registration with Federal and State Tribunals of Accounts and other time-consuming formalities. The Company recently advised us that all formalities have now been completed, and we are awaiting the documents necessary to declare the loan effective.

PART II. Description of the Proposed Loan

7. The main characteristics of the proposed loan are as follows:

Borrower:	Centrais Eletricas de Minas Gerais, S.A. (CEMIG)
Guarantor:	United States of Brazil
Amount:	The equivalent, in various currencies, of \$49 million
Purpose:	Assist in financing Jaguara hydroelectric project (400 MW)
Term & Amortization:	25 years (including 5½ years grace); semi-annual repayments from October 1, 1971 through April 1, 1991.
Interest Rate:	6% per annum
Commitment Charge:	3/8 of 1% per annum

PART III. The Project

8. An appraisal report on the Jaguara Power Project (TO-514a) is attached.

9. The State of Minas Gerais, with a population of over 10 million, is larger in land area than France. The more densely populated southern half of the State is very rich in iron ore and other minerals and contains many new relatively heavy industries, such as steel and aluminum. The capital city, Belo Horizonte, with a population of nearly one million, is a rapidly growing center of industry and commerce. About 80% of CEMIG's output is absorbed by industry. The demand for electric power in CEMIG's market area has grown at an annual rate of 20% in the past five years, except for 1964 when the rate of growth dropped to 12% due to unsettled business conditions. As the CEMIG system is interconnected with the systems serving the Central South region, demand for power is based on the growth rate of the region, estimated by CANAMBRA at 10-11% per annum. CANAMBRA studies also show that the output of the Jaguara plant will be quickly absorbed after the plant is placed in operation in 1971.

10. The CEMIG group comprises CEMIG and its subsidiary, Eletrificacao Rural de Minas Gerais (ERMIG). CEMIG is a power utility owned principally by the State of Minas Gerais (66%), Centrais Eletricas Brasileiras, S.A. - Eletrobras (16%) and by some 35,000 shareholders, including municipalities, industrial consumers, insurance companies, banks and individuals. ERMIG, which is effectively controlled by CEMIG, is responsible for rural electrification. CEMIG is responsible for the State's power expansion program and serves or will eventually serve all the principal towns and industries in the State. CEMIG's Board and management are able and

experienced and should be able to carry out and operate the Project efficiently.

11. The Jaguara hydroelectric plant and associated transmission facilities constitute Part I of the Project, which includes as Part II the other expansion requirements of the CEMIG system through 1971. The Borrower would be obligated to carry out the entire expansion program, but the Bank loan would be used only to finance the Jaguara plant and related facilities. Jaguara, expected to be completed by early 1971, together with other installations, would increase CEMIG's generating capacity to about 1,000 MW by that time.

12. The Jaguara plant, with an initial installation of 400 MW, will be situated on the Rio Grande River, downstream from the existing Furnas and Peixoto plants and the proposed Estreito plant now under construction (for which the Bank made a loan of $57 million in 1965). The Jaguara plant will benefit greatly from the large flow regulating reservoir at Furnas. The plant will be connected to Belo Horizonte and to Estreito to form an interconnection with Furnas' system serving the major load centers of Sao Paulo and Rio de Janeiro.

13. The estimated cost of Jaguara (including interest during construction on the Bank loan) is US$ 90 million equivalent, including contingency allowances of 17% on civil works and 10% on other items. These should be adequate as Jaguara promises to have a minimum of engineering difficulties. The cost per kilowatt installed is US$ 165 (excluding transmission) which is very favorable for a hydroelectric plant with an energy capability such as Jaguara's.

14. In addition to the Jaguara plant and associated transmission facilities, CEMIG will also carry out a major expansion program (described as Part II of the Project) including new generating capacity and transmission and distribution facilities to serve about 275,000 new customers and about 200 new towns and rural areas.

15. The entire expansion program from 1966 to 1971 (including Jaguara) is estimated to cost the equivalent of about $231 million, including additions to working capital. This program will be financed from the following sources:

Net internal cash generation	25%
Federal grants	6
State, private equity contributions	25
Eletrobras equity contribution[1/]	5
Proposed IBRD Loan	21
Eletrobras loan[1/]	4
Other borrowings	14
	100%

1/ The Eletrobras loan and Eletrobras undertaking to provide equity have been made conditions of effectiveness of the proposed loan.

Satisfactory commitments or assurances have been or will be received that all necessary funds will be provided. In addition, the State of Minas Gerais is authorized by existing legislation to provide additional funds that might be needed in the event of an overrun in costs. These arrangements are satisfactory.

16. As permitted by existing electric tariff legislation, CEMIG and the government have agreed to establish tariffs adequate to provide the Company with a minimum annual return of 10% on its revalued net fixed assets after covering all operating costs, including depreciation. While this should produce a satisfactory level of rates, the Bank is now discussing with the government possible improvements in the tariff legislation. CEMIG's net operating income after taxes would provide ample debt service coverage. CEMIG's debt/equity ratio is also very favorable, and there is still adequate scope for further borrowing.

17. In accordance with the pattern established by agreement between the Bank and Brazil in the 1965 loans to Central Eletrica de Furnas (Furnas) and Usinas Eletricas de Paranapanema (Uselpa), the proposed loan is intended to cover the procurement of goods on the basis of international competitive bidding, with Brazilian suppliers participating with a preference of 15% in respect of equipment and materials. The proposed loan would also cover payments for civil works awarded under international competition with Brazilian contractors participating without preference. Withdrawals in respect of civil works will be at a uniform percentage, which has presently been established at 20%.

PART IV. Legal Instruments and Authority

18. The following draft documents to which the Bank is a party, and the Report of the Committee provided for in Article III, Section 4 (iii) of the Articles of Agreement, are being distributed to the Executive Directors separately: (a) Loan Agreement with Centrais Eletricas de Minas Gerais, S.A.; (b) Guarantee Agreement with the United States of Brazil; and (c) Project Agreement with the State of Minas Gerais.

19. These agreements are substantially similar to those of the recent FURNAS and USELPA loans. The following provisions are of special interest:

(a) Sections 5.14 and 3.07 of the Loan and Guarantee Agreements, respectively, establish the minimum level at which power tariffs will be set, to produce, *inter alia*, a return of 10% on net revalued fixed assets.

(b) Section 2.01 of the Guarantee Agreement contains the usual "financial guarantee" of the Guarantor, but does not (in accordance with a recent change in Brazilian policy) extend the guarantee to fulfillment of the Borrower's other obligations because CEMIG is a state-owned company.

(c) The Project Agreement, which would be executed under existing State legislation, does provide reasonable assurances of adequate funds from the State of Minas Gerais to complete the project, and further provides: (i) that the State will take all reasonable action necessary to enable the Borrower to carry out the Expansion Program; (ii) that it will not take or permit any of its agencies to take, any action which would interfere with the performance by the Borrower of its obligations under the Loan Agreement; and (iii), that it will accord the Project the highest priority.

(d) Under Sections 3.09 and 3.10 of the Guarantee Agreement, the Guarantor undertakes to carry out and implement studies to: (i) reduce restrictions on procurement by contractors working on similar power projects; and (ii) achieve consistent rate policies which will ensure an adequate return to power utilities on their real investment.

20. The Guarantor is authorized by existing legislation to give its guarantee to the proposed loan.

PART V. The Economy

21. The last Economic Report (WH-146a) was prepared by the IBRD Economic Mission which visited Brazil in the Fall of 1964. The report was distributed to the Executive Directors in May 1965. Another Economic Mission visited Brazil in November-December 1965 and is preparing a report. This report is expected to be submitted to the Executive Directors in April 1966.

22. Nearly all the indicators of economic performance registered substantial improvements in 1965 as compared with 1964. The rise in the cost of living slowed down by nearly one half (from 87% in 1964 to an estimated 45%); GNP rose by an estimated 5%; the Central Government budget deficit declined by one half in real terms; non-coffee exports rose by over 35% to an all-time high, and this increase in exports together with a drop in imports and substantial capital inflows (including debt rescheduling) raised foreign exchange reserves to about $500 million which is the highest level in some years. The major area of slippage in the government's 1965 economic program was the rate of monetary expansion which substantially exceeded the programmed level. This was due primarily to a much smaller than expected contractionary effect from coffee financing and a very high rate of commercial bank credit expansion which arose mainly from purchases of foreign exchange by the monetary authorities. The 1966 monetary program does not rely on a large contractionary effect from coffee financing and is designed to prevent a repetition of the excessive expansion of commercial bank credit.

23. The government is continuing its anti-inflationary monetary, fiscal, and wage policies to produce a further slowdown in rate of inflation during 1966 and to achieve approximate price stability by the end of the year. The government plans to continue correcting the price distortions which have contributed to the large public deficits and balance of payments crises and have produced bottlenecks in public sectors. The 1966 program contemplates the continuation of policies designed to strengthen Brazil's balance of payments: a flexible exchange rate; the relaxation and elimination of export controls; and sound external debt management.

24. The government's anti-inflationary program and the slowdown in the rate of inflation have produced a substantial change in inflationary expectations. Consumers have become more price conscious and producers more cost conscious. This has led to the elimination of a sizeable number of marginal firms and to increasing efforts to reduce costs. The public authorities have been contributing towards inproving economic efficiency by undertaking measures and studies to improve the productivity of public investment in the fields of electric power, transport, steel, and telecommunications. They are also increasingly using the price mechanism to allocate credit to the private sector in agriculture and industry. Most recently, the government has begun a study of import policies with a view to liberalizing them to facilitate the use of external financial assistance and also to improve the efficiency of Brazilian industry by subjecting it to more external competition.

25. Rising economic activity and a recovery of private investment, both domestic and foreign, together with higher disbursements on project loans that are tied to imports, are expected to produce a substantial increase in imports in 1966. Brazilian exports, together with projected capital inflows, are expected to enable Brazil to meet all its scheduled external obligations without debt rescheduling or the accumulation of arrears for the first time in some years. While Brazil's obligations on its existing external debt will continue to be heavy during the next few years, they should be manageable if Brazil's new borrowing is provided on suitable terms.

PART VI. Compliance with Articles of Agreement

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

PART VII. Recommendation

27. I recommend that the Executive Directors adopt the following resolution:

Resolution No.

"Approval of Loan to Centrais Eletricas de Minas Gerais, S.A. in the amount of the equivalent of U.S.$49,000,000 to be guaranteed by the United States of Brazil:

RESOLVED:

THAT the Bank shall grant a loan to Centrais Eletricas de Minas Gerais, S.A., to be guaranteed by The United States of Brazil, in an amount in various currencies equivalent to forty-nine million United States dollars (U.S.$49,000,000), to mature on and prior to April 1, 1991, to bear interest at the rate of six per cent (6%) per annum, and to be upon such other terms and conditions as shall be substantially in accordance with the terms and conditions set forth in the form of Loan Agreement (Jaguara Power Project) between the Bank and Centrais Eletricas de Minas Gerais, S.A. and the form of Guarantee Agreement (Jaguara Power Project) between The United States of Brazil and the Bank and the form of Project Agreement (Jaguara Power Project) between The State of Minas Gerais and the Bank, which have been presented to this meeting."

George D. Woods

President

Attachment

Washington, D.C.
February 25, 1966