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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

REPORT AND RECOMMENDATIONS

OF THE

PRESIDENT

TO THE

EXECUTIVE DIRECTORS

ON A

PROPOSED LOAN

OF

\$40 MILLION TO THE CASSA

FOR THE CONSTRUCTION OF A NUCLEAR POWER PLANT

IN SOUTHERN ITALY

September 4, 1959

REPORT AND RECOMMENDATIONS OF THE PRESIDENT
TO THE EXECUTIVE DIRECTORS
ON A PROPOSED LOAN OF \$40 MILLION TO THE CASSA
FOR THE CONSTRUCTION OF A NUCLEAR POWER PLANT
IN SOUTHERN ITALY

1. I submit the following report and recommendations on a proposed loan in various currencies equivalent to \$40 million to the Cassa per Opere Straordinarie di Pubblico Interesse nell'Italia Meridionale (Cassa per il Mezzogiorno) to assist in the financing of a nuclear power plant to be constructed and operated by Societa' Elettronucleare Nazionale "SENN" per Azioni on the Garigliano River in Southern Italy.

PART I - HISTORICAL

2. The Bank has been actively considering the application of nuclear power on a commercial scale since 1955. It appeared that Italy was a country where nuclear power should have early commercial application, and it was accordingly agreed between the Bank and the Italian Government, in 1957 that a joint study would be undertaken for the examination of a large nuclear power station to be established by SENN in Southern Italy. The cost of the study was to be shared by the Bank, the Italian Government, and SENN.

3. Work on the study, which was assisted by an International Panel of nuclear scientists established by the Bank, continued until late 1958. The first phase of the work was the preparation of an invitation for tenders for the construction of a nuclear power plant at a given site. The second phase was to assist SENN to review the tenders received. Nine tenders were eventually submitted. Aided by a report of the International Panel and by a study of SENN's consultants and technical staff, SENN selected the tender put forward by the International General Electric Company, a division of General Electric Company.

4. In September and October of 1958 a Bank mission visited Rome and discussed the financial and technical aspects of the SENN project. Negotiations then took place in Washington in April, and were completed in Rome in July.

5. The Bank has made the following loans in Italy:

<u>No.</u>	<u>Borrower</u>	<u>Purpose</u>	<u>Amount (net of cancellations (equivalent in \$ million))</u>
50 IT	Cassa per il Mezzogiorno	Development of Southern Italy	10.0
88 IT	Cassa per il Mezzogiorno	" "	10.0
117 IT	Cassa per il Mezzogiorno	" "	68.4
150 IT	Cassa per il Mezzogiorno	" "	74.6
189 IT	Cassa per il Mezzogiorno	" "	75.0
224 IT	Cassa per il Mezzogiorno	" "	<u>20.0</u>
	Total, net of cancellations :		258.0
	of which has been repaid :		<u>4.2</u>
	Total now outstanding :		253.8
	Amount sold :	24.3	
	of which has been repaid :	<u>3.8</u>	<u>20.5</u>
	Net amount now held by Bank :		<u>233.3</u>

PART II - DESCRIPTION OF THE PROPOSED LOAN

6. The main characteristics of the loan would be as follows:

<u>Borrower</u>	:	Cassa per il Mezzogiorno
<u>Guarantor</u>	:	The Republic of Italy
<u>Amount</u>	:	Equivalent of \$40 million
<u>Purpose</u>	:	To assist in financing the construction by SENN of a nuclear power plant in Southern Italy
<u>Maturity</u>	:	20 years. Amortization would be in semi-annual instalments beginning on February 15, 1964 and ending on August 15, 1979
<u>Interest Rate</u>	:	6% including 1% commission
<u>Commitment Charge</u>	:	3/4 of 1%

PART III - LEGAL INSTRUMENTS

7. The following draft Loan documents are attached: Loan Agreement (No. 1), Guarantee Agreement (No. 2), and Project Agreement (No. 3).

8. As in the Bank's previous loans to the Cassa for power projects, the proceeds of the loan will be re-lent by the Cassa to the company constructing the project, in this case SENN, under a Subsidiary Loan Agreement satisfactory to the Bank. Attention is directed to the following provisions in the Loan Agreement:

- a. A provision which adds the following events of default:
 - (i) the occurrence of circumstances which make it improbable that an appropriate supply of nuclear fuel will be available for the Project, and
 - (ii) termination of SENN's arrangements with the General Electric Company without an alternative satisfactory to the Bank before completion of the Project (Sect. 6.01 and 6.02);
- b. A provision requiring the Cassa to repay the Bank in advance of maturity an amount equivalent to any repayments made in advance of maturity by SENN to the Cassa (Section 5.07).

9. In Section 2.02 of the Guarantee Agreement the Guarantor agrees to take all such action as shall be required on its part to assure that SENN shall have available to it the nuclear fuel necessary for the efficient operation of the Project and to take appropriate executive action under future and existing legislation to assure the efficient construction and operation of the Project.

10. The Project Agreement will be similar to those used in past loans to the Cassa for power projects. Societa' Finanziaria Elettrica Nazionale (Finelettrica), Societa' Meridionale di Elettricità (SME), and Societa' Idroelettrica Piemonte (SIP), three shareholders of SENN, will be additional parties to the Project Agreement, jointly and severally guaranteeing performance of the agreement and agreeing to become joint and several sureties for the performance of all obligations (including financial) of SENN to the Cassa. In addition, the Project Agreement will contain a more specific guarantee by these three shareholders that they will cause the Project to be constructed and operated with due diligence and efficiency and in accordance with sound engineering, financial and business standards, acting in SENN's stead in the fulfillment of all obligations under the Project Agreement should SENN not fulfill such obligations (Article III, Section 3).

11. Finelettrica, SME and SIP will also join in the Subsidiary Loan Agreement, under which the Cassa relends the proceeds of the loan to SENN, as sureties, granting joint and several suretyships for the performance of the obligations of SENN thereunder. In addition to this suretyship, the Cassa's loan to SENN will be secured by a first mortgage and a privileged lien on the real estate, plants and equipment connected with the Project.

PART IV - APPRAISAL OF THE PROPOSED LOAN

The Project

12. A report on the project entitled "Appraisal of the SENN Nuclear Power Plant" (TO 200b) is attached (No. 4).

13. The project is the construction of a nuclear power plant with a gross capacity of 160 MW. The plant would be constructed and operated by SENN. The total cost of the plant is estimated to be \$66.4 million. SENN plans to raise the equivalent of about \$26.4 million in about equal proportions by the issue of shares and by shareholders' advances, subordinated to its loan from the Cassa per il Mezzogiorno; the balance, \$40 million, would be covered by the loan from the Cassa per il Mezzogiorno.

14. Nine of the fourteen shareholders of SENN are public utility companies, the other five are industrial companies. Twelve of the fourteen are directly or indirectly controlled by the Istituto Ricostruzione Industriale (IRI). The utility shareholders form part of the Italian electric power network into which SENN's output will be fed. Three of the strongest of these utility companies will guarantee performance of the Project Agreement and become sureties for the performance of all obligations of SENN to the Cassa per il Mezzogiorno. SENN will give written assurances to the Bank that it will conduct its operations in accordance with sound business principles to ensure a sound financial position.

15. International General Electric Operations, S.A., a wholly owned Swiss subsidiary of the General Electric Company, with Ebasco Services, would erect the plant on a "turn-key" basis, including the detailed design, supply of equipment, erection and operation of the plant during an initial test period. The plant design includes reliable safeguards to prevent hazardous incidents and to minimize hazard to plant personnel and the surrounding area.

16. The site for SENN was chosen not only because of a good water supply and favorable conditions for the release of waste gases and disposal of radioactive waste, but also because from it the plant could be easily linked with the extensive generation and distribution system of the utility shareholders of SENN, covering about half of Italy and serving over half of the population.

17. Power demand is growing at a fast rate in the area served by this system. Studies indicate that it will be necessary to increase capacity from the 4,140 MW existing at the end of 1958 to 7,250 MW by 1965. SENN will form part of this increase.

18. Nuclear power plants, to be economic, must use their generating capacity as fully as possible because of their high capital cost. Studies indicate that the base load requirements of the system are such that SENN could be operated at a high plant factor, i.e., at a high proportion of the number of hours in each year.

19. The cost to the Italian economy of generating nuclear power by the proposed SENN plant is calculated to be about 15% higher than the cost of generating electricity from a conventionally fueled thermal plant, both operating at a high plant factor. This slight cost disadvantage is more than offset by the advantage to the Italian power system in gaining experience in the building and operating of nuclear power stations, which can be expected to take up a growing portion of Italian power requirements in the years to come.

Procurement

20. General Electric Company was allotted the contract after consideration of bids from nine companies, as described in paragraph 3 above. A Letter of Intent has already been signed and a definitive contract between SENN and the International General Electric Operations, S.A. will be signed shortly. Expenditures under this contract represent about half of the total cost of the project. They include the cost of fabricating the nuclear fuel elements. The cost of the nuclear fuel itself has not been capitalized since arrangements are well advanced for its supply through EURATOM on a deferred payment basis.

Economic Situation

21. A report on "Current Economic Position and Prospects of Italy" (R59-30) was circulated on April 14, 1959. The report described the effects of the 1958 international recession on the Italian economy which took the form of a reduction in the hitherto rapid growth, accompanied by a great improvement in the balance of payments owing to reduced imports and a considerable increase in invisible earnings.

22. In 1958 the real increase in the gross national production was 4.1% as against 5.6% in 1957. This was mainly due to the excellent harvest. Industrial production increased by only 2.2%, the slackening in the rate of expansion being mainly because investment was no longer rising and, to a lesser extent, because the demand for exports fell off. A recovery in production began towards the end of 1958 and has continued into the spring of this year. This appears to have been due largely to increased private and government consumption. The increase in private investment has been small and the capital goods industries have not reached the rate of increase of the years before 1957, despite support from public works. Home building has not increased in spite of lower interest rates. It has been estimated that, for 1959 as a whole, the increase in the gross national product will be about 4 to 5%. Although this is in itself satisfactory, it is less than the rapid increase of the years prior to 1957 and, if no improvement takes place, it may not be sufficient to absorb the net additions to the labor force. It is against this background that some discussion has taken place in Italy over the desirability of further measures to stimulate expansion. Quite apart from special expansion measures of this sort there will be a continued need to maintain investment at a high level.

23. Meanwhile, the external economic position has remained favorable. The recovery in production has led to increased imports, but exports have also resumed their expansion. The rise in reserves of foreign exchange has continued since the end of 1958 and they amounted to \$2.6 billion at the end of June. Italy's external public debt is about \$850 million and service payments are less than 3% of foreign exchange earnings. Italy should be able to meet the service on the proposed loan in addition to its other external obligations.

PART V - COMPLIANCE WITH ARTICLES OF AGREEMENT

24. The report of the Committee provided for in Article III, Section 4 (iii) of the Articles of Agreement of the Bank is attached (No. 5).

25. I am satisfied that the proposed loan will comply with the Articles of Agreement of the Bank.

PART VI - RECOMMENDATIONS

26. I recommend that the Bank at this time make a loan to the Cassa per Opere Straordinarie di Pubblico Interesse nell'Italia Meridionale in an amount in various currencies equivalent to \$40 million to be guaranteed by the Republic of Italy for a term of 20 years, with interest, commission and commitment charges and on such other terms as are specified in the attached draft Loan, Guarantee and Project Agreements and that the Executive Directors adopt a resolution to that effect in the form attached (No. 6).

W. A. B. Iliff, Vice-President
for Eugene R. Black
President

Attachments

Washington, D.C.
September 4, 1959