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DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

64 p/

CAPITAL ASSISTANCE PAPER

Proposal and Recommendations
For the Review of the
Development Loan Committee

TURKEY - GOKCEKAYA TRANSMISSION LINES

277-388

AID-ILC/P-325

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A.I.D.
Reference Center
Room 1656 NS

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

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AID-DLC/P-325
May 20, 1965

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: Turkey - Gokcekaya Transmission Lines

Attached for your review are the recommendations for authorization of a loan in an amount not to exceed \$7,690,000 to the Government of Turkey to finance the foreign exchange cost of design and construction of 380 kv transmission lines, substations and switchyards necessary to connect the Gokcekaya Hydroelectric Power Plant to the Northwest Anatolia System and to finance the cost of training of personnel in construction, operation and maintenance of lines and equipment.

This loan proposal is scheduled for consideration by the Development Loan Committee at its meeting on May 26, 1965.

Helen E. Nelson
Secretary
Development Loan Committee

Attachments:

Summary and Recommendations
Project Analysis
Annexes I-VI

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TURKEY

GOKÇEKAYA TRANSMISSION LINES

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TURKEY - GOKÇEKAYA TRANSMISSION LINES LOAN

SUMMARY AND RECOMMENDATIONS

1. APPLICANT: The Republic of Turkey
2. AMOUNT: \$7,690,000
3. LOAN TERMS: Term of forty (40) years after the date of first disbursement including a ten year grace period. Interest on outstanding principal of one percent (1%) per annum during grace period and two and one-half percent ($2\frac{1}{2}\%$) per annum thereafter.
4. TOTAL COST OF ACTIVITY: \$19,945,000, composed of \$7,690,000 in foreign exchange plus \$12,255,000 in local currency (TL 110,295,000).
5. DESCRIPTION OF ACTIVITY: Financing the foreign exchange cost of design and construction of 380 KV transmission lines, substations and switchyards necessary to connect the Gokçekaya Hydroelectric Power Plant to the Northwest Anatolia System and to finance the cost of training of personnel in construction, operation and maintenance of lines and equipment.
6. PURPOSE OF ACTIVITY: Improving and increasing electric power service in Northwest Turkey.
7. BACKGROUND OF ACTIVITY: AID has assisted the electric power sector in Turkey with several loans and has financed the foreign exchange cost of the Gokçekaya Hydroelectric Power Plant which these transmission lines will serve.
8. EXPORT-IMPORT BANK INTEREST: On April 26, 1965, the Export-Import Bank stated that it was not prepared to consider this loan.
9. MISSION VIEWS: The Mission recommends approval of this loan.
10. STATUTORY CRITERIA: All statutory criteria have been met.
11. RECOMMENDATION: Authorization of a Loan to the Republic of Turkey of an amount not to exceed \$7,690,000 for the purposes stated above, subject to the following terms and conditions:
 - a. Repayment in United States dollars.

- b. Term of forty (40) years from date of first disbursement, including a ten (10) year grace period.
- c. Interest of one percent (1%) per annum during grace period, two and one-half percent (2½%) per annum thereafter.
- d. Procurement with the loan funds shall be limited to United States sources.
- e. Other terms and conditions as AID may deem advisable.

CAPITAL ASSISTANCE COMMITTEE:

Loan Officer: PMicou, NESA/CDF
Engineer: RPStokely, NESA/ENGR
Counsel: JAWestberg, NESA/GC
Desk: RCChase, NESA/GTIC

Drafting Officers: PMicou, NESA/CDF: RPStokely, NESA/ENGR

I. HISTORY AND BACKGROUND

A. Electric Power in Turkey

1. Electric service first began in Turkey in 1902, and the first service to a large community was at Istanbul in 1913. After the establishment of the Republic in 1923, development of electric power followed the emphasis on industrialization. After the end of World War II, when total generating capacity totaled 246 MW, expansion of the industry accelerated with the installation of larger Government-owned regional plants. At the end of 1962 generating capacity totaled 1,300 MW.

2. The First Five Year Development Plan, 1963-1967, published in 1963, states that only 30.5 percent of the population benefit from electricity. Electric power is supplied to 67 provincial centers, 420 district and subdistrict centers and 182 villages. There are two large interconnected grids and several regional systems. Outside of these, electricity is supplied by individual diesel power plants. (Five Year Plan, p. 356)

3. The Five Year Plan forecasts almost a doubling of demand for electric power between 1962 and 1967. The Development Plan states that there has been an annual increase of 11.6 percent in energy production over the last ten years, and in future years, annual increase is expected to rise to 13 percent. (Five Year Plan, p. 357)

B. Foreign Assistance to the Electric Power Sector

4. The Government of Turkey plans to meet the demand for electric power by construction of new power plants and expansion of existing plants. The United States has assisted Turkey with its development of electric power for many years. The Sariyar Dam and Hydroelectric project, completed in 1957, was financed through I.C.A. With the assistance of AID loan number 277-H-035 for \$31,300,000 the last two units at the Sariyar Hydroelectric Station are now being installed. The same loan is financing a two-unit oil-burning thermal electric station, known as "New Istanbul" at Anbarli, near Istanbul. The Development Loan Fund financed the improvement and distribution of power to fifteen cities by its loan DLF-98 for \$6,153,000 made in 1959. AID Loan 277-H-059 for \$6,400,000, authorized April 30, 1965, will be used to finance the foreign exchange cost of transmission lines to thirty-two load centers in northwest Turkey. AID loan 277-H-053 for \$20,400,000 was authorized in June, 1964 to finance the construction of a dam and hydroelectric power plant at Ciceroz on the Sakarya River. The loan recommended

by this paper would finance the foreign exchange cost of 380 KV lines to transmit power from the Ciceroz plant to Istanbul and Ankara. (The Ciceroz plant has been renamed "Gokçekaya" and will be called "Gokçekaya" in this paper.)

5. Other countries and organizations have assisted the Turkish power sector. Austria, as a member of a consortium of Common Market countries, has made a loan to finance installation of a third unit at the Tunçbilek lignite-burning thermal-electric station. The World Bank has agreed to finance the installation of the third unit in the Seyhan Hydroelectric Station and the construction of the Mersin Thermal electric station and the Kadincik Hydroelectric Project. AID, I.D.A., the European Investment Bank and several European nations are presently discussing consortium financing for the large Keban Dam and Hydroelectric Station on the Euphrates River.

6. Turkey has received assistance in her efforts to reorganize and improve the present organization of her power system. AID has financed a "Study of Electric Power Manpower and Training Needs in Turkey" by the engineering firm of Stone & Webster. This report should be complete within the next two months. The World Bank has been requested to undertake a broad study leading toward eventual reorganization of the electric power industry. This study may be financed by the UN Special Fund.

7. There is presently pending in the National Assembly a bill to establish the Turkish Electric Authority (TEK) to develop the electric power industry on a self-financing basis similar to the practices of private industry. The proposed Authority would consolidate the various agencies now connected with the electric utility business.

C. Gokçekaya Dam and Hydroelectric Loan

8. On June 15, 1964, a loan was authorized by A.I.D. in the amount of \$20,400,000 to the Government of Turkey for the Gokçekaya Hydroelectric and Transmission Line Project. This loan, AID No. 277-H-053, provided the foreign exchange costs for the project, which consists of the construction of a 300 MW hydroelectric power plant on the Sakarya River and associated 154 KV transmission facilities to deliver the plant output to the 154 KV Northwest Anatolia Transmission grid.

9. The loan application had requested that the transmission facilities be 380 KV so that the facilities could be utilized by future power sources -- principally Keban--as well as for connecting Gokçekaya to the grid. AID felt that planning had not progressed far enough to

indicate the need for 380 KV facilities, the first extra high voltage installation planned for Turkey. The scope and amount of the loan authorized was reduced to provide only 154 KV facilities actually needed for the output of Gokçekaya. It was recognized by AID that additional planning might show the wisdom of combining the facilities needed for Gokçekaya with those needed for future power sources--Keban Hydro or additional thermal. AID informed the Government of Turkey that a decision must be reached prior to disbursement of AID funds under the Gokçekaya loan for other than engineering services. The GOT, through EIE, executed an amendment to their engineering contract with Ebasco Services, Incorporated. This contract provided for feasibility studies of Keban and Gokçekaya and related transmission. The amendment provided for a further study and report to determine the transmission facilities which would most economically (a) connect the Gokçekaya project to the grid and (b) provide the transmission requirements between Istanbul and Ankara. The resultant report is called "Investigation of Connection of Gokçekaya Hydro Electric Power Plant to the Northwest Anatolia System" and is dated November 1964. The contract as amended was financed by AID loan 277-H-036 in the amount of \$350,000.

10. The present application for a loan of \$7,690,000 is based upon the conclusions of the Ebasco Report, which is discussed in Section III of this paper, "Technical Analysis."

II. CAPACITY OF THE BORROWER

11. The borrower of this loan will be the Republic of Turkey acting through the Ministry of Finance and the Ministry of Power and Natural Resources. The funds will be reloaned to Etibank, a State Economic Enterprise, which will be directly responsible for constructing the transmission facilities and will own and operate the facilities when completed. The terms of re-lending to Etibank should be similar to the terms of the re-lending under the recent loan to Etibank for overhead transmission lines. (277-H-059). Terms suggested in that loan paper were $3\frac{1}{2}\%$ for twenty-five years with a five year grace period.

12. A full discussion of the functions and organization of Etibank and a detailed financial analysis of Etibank's 1961-63 financial statements will be found in paragraphs 10-14 and Section V of the loan paper "Etibank-Overhead Transmission Lines and Substations," which was the basis for approval of loan 277-H-059 on April 30, 1965. The conclusion of that loan paper, that Etibank has the qualified staff and appropriate resources to construct and operate the overhead transmission lines and substations, applies equally to the project contemplated by this paper, with the further provision that Etibank will employ sufficient U.S. construction supervisory staff during the construction of the high voltage transmission lines.

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III. TECHNICAL ANALYSIS

A. Summary and Conclusions of the Ebasco Report

13. In the Report, various transmission schemes were studied which might accomplish the dual purpose of connecting Gokçekaya to the grid and at the same time provide some of the transmission requirements between Istanbul and Ankara. Adequate consideration was given to the long range development of the system, both with respect to the loads and power generating sources. The loads used were the same as those used for the analysis of the Gokçekaya project. Three basic power generating schemes were studied, along with an alternate to one. In all of the load and power generating schemes, a ten year period was studied, starting with the inservice date of Gokçekaya (which consists of three 100 MW units estimated to be in service in 1969). The report was based on sound engineering and economic principles. It showed a long range economic advantage favoring the connection of Gokçekaya at 380 KV rather than 154 KV. For the ten year period following the construction of Gokçekaya, its connection at 380 KV is less expensive than at 154 KV for all plans and for each interest rate considered from the standpoints of comparative capital investment, summation of annual costs, and cumulative present worth of annual costs.

B. Loads and Power Generating Sources Studied in the Report

14. Plan A - With Keban Hydro.

Initial installation 600 MW 1970-71. Additional 450 MW by 1979. 900 MW thermal added during the period, including 300 MW at Izmir.

Plan B - With West Thermal Power Sources. This plan involves additional thermal generation near Istanbul and Izmit totalling 1350 MW during the period 1970-1979. Plan B1 with additional transmission to Area E (Izmir) includes the addition of 450 MW thermal capacity at Izmir. Plan B2 without additional ties to Izmir required 600 MW additional thermal capacity at Izmir.

Plan C. - With Kutahya and Other West Thermal Power Sources.

This plan contemplates the initial installation of 300 MW at Kutahya thermal station using lignite fuel. This is followed by thermal generating capacity of 1200 MW near Istanbul and Izmit and 300 MW at Izmir.

Further details of the loads and power generating sources are shown in (Table 1), Annex I.

C. Transmission Requirements

15. The transmission lines needed for the loads and power generating sources shown in paragraph B above (Table 1) are shown in (Tables 2 and 3). Those shown in (Table 2) are required if Gokçekaya is connected by 154 KV facilities. Those shown in (Table 3) are needed if it is connected by 380 KV facilities.

16. A computer was used to analyze the transmission results and determine the best plan. The basic technical assumptions used were as follows:

1. Single contingency emergency conditions were recognized.
2. The criterion for transmission line reinforcement used, was, in addition to voltage drop and loss considerations, the thermal limit of conductors for short lines with stability limits considered for longer lines.
3. The 154 KV system additions were analyzed using 795 MCM ACSR, which is in line with existing facilities in Turkey. The 380 KV system was analyzed using a dual bundle of 954 MCM ACSR, which size is near the physical minimum for this voltage. The selection of 380 KV as an alternate of 154 was based on common utility practice to at least double the existing voltage where an increase is necessary. In addition, 380 KV - dual bundle 954 MCM ACSR facilities were previously determined to be the most economical transmission arrangement for the Keban - Gokçekaya generating plant arrangement.

D. Economic Factors used with Study

17. A life of 50 years was accepted for all transmission facilities. Annual operations and maintenance expenses were estimated at 0.3% of investment for lines and 1.25% of investment for substations. Transmission system losses were evaluated at \$.0035 per KWH for energy and \$15.00 per KW/yr for demand. Taxes and duties on foreign purchases were excluded in establishing economics comparisons between plans. Interest rates were established at 3.5% for foreign exchange and 6% for local currency, and alternatively at 8% for each.

E. Results of the Study

18. The results of the study are shown in (Table 4). These show an economic advantage in connecting Gokçekaya to the Northwest Anatolia Transmission grid at 380 KV rather than at 154 KV. Capital cost savings for

the period through 1979 range from about \$3,000,000 to about \$10,000,000, depending on the future power supply plan studied. Cumulative annual cost savings vary from \$2,000,000 to \$5,000,000 for the period through 1979 depending on the future power supply plan accepted and on the interest rates assumed.

F. Effect on the Gokçekaya Benefit-Cost Ratio

19. The benefit-cost ratio for Gokçekaya was calculated to be 1.57 in the loan paper for loan 277-H-053, which was based on 154 KV transmission facilities deemed necessary to transmit the output of the grid. The extra capital costs of making the connection at 380 KV are described in the following section. These added costs are justified on the basis of future loads and power sources through 1979 as described in the preceding paragraphs. They are chargeable to future planning and not to Gokçekaya. The benefit-cost ratio for Gokçekaya will not be decreased because of these added costs.

G. Description of Project

20. The Project consists of a 14.4/380 KV substation with a total capacity of 316 MVA and a switchyard at the Gokçekaya hydroelectric plant financed by AID Loan 277-H-053 and now under construction, 380 KV transmission lines to Ankara and Istanbul, and 380/154 KV substations at Ankara and Istanbul with a capacity of 300 MW each. Its purpose is to transmit the output of the Gokçekaya power plant to the 154 KV grid at Istanbul and Ankara. The Gokçekaya 380 KV plant substation and switchyard will take the place of the 154 KV substation in the Gokçekaya loan (AID No. 277-H-053). These funds and those for 154 KV transmission facilities in the prior loan will be used to partially meet the construction costs of the Gokçekaya 380 KV plant substation and switchyard.

21. Specific details and costs estimates, not including interest, of the project are as follows:

(1) Gokçekaya Plant Substation and Switchyard - See Annex II, Schedules A, B and C for details:

Ten (One spare) 35.1 MVA 14.4/380 KV single phase transformers, switchyard, structures, switches, circuit breakers, and appurtenances.

Foreign Exchange	\$4,400,000
Local Currency Equivalent	<u>1,753,000</u>
Total	\$6,153,000

Funds included in AID Loan No. 277-II-053 for the 154 KV substation, switchyard, and transmission lines:

Foreign Exchange	\$4,000,000
Local Currency Equivalent	<u>\$1,600,000</u>
Total	\$5,600,000

Net additional Funds needed for this portion of the project:

Foreign Exchange	\$ 400,000
Local Currency Equivalent	<u>\$ 153,000</u>
Total	\$ 553,000

(2) Gokçekaya - Ankara, Istanbul Transmission lines, See Annex II, Schedule D for details.

377 KM (234 miles) of 380 KV single circuit transmission line, dual bundle 964 MCM ACSR, steel towers.

Foreign Exchange	\$4,250,000
Local Currency Equivalent	<u>\$10,104,000</u>
Total	\$14,354,000

(3) Ankara and Istanbul Substations

Each substation consists of 2 - 380/154 KV 150 MW auto-transformers, structures, switches, circuit breakers, and appurtances. See Annex II, Schedules E, F, and G for details. Total costs for the two substations are as follows:

Foreign Exchange	\$2,960,000
Local Currency Equivalent	<u>\$1,918,000</u>
Total	\$4,878,000

Since this will be the first 380 KV project in Turkey, a training program for Turkish engineers in the U.S. is considered essential. This will

train 10 men in two groups of 5 men each. Each group will be trained for 3 months. Total costs are estimated as follows:

Foreign Exchange	\$ 80,000
Local Currency Equivalent	\$ 80,000
	<hr/>
Total	\$160,000

(5) Recapitulation of Net Costs

	<u>Foreign Exchange</u>	<u>Local Currency Equ.</u>
Gokçekaya Sub & Switchyard	\$ 400,000	\$ 153,000
380 KV transmission Line	4,250,000	10,104,000
Ankara & Istanbul Substatations	2,960,000	1,918,000
Training - Overseas	<u>80,000</u>	<u>80,000</u>
Total	\$7,690,000	\$12,255,000

H. Basis of Construction Cost Estimates

22. The cost estimates are based on U.S. procurement of all major components except the ACSR conductor and the steel for towers and structures. A joint venture of Etibank-Kaiser-Finska has resulted in the construction of an ACSR plant known as Turkkablo, near Izmit, Turkey. In October 1963 a Cooley Loan for \$800,000 equivalent was authorized by A.I.D. to cover some of the costs of this plant. This Cooley Loan was, in part, justified on the expectation that the quantities of ACSR required for this and similar projects could be supplied by Turkkablo. The ACSR costs are to be covered by local currency. Conductor accessories are included as dollar costs. In addition, dollars have been included for U.S. experts to assist in the handling and installation of these large conductors since Etibank has no experience in such installations. For many years, the Turks have been fabricating steel towers and structures from Turkish steel. With the exception of the U.S. experts referred to above, the cost estimates are based on the use of Turkish construction crews and the costs are covered by local currency. The basic cost estimates have been prepared by Ebasco and EIE. The loan committee and the Mission believe they are reasonable.

I. Basis of Engineering Cost Estimates

23. These are based full engineering services being supplied by a U.S. consulting engineering firm. These will include detailed design, preparation of plans and specifications, preparation of tender documents, factory inspection of material both in the U.S. and in Turkey, assistance in bid analysis, expediting, and supervision and inspection of construction.

J. Implementation Plan

24. Construction will be performed by Etibank with the assistance of U.S. experts for conductor stringing and with project management by a U.S. consulting engineering firm. The committee feels that this procedure will be satisfactory. Very close attention will be given to the scope of services of the engineer to assure that all needed functions are included. Engineering design time is estimated at one year and procurement and construction time at two years. Completion by mid 1968 is, therefore, anticipated. This is in sufficient time to meet the completion time of the Gokçekaya hydroelectric plant now estimated to be early 1969.

IV. ECONOMIC ANALYSIS

A. Contribution to the Economic Development of Turkey

25. The economic analysis of the Gokçekaya Dam and Hydroelectric Plant included as Section V of the loan paper for that loan remains valid for this transmission line loan. The load forecasts made by Ebasco for the Keban and Ciceroz (Gokçekaya) Feasibility Studies have been confirmed by the Battelle Memorial Institute study of the Keban Dam project. Electric power continues to be a basic need in Turkey's social, industrial and economic development and is emphasized in all of Turkey's development planning. Transmission lines must be a part of the Gokçekaya Project and AID is satisfied that the 380 KV lines are the appropriate and necessary facilities for the project, and that they will contribute to the development of Turkey's economic resources and productive capacities.

B. Impact on Turkey's Balance of Payments

26. This loan will not have an immediate effect on Turkey's balance on payments. On one scale of the balance, the loan is on development loan terms with a ten year grace period. On the other, it is for basic investment in electrical transmission facilities which will assist industrial development in Western and Central Turkey and may have an important beneficial effect on Turkey's future exports.

C. Effect of Loan on Private Enterprise Activities

27. Of the total amount of money proposed to be loaned, none is being loaned directly to private enterprise or to intermediate credit institutions. None is being loaned to the government for disbursement to finance the import of commodities by private enterprise or for the use of private enterprise. None of the loan is being loaned to the government to finance project work done under contract by private enterprise nor is any of the loan being loaned to a mixed enterprise. None of the loan will be used for direct purchase by the government from Turkish private enterprise, as procurement is limited to the U.S. The contemplated impact of the proposed loan on development of private enterprise in Turkey is two-fold. First, large amounts of local currency will be spent on procurement of equipment and services from Turkish manufacturers including an order of more than two million dollars worth of conductor cable to be manufactured in Turkey by a private firm. Second, the loan will improve electrical service in the areas covered and will indirectly assist existing and future industries which need reliable power.

V. FINANCIAL ANALYSIS

28. For a full discussion of the financial situation of Etibank, see pages 13 through 21 of the loan paper for the loan to the Government of Turkey for overhead transmission lines to thirty-two load centers (277-H-059). This analysis is recent enough to be relevant to the consideration of this loan. The financial analysis states, at page 19, that Etibank maintains a sound capital structure, with borrowed and own long-term resources in a stable and healthy relationship of 1.5 to 1. Its banking transactions show an encouraging increase in volume and profits, with more room for balanced future growth. However, overall profitability is declining, mainly due to rising costs of sales, increasing interest and commission expenses and loss write-offs. Liquidity has suffered as a result, with expanding sales and new investments into fixed assets (buildings, plants, equipment) placing further demands on current financial resources.

29. The Administration of Power Plants has been suffering from the profit squeeze with the rest of the organization. Its costs, mainly for outside power are increasing more rapidly than income from the sale of electricity. The 10% increase in the price of electric power sold, projected for 1965, is insufficient to wipe out the TL 11.7 million loss expected this year.

30. Based on sound capitalization and growing sales, Etibank may have a good future, if the causes for growing costs of operations are attacked soon. The first steps are a new accounting system, better financial controls

and the establishment of profit centers with a clear performance responsibility. As the probable increases in Etibank's most profitable operation, copper sales, will not add sufficiently to gross income, and since considerable time is required to bring rising production costs under control, no immediate changes for the better are apparent at this time.

31. The Administration of Power Plants should aim at establishing profitable operations. Initial corrective measures should include (a) the separation of the Administration of Power Plants into a financial entity with its own capital and operational resources, clearly determined profit responsibility and one controllable account showing individual profit transfers; (b) the investigation of rising production costs, particularly for outside power; and (c) the investigation of the present electric sales tariff, its impact on industrial and individual consumers, and the possibility of its further upward revision.

VI. REPAYMENT PROSPECT

32. The loan will be made to the Republic of Turkey, which has been determined to be a suitable borrower of Development Loan Funds and to which project loan funds have been pledged by the United States as a member of the Turkey Consortium. Etibank will borrow the funds from the Government of Turkey and will agree to repay them upon terms satisfactory to A.I.D. and similar to the terms of repayment for the re-lending to Etibank in the overhead transmission line loan (2770H-059) which are now being negotiated.

VII. IMPACT ON U.S. ECONOMY

33. The impact on the U.S. economy will consist of substantial purchases here of electrical equipment including transformers, circuit breakers, insulators, carrier equipment, etc. The loan will also provide funds to obtain services of U.S. engineering firms for consulting and supervisory work. Construction of the facilities will result in future orders of spare parts and replacements from U.S. suppliers.

VIII. ISSUES

None

IX. CONCLUSIONS AND RECOMMENDATIONS

34. The Capital Assistance Committee concludes that this loan is an appropriate use of Development Loan Funds; that it is necessary to the implementation of loan 277-H-053 for the dam and hydroelectric plant, and was contemplated by the Agency when that loan was approved; that the loan for 380 KV transmission lines is justified by the technical studies which have been completed since the authorization of loan 277-H-053.

35. The committee recommends that the loan be authorized and then coordinated with loan 277-H-053 as much as possible. The loan agreement for 277-H-053 should be amended to eliminate from the project description in Section 1.2 the clause "and approximately ninety-seven miles of 154 KV transmission lines running from said installation to Eskisehir and to the Sariyar power plant." The project description in that loan agreement should be amended to describe the substation which will be constructed with funds in loan 277-H-053 now allocated to transmission lines. The first Letter of Implementation for loan 277-H-053 should be amended to reflect these changes and the new cost estimates for the higher voltage lines so that it will be clear that loan 277-H-053 may be used for construction of the dam, the power plant and the 380 KV transmission facilities up to the total amount of the loan and that this new loan will be for the additional costs of the 380 KV transmission facilities.

Table 1
CICEROZ TRANSMISSION STUDY
POWER SOURCE ADDITIONS
 (No. Units and Mw Each)

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>Total Additions</u>
PLAN A (With additional ties to Area E)											
Keban	3-150	1-150			1-150		1-150			1-150	1 050
Izmir	1-150					1-150					300
Istanbul								2-150			300
Izmit									2-150		300
											<u>1 950</u>
PLAN B1 (With additional ties to Area E)											
Istanbul	2-150										300
Izmir	1-150		1-150							1-150	450
Izmit				1-150	1-200	1-200		1-200	1-300		<u>1 050</u>
											1 800
PLAN B2 (Without additional ties to Area E)											
Istanbul	2-150										300
Izmit				1-150	1-200	1-200		1-200	1-300		1 050
Izmir	2-150			1-150					1-150		<u>600</u>
											1 950
PLAN C (With additional ties to Area E)											
Kutahya	2-150										300
Izmir	1-150				1-150						300
Istanbul			1-150	1-150							300
Izmit						1-150	1-150	1-200	1-200	1-200	<u>900</u>
											1 800
DEMAND - Mw											
Areas A, B, C, D	1 240	1 335	1 435	1 525	1 640	1 765	1 900	2 040	2 190	2 360	
Area E	316	334	354	375	405	435	465	500	535	575	
Areas A, B, C, D, E	1 556	1 669	1 789	1 900	2 045	2 200	2 365	2 540	2 725	2 935	

Note: 1970 Capability without above additions totals 1425 mw for Areas A, B, C, D, E as follows:
 Ciceroz 300, Silahtar 100, Catalagzi 106, Tuncbilek 120, Istanbul 220, Areas A, B, C, D hydro 357,
 Areas A, B, C, D minor thermal 35, Area E hydro 117, Area E thermal 70.

AID-DIC/P-325
 May 20, 1975
 ANNEX I
 Table 1

Table 2
CICEROZ TRANSMISSION STUDY
COMPARISON OF TRANSMISSION REQUIREMENTS FOR ALTERNATIVE PLANS
CICEROZ PLANT CONNECTIONS AT 154 KV

<u>1969 Minimum</u>	<u>Plan A</u>	<u>Plan B1</u>	<u>Plan B2</u>	<u>Plan C</u>
154 kv Ciceroz-Sariyar				
154 kv Ciceroz-Eskisehir				
154 kv Sariyar-Ankara (2nd)				
154 kv Ciceroz-Adapazari				
154 kv Adapazari-Izmit (3rd)				
	380 kv Ankara-Istanbul (2)			
	<u>1970</u>	<u>1970</u>	<u>1970</u>	<u>1970</u>
	380 kv Keban-Antara (2)	154 kv Tuncbilek-Izmir		154 kv Pasalar-Adapazari (3rd)
	154 kv Tuncbilek-Izmir			154 kv Izmit-Istanbul (3rd)
				154 kv Kutahya-Eskisehir
				154 kv Kutahya-Izmir
	<u>1973</u>	<u>1973</u>	<u>1973</u>	<u>1973</u>
	380 kv Adapazari Tap	380 kv Istanbul-Izmit	380 kv Istanbul-Izmit	380 kv Istanbul-Adapazari
	154 kv Adapazari-Eregli (2)	380 kv Izmit-Adapazari	380 kv Izmit-Adapazari	380 kv Adapazari-Eregli
		380 kv Adapazari-Eregli	380 kv Adapazari-Eregli	380 kv Eregli-Ankara
		380 kv Eregli-Ankara	380 kv Eregli-Ankara	
	<u>1975</u>	<u>1975</u>	<u>1975</u>	<u>1975</u>
		380 kv Istanbul-Ankara	380 kv Istanbul-Ankara	380 kv Istanbul-Ankara
				380 kv Izmit Plant Tap
	<u>1977</u>	<u>1977</u>	<u>1977</u>	<u>1977</u>
	380 kv Adapazari-Kutahya	380 kv Adapazari-Kutahya		

ATD-0111/P-11
 May 1972
 AHHK/J
 Table 2

Table 3
 CICEROZ TRANSMISSION STUDY
 COMPARISON OF TRANSMISSION REQUIREMENTS FOR ALTERNATIVE PLANS
 CICEROZ PLANT CONNECTIONS AT 380 KV

<u>1969 Minimum</u>	<u>Plan A</u>	<u>Plan B1</u>	<u>Plan B2</u>	<u>Plan C</u>
380 kv Ciceroz-Ankara				
380 kv Ciceroz-Istanbul				
	380 kv Ankara-Istanbul			
	<u>1970</u>	<u>1970</u>	<u>1970</u>	<u>1970</u>
	380 kv Keban-Ankara (2)	154 kv Tuncbilek-Izmir		380 Ciceroz-Kutahya
	154 kv Tuncbilek-Izmir			154 kv Kutahya-Eskisehir
				154 kv Kutahya-Izmir
	<u>1973</u>	<u>1973</u>	<u>1973</u>	<u>1973</u>
	380 kv Adapazari Tap	380 kv Adapazari-Eregli	380 kv Adapazari-Eregli	380 kv Adapazari-Eregli
	154 kv Adapazari-Eregli (2)	380 kv Eregli-Ankara	380 kv Eregli-Ankara	380 kv Eregli-Ankara
		380 kv Izmit Plant Tap	380 kv Izmit Plant Tap	
		380 kv Adapazari Tap	380 kv Adapazari Tap	
	<u>1975</u>	<u>1975</u>	<u>1975</u>	<u>1975</u>
		380 kv Istanbul-Adapazari	380 kv Istanbul-Adapazari	380 kv Istanbul-Izmit
				380 kv Izmit-Adapazari
	<u>1977</u>	<u>1977</u>	<u>1977</u>	<u>1977</u>
	380 kv Ciceroz-Kutahya	380 kv Ciceroz-Kutahya		

AID-DJL/P-300
 May 1979, 1 p. 1
 ANKARA
 Table 3

Table 4
 CICEROZ TRANSMISSION STUDY
COMPARATIVE COST SUMMARY OF ALTERNATIVE PLANS
 (Thousands of Dollars)

	<u>Comparative Capital Investment</u>		<u>Interest Rate: 3-1/2% Foreign 6% Local</u>				<u>Interest Rate: 8% Foreign 8% Local</u>			
			<u>Summation of Annual Costs</u>		<u>Present Worth (1970) of Annual Costs</u>		<u>Summation of Annual Costs</u>		<u>Present Worth (1970) of Annual Costs</u>	
<u>CICEROZ AT</u>	<u>154 kv</u>	<u>380 kv</u>	<u>154 kv</u>	<u>380 kv</u>	<u>154 kv</u>	<u>380 kv</u>	<u>154 kv</u>	<u>380 kv</u>	<u>154 kv</u>	<u>380 kv</u>
<u>PLAN A</u>										
1968-69	30 020	29 400	3 246	3 202	3 323	3 276	5 132	5 128	5 337	5 333
1970-79	<u>444 380</u>	<u>437 210</u>	<u>426 665</u>	<u>422 907</u>	<u>325 064</u>	<u>322 178</u>	<u>525 738</u>	<u>519 993</u>	<u>362 023</u>	<u>357 930</u>
Total	474 400	466 610	429 911	426 109	328 387	325 454	530 870	525 121	367 360	363 263
<u>PLAN B1</u>										
1968-69	8 820	17 140	988	1 880	1 012	1 923	1 536	3 020	1 597	3 141
1970-79	<u>260 520</u>	<u>242 120</u>	<u>510 672</u>	<u>506 984</u>	<u>388 672</u>	<u>386 247</u>	<u>560 943</u>	<u>556 803</u>	<u>384 600</u>	<u>382 906</u>
Total	269 340	259 260	511 660	508 864	389 684	388 170	562 479	559 823	386 397	386 047
<u>PLAN B2</u>										
1968-69	8 820	17 140	988	1 880	1 012	1 923	1 536	3 020	1 597	3 141
1970-79	<u>266 350</u>	<u>249 840</u>	<u>528 971</u>	<u>525 490</u>	<u>403 824</u>	<u>401 557</u>	<u>582 564</u>	<u>578 920</u>	<u>400 986</u>	<u>399 361</u>
Total	275 170	266 980	529 959	527 370	404 836	403 480	584 100	581 940	402 583	402 502
<u>PLAN C</u>										
1968-69	8 820	17 140	988	1 880	1 012	1 923	1 536	3 020	1 597	3 141
1970-79	<u>273 720</u>	<u>262 550</u>	<u>552 829</u>	<u>546 326</u>	<u>422 927</u>	<u>418 325</u>	<u>607 832</u>	<u>602 682</u>	<u>419 855</u>	<u>416 342</u>
Total	282 540	279 690	553 817	548 206	423 939	420 248	609 368	605 702	421 452	420 063

ATT-DRC/P-3
 May 22, 1970
 ALBERT J
 YADON

Gokcekaya Plant Substation and Switchyard

	ALL SUMS IN - 000's			
	Foreign \$	Local T L	Total \$	Total T L
<u>380 kv Gokcekaya (Recommended Plan-1964)</u>				
Rough Grade	75	225	100	902
Surface Fence Lighting	19	303	53	477
Foundations	22	342	60	542
Structures	38	1,329	185	1,671
Conduits - Ducts	<u>21</u>	<u>297</u>	<u>54</u>	<u>487</u>
Civil & Contract	175	2,496	452	4,079
Transformers	1,263	629	1,332	12,015
Circuit Breakers	1,373	673	1,448	13,054
Disconnect Switches	145	99	156	1,407
Switchboard	5	5	5	49
Inst. Transformers	9	5	10	94
Lightning Arresters	41	27	44	397
Carrier Equipment	<u>41</u>	<u>27</u>	<u>44</u>	<u>397</u>
Major Electrical	1,614	836	1,707	15,398
Tr. Fire Protection	20	27	23	207
Bus & Insulators	87	160	104	938
Wiring	36	72	44	397
Grounding	<u>14</u>	<u>45</u>	<u>19</u>	<u>171</u>
Other Electrical	157	304	190	1,713
Subtotal	3,209	4,265	3,681	33,205
O&C & Escalation	<u>481</u>	<u>640</u>	<u>552</u>	<u>4,980</u>
Subtotal	3,690	4,905	4,233	38,185
INDirect Construction Cost & Overhead	400	700	478	4,300
Engineering	<u>310</u>	<u>195</u>	<u>332</u>	<u>2,900</u>
Total	4,400	5,800	5,043	45,385
Interest during Construction	220	600	287	2,540
Taxes and Duties	<u>-</u>	<u>10,000</u>	<u>1,110</u>	<u>10,000</u>
Grand Total	4,620	16,400	6,440	57,925

DETAILED DESCRIPTION OF 380 KV GOKCEKAYA PLANT SUBSTATION AND SWITCHYARD

The step-up facilities for the Gokcekaya three generators consist of three 14.4 kv delta-380 kv wye connected main transformer banks, located on the Transformer Deck. Each bank consists of three FOA single phase transformers rated 35.1 mva at 55°C rise and 40.0 mva at 65°C rise. One spare transformer and a transformer transfer car and track are provided.

Transformer surge protection is provided by spill gaps on the high voltage bushings and by separately mounted 336 kv lightning arresters connected to the high voltage terminals. One spare lightning arrester is provided.

The 380 kv overhead spans for each unit take off from the transformer pull-off structure, located on the Transformer Deck at Elevation 288.0 meters, and run up the bank behind the power house via intermediate steel towers to terminate at switchyard type AM towers, located in the switchyard at Elevation 400.0 meters. The conductors are 2-954 Mcm ACSR per phase and the shield wires are 7/16 inch galvanized steel. Phase spacing is 7.60 meters.

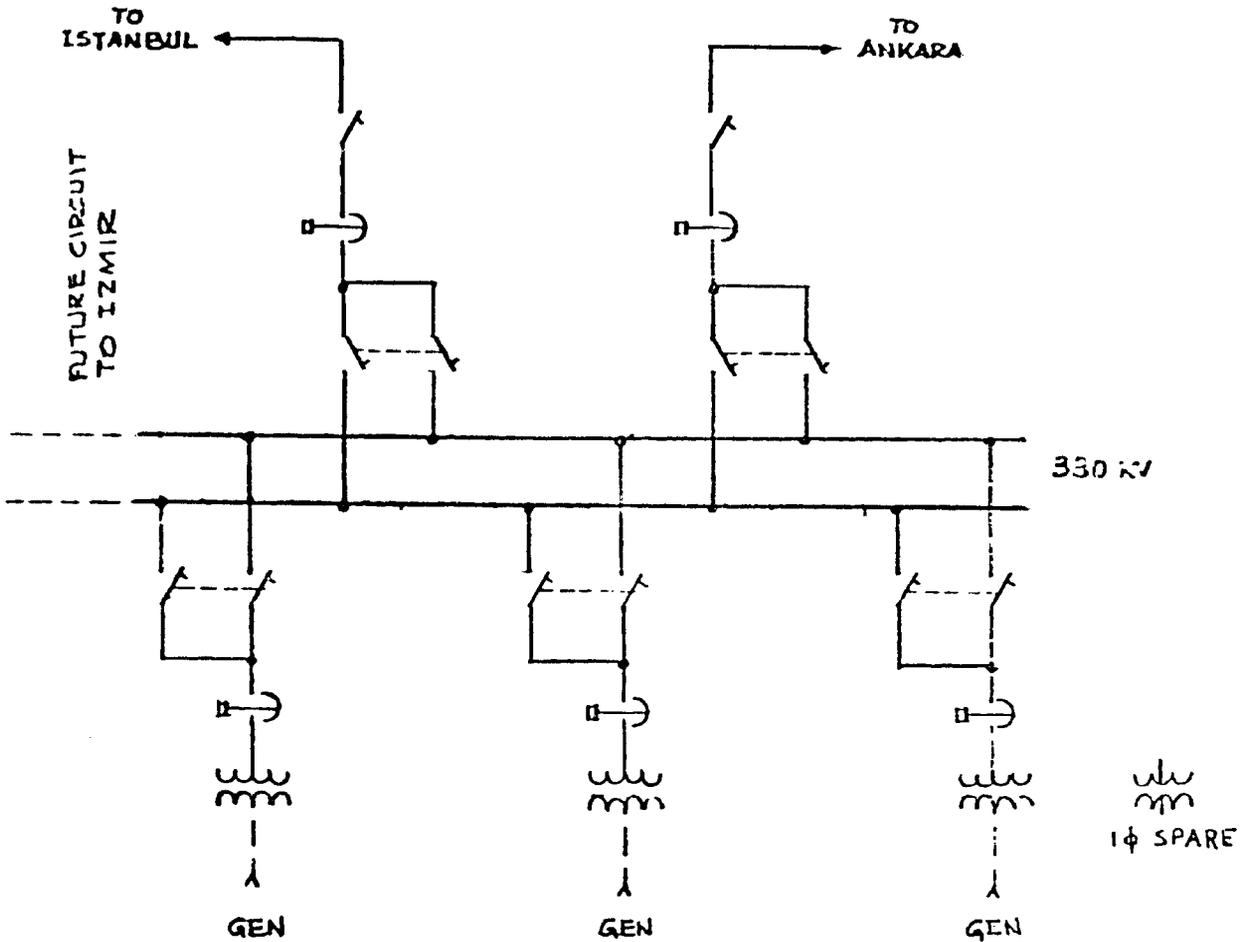
The six-bay double bus 380 kv switchyard provides for three generator units, two transmission line circuits and space for one future transmission line circuit. The two main buses are 2-954 Mcm ACSR per phase strain buses run the length of the yard. Each main bus is provided with one coupling capacitor potential device for bus voltage instrumentation.

Each of the three generator bays and each transmission line bay requires a power circuit breaker rated 1600 amperes, 420 kv, 15,000 mva. However, this breaker rating is not currently available in the USA and manufacturers advise that the nearest rating is 2000 amperes, 500 kv, 35,000 mva. For each power circuit breaker two main bus selector disconnecting switches are provided. These will be rated 420 kv, 1600 amperes.

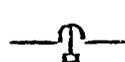
In each generator bay two sets of current transformers will be provided for unit and bus differential relaying.

In each line bay four sets of current transformers will be provided for bus differential relaying, line primary relaying, line backup relaying, and instrumentation. Other line bay accessories include 3 line isolating disconnecting switches, 3 lightning arresters, a single frequency carrier current wave trap, and coupling capacitor with potential devices.

AED-DW/P-11
 May 20, 1965
 ANNEX II
 Schedule C



LEGEND

-  DISCONNECTING SWITCH
1600A, 420KV, 3-POLE, 1470KV BIL
-  POWER CIRCUIT BREAKER
1600A, 420KV, 1470KV BIL
15000MVA, 3-POLE
-  MAIN STEP-DOWN TRANSFORMER BANK
3-35.1/40.0 MVA, 55/65 C,
14.4 - 380 KV

EBASCO SERVICES INCORPORATED
 NEW YORK

DIV. E.I.T.C. DR. J.R.
 SCALE ~ CM.
 DATE MAY 17, 1965

APPROVED

GOKCEKAYA H.T. PROJECT
 ONE LINE WIRING DIAGRAM
 330KV SWITCHYARD
 100% RECOMMENDED PLAN

AED-DW-16-2

AID-DIC/P- 300
 May 20, 1960
 AREA II
 Schedule D

380 kv, ZONE 1 - LIGHT - 377 km

<u>Description</u>	<u>ALL SUMS IN - 000's</u>			
	<u>Foreign</u> <u>\$</u>	<u>Local</u> <u>T L</u>	<u>Total</u> <u>\$</u>	<u>Total</u> <u>T L</u>
Clearing Right of Way	-	1,185	131	1,185
Steel Towers	725	20,285	2,975	26,824
Guys & Anchors	343	805	432	3,899
Conductors	1,330	31,944	4,871	44,672
Shield Wires	410	500	465	4,198
Insulators & Hardware	<u>845</u>	<u>550</u>	<u>906</u>	<u>8,172</u>
Subtotal	<u>3,653</u>	<u>55,269</u>	<u>9,780</u>	<u>88,950</u>
SUPERVISION OF CONSTRUCTION	276	5,885	928	8,374
OTHER INDIRECT CHARGES	-	3,220	357	3,220
ENGINEERING DESIGN	185	83	194	1,752
OTHER OVERHEAD CHARGES	136	-	136	1,227
LAND & RIGHTS OF WAY	<u>-</u>	<u>527</u>	<u>59</u>	<u>527</u>
Subtotal (Before Interest)	<u>4,250</u>	<u>64,984</u>	<u>11,454</u>	<u>104,050</u>
<u>INTEREST DURING CONSTRUCTION</u>				
FOREIGN	215	-	215	1,940
LOCAL	<u>-</u>	<u>5,849</u>	<u>649</u>	<u>5,849</u>
Total Without Taxes	<u>4,465</u>	<u>70,833</u>	<u>12,318</u>	<u>111,839</u>
TAXES & DUTIES	<u>-</u>	<u>26,000</u>	<u>2,900</u>	<u>26,000</u>
Total With Taxes (Transmission Lines)	<u>4,465</u>	<u>96,833</u>	<u>15,218</u>	<u>137,839</u>

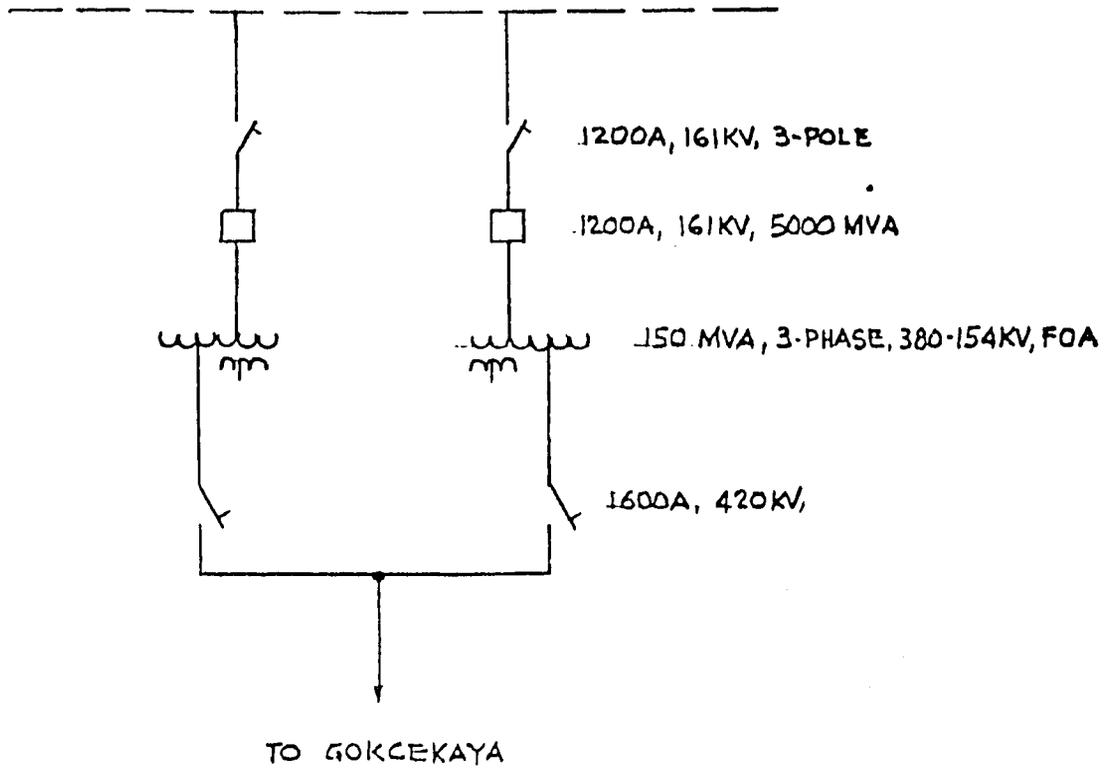
AID-106 / P- 100
 May 1965, 1966
 A PEX 11
 Column E

Ankara and Istanbul Substations

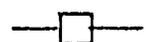
<u>Descriptions</u>	ALL SUMS IN - 000's			
	<u>Foreign</u> <u>\$</u>	<u>Local</u> <u>T L</u>	<u>Total</u> <u>\$</u>	<u>Total</u> <u>T L</u>
Site Improvements	20	280	51	160
Foundations	12	199	34	307
Structures	11	429	58	528
Conduit - Ducts	6	82	15	135
Transformers	901	412	947	8,539
Circuit Breakers	183	97	194	1,748
Disconnect Switches	68	64	75	677
Switchboard	9	18	11	99
Inst. Transformers	4	3	4	36
Lightning Arresters	30	27	33	298
Carrier Equipment	35	26	38	343
Bus & Insulators	65	96	76	685
Wiring	11	24	14	126
Grounding	<u>5</u>	<u>11</u>	<u>6</u>	<u>54</u>
Ankara - 300 mva	1,360	1,768	1,556	14,035
Istanbul - 300 mva - Same Cost as above	<u>1,360</u>	<u>1,768</u>	<u>1,556</u>	<u>14,035</u>
Subtotal	2,720	3,536	3,112	28,070
Supervision of Construction	44	867	140	1,264
Other Indirect Charges	-	440	49	440
Engineering Design	155	40	159	1,438
Other Overhead Charges	41	-	41	370
Land & Rights of Way	<u>-</u>	<u>350</u>	<u>39</u>	<u>350</u>
Subtotal (Before Interest)	2,960	5,233	3,540	31,932
<u>Interest During Construction</u>				
Foreign	155	-	155	1,398
Local	<u>-</u>	<u>471</u>	<u>52</u>	<u>471</u>
Total Without Taxes	3,115	5,704	3,747	33,801
Taxes & Duties	<u>-</u>	<u>12,000</u>	<u>1,338</u>	<u>12,000</u>
Total With Taxes (Remote Substations)	3,115	17,704	5,085	45,801

AID-DLC/P-3
 May 27, 1965
 ANNEX II
 Schedule F

154 KV PROPOSED
 SUBSTATION



LEGEND

-  DISCONNECTING SWITCH
-  POWER CIRCUIT BREAKER
-  AUTOTRANSFORMER WITH TERTIARY 36 KV

EDASCO SERVICES INCORPORATED
 NEW YORK

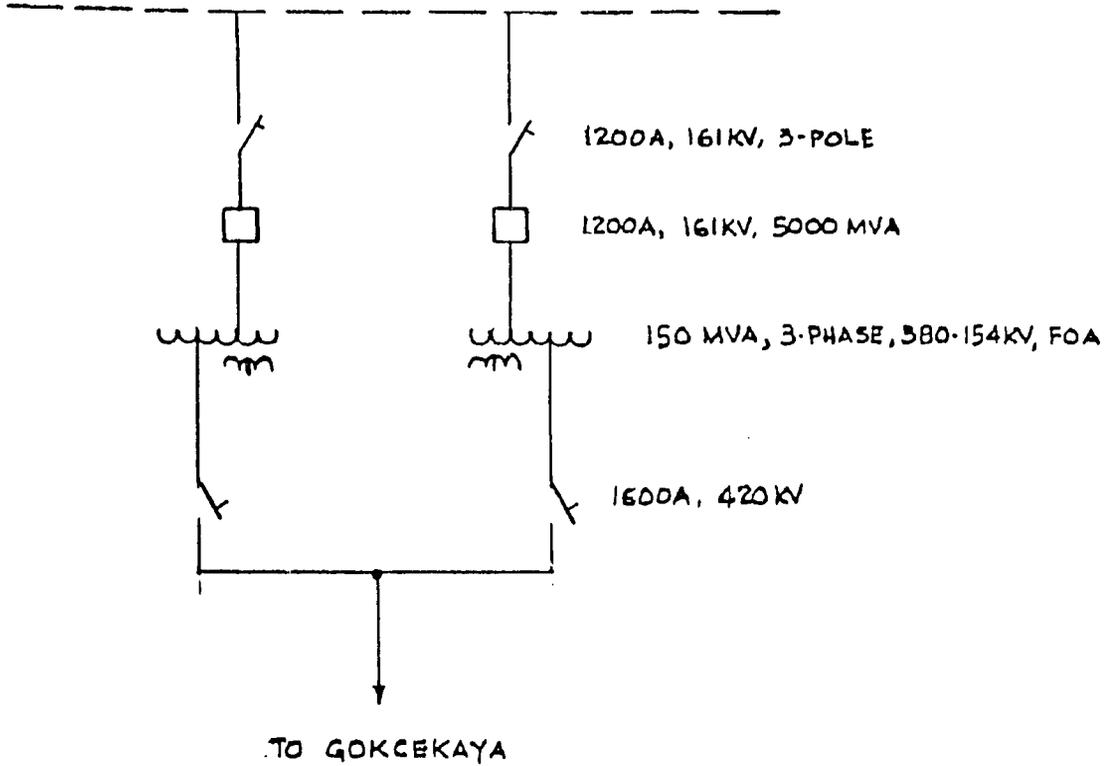
DIV. 1130 DR. TR
 SCALE 1/2" CH. 1
 DATE MAY 17 1965

APPROVED

ANKARA SUBSTATION EXTENSION
 ONE LINE WIRING DIAGRAM

A-5066-3

154 KV EXISTING
 SUBSTATION



LEGEND

-  DISCONNECTING SWITCH
-  POWER CIRCUIT BREAKER
-  AUTOTRANSFORMER
WITH TERTIARY 36 KV

EBASCO SERVICES INCORPORATED
 NEW YORK

DIV. ELEC DR. TR
 SCALE ~ CH.
 DATE MAY 17, 1965

APPROVED

ISTANBUL SUBSTATION EXTENSION
 ONE LINE WIRING DIAGRAM

A-5066-4

TURKEY-GOKÇEKAYA
TRANSMISSION LINES

STATUTORY CHECKLIST

1. FA Sec. 102. Precautions that have been or are being taken to assure loan proceeds are not diverted to short-term emergency purposes (such as budgetary, balance of payments, or military purposes) or any other purpose not essential to the country's long-range economic development. - - The loan agreement will require that loan proceeds be used directly on the project described in the paper.
2. FA Sec. 201(b). Manner in which loan will promote country's economic development, emphasizing help for long-range plans and programs designed to develop economic resources and increase productive capacities. - - Covered in the Section titled "Economic Analysis".
3. FA Sec. 201(b)(1). Information and conclusion on availability of financing from other free-world sources, including private sources within the United States. -- The Export-Import Bank is unwilling to consider this application. Funds from private sources are not available upon development loan terms.
4. FA Sec. 201(b)(2). Information and conclusion on activity's economic and technical soundness, including the capacity of the recipient country to repay the loan at a reasonable rate of interest. - - Covered in the Sections titled "Economic Analysis" and "Repayment Prospects".
5. FA Sec. 201(b)(3). Information and conclusion on existence of reasonable promise activity will contribute to development of economic resources or increase of productive capacities. - - Covered in the Section titled "Economic Analysis".
6. FA Sec. 201(b)(4). Information and conclusion on activity's relationship to other development activities, and its contribution to realizable long-range objectives. - - Covered in the Section titled "Economic Analysis".
7. FA Sec. 201(b)(5). Country's self-help measures, including institution of Foreign Assistance Act investment guaranty programs. - - Discussed in LAS. Turkey has an agreement with the U.S. on Investment Guaranties.

The following abbreviations are used:

FA Foreign Assistance Act of 1961, as amended by the Foreign Assistance Act of 1964.

App. Foreign Assistance and Related Agencies Appropriation Act, 1965.

8. FA Sec. 201(b)(6). Information and conclusion on possible effects on U.S. economy, with special reference to areas of substantial labor surplus. - - The project will have no large effect on the U.S. economy other than by procurement of goods and services. No information is available as to whether any specific labor surplus area in the U.S. will be benefited.
9. FA Sec. 201(b). Information and conclusion on reasonable prospects of repayment. - - Covered in Section "Repayment Prospects".
10. FA Sec. 201(d). Information and conclusion on legality (under laws of the country and the U.S.) and reasonableness of lending and relending terms. - - Similar loans have been made, and this loan will be made, in compliance with U.S. and Turkish law. The LAS justifies the development loan terms.
11. FA Sec. 201(e). Information and conclusion on availability of an application together with sufficient information and assurances to indicate reasonably that funds will be used in an economically and technically sound manner. - - An adequate application and other sufficient information have been received, as described in the loan paper.
12. FA Sec. 201(f). If a project, information and conclusion whether it will promote the economic development of the requesting country, taking into account the country's human and material resource requirements and the relationship between the ultimate objectives of the project and the country's overall economic development. - - Covered in the Section titled "Economic Analysis".
13. FA Sec. 201(f). If a project, information and conclusion whether it specifically provides for appropriate participation by private enterprise. - - The borrower is the Government of Turkey. U.S. private enterprise will supply equipment and services. Much of the local currency component will be spent with local Turkish private firms.
14. FA Sec. 202(a). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use by private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements from private sources. - - See Part 3 of Section titled "Economic Analysis".
15. FA Sec. 601. Information and conclusions whether loan will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture, and commerce; (f) strengthen free labor unions. - - (a) The loan would encourage the flow of international trade since all the

funds will be spent for items to be imported from the U.S. (b) Private initiative and competition should be encouraged by improved power service. (c) The loan would have no direct effect on the development and use of cooperatives, credit unions and savings and loan associations. (d) The loan would have no effect on monopolistic practices, though it should be noted that Etibank is publicly owned. (e) The project would improve technical efficiency of industry, agriculture and commerce by providing cheaper and more reliable service. (f) The loan would have no known effect on strengthening free labor unions.

16. FA Sec. 601(d). Conclusion and supporting information on compliance with the Congressional policy that engineering and professional services of U.S. firms and their affiliates are to be used in connection with capital projects to the maximum extent consistent with the national interest. - - Engineering services will be required by the loan agreement and will be obtained from private sources in the U.S.
17. FA Sec. 601, 602. Information and conclusions whether loan will (a) encourage U.S. private trade and investment abroad; (b) encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise), and (c) permit American small business to participate equitably in the furnishing of goods and services financed by it. - - (a) The loan would encourage the export of U.S. products to Turkey. (b) All procurement would be from U.S. private enterprise. (c) American small business would have an opportunity to participate in the furnishing of goods and services by contracting with the U.S. power equipment manufacturing companies. The Loan Agreement would include the usual provision to maximize the opportunity for such participation.
18. FA Sec. 604(a). Compliance with restriction of commodity procurement to U.S. except as otherwise determined by the President and subject to statutory reporting requirements. - - Procurement will be limited to the U.S.
19. FA Sec. 604(b). Compliance with bulk commodity procurement restriction to prices no higher than the market price prevailing in the U.S. at time of purchase. - - A provision to this effect will be in the Loan Agreement.
20. FA Sec. 604(d). Compliance with requirement that marine insurance be purchased on commodities if the participating country discriminates, and that such insurance be placed in the U.S. - - This will be covered in the Loan Agreement.

21. FA Sec. 611(a)(1). Information and conclusion on availability of engineering, financial, and other plans necessary to carry out the assistance and of a reasonably firm estimate of the cost of the assistance to the United States. - - Covered in Section titled "Technical Analysis" and the provision of engineering services will also be dealt with in the Loan Agreement. Sufficient information has been received to indicate that the loan will meet the costs of the project.
22. FA Sec. 611(a)(2). Necessary legislative action required within recipient country and basis for reasonable anticipation such action will be completed in time to permit orderly accomplishment of purposes of loan. - - No necessary legislative action is required.
23. FA Sec. 611(b); App. Sec. 101. If water or water related land resource construction project or program, information and conclusion on benefit-cost computation. - - Covered in Section titled "Technical Analysis".
24. FA Sec. 611(c). Compliance with requirement that contracts for construction be made on competitive basis to maximum extent practicable. - - Appropriate provision for this requirement will be made in the Loan Agreement.
25. FA Sec. 619. Compliance with requirement that assistance to newly independent countries be furnished through multilateral organizations or plans to maximum extent appropriate. - - Although Turkey is not a "Newly independent country", assistance to Turkey is based on consortium meetings in which participants include international lending agencies.
26. FA Sec. 620(a); App. Sec. 107. Compliance with prohibitions against assistance to Cuba and any country (a) which furnishes assistance to Cuba or fails to take appropriate steps by February 14, 1964 to prevent ships or aircraft under its registry from carrying equipment, materials, or supplies from or to Cuba; or (b) which sells, furnishes or permits any ships under its registry from carrying items of primary strategic significance, or items of economic assistance. - - Turkey is not in violation of this section.
27. FA Sec. 620(b). If assistance to the government of a country, existence of determination it is not controlled by the international Communist movement. - - Turkey is not controlled by the international Communist movement.

28. FA Sec. 620(c). If assistance to the government of a country, existence of indebtedness to a U.S. citizen for goods or services furnished or ordered where such citizen has exhausted available legal remedies or where the debt is not denied or contested by such government or the indebtedness arises under an unconditional guaranty of payment given by such government. - - Turkey is not ineligible under this section.
29. FA Sec. 620(d). If assistance for any productive enterprise which will compete with U.S. enterprise, existence of agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan. - - Not applicable.
30. FA Sec. 620(e). If assistance to the government of a country, extent to which it (including government agencies or subdivisions) has, after January 1, 1962, taken steps to repudiate or nullify contracts or taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking appropriate steps to discharge its obligations. - - Turkey is not ineligible under this section.
31. FA Sec. 620(f); App. Sec. 109. Compliance with prohibitions against assistance to any Communist country. - - Turkey is not a Communist country.
32. FA Sec. 620(g). Compliance with prohibition against use of assistance to compensate owners for expropriated or nationalized property. - - Not applicable. Funds will not be so used.
33. FA Sec. 620(h). Compliance with regulations and procedures adopted to insure against use of assistance in a manner which, contrary to the best interests of the U.S., promotes or assists the foreign aid projects or activities of the Communist-bloc countries. - - The Loan Agreement will contain provision on this point.
34. FA Sec. 620(i). Existence of determination that the country is engaging in or preparing for aggressive military efforts. - - No such determination under this statute has been made.
35. FA Sec. 620(k). If construction of productive enterprise where aggregate value of assistance to be furnished by U.S. will exceed \$100 million, identification of statutory authority. - - Not applicable.

36. FA Sec. 620(1). Compliance with prohibition against assistance after 31 December 1965 for the government of a country which fails to institute investment guaranty program. - - Turkey has agreed to an Investment Guaranty Program.
37. FA Sec. 636(h); 612(c). Appropriate steps that have been taken to assure that, to maximum extent possible, country is contributing local currencies to meet the cost of contractual and other services and foreign currencies owned by the U.S. are utilized to meet the cost of contractual and other services. - - The GOT will furnish necessary local currency. U.S. owned Turkish Lira is used for all administrative and program costs in lieu of dollars, to the maximum extent possible.
38. App. (Sec. Unnumbered). Use of funds to carry out FA Sec. 205, which pertains to IDA. - - Not applicable.
39. App. Sec. 102. Compliance with requirement that payments in excess of \$25,000 for architectural and engineering services on any one project be reported to Congress. - - Any such payments will be reported.
40. App. Sec. 104. Compliance with bar against funds to pay pensions, etc., for military personnel. - - Funds will not be used for this purpose.
41. App. Sec. 111. Compliance with requirement for security clearance of personnel under contracts for services. - - All such personnel will be cleared.
42. App. Sec. 112. Compliance with requirement for approval of contractors and contract terms for capital projects. - - Specifications, contractors and contract terms will be reviewed for approval by AID.
43. App. Sec. 114. Compliance with bar against use of funds to pay assessments, etc., of U.N. member. - - Funds will not be used for such purposes.
44. App. Sec. 117. Compliance with regulations on employment of U.S. and local personnel for funds obligated after 30 April 1964. - - Appropriate provision for compliance with such regulations would be included in the implementing documentation.
45. App. Sec. 401. Compliance with bar against use of funds for publicity or propaganda purposes within U.S. not heretofore authorized by Congress. - - Funds will not be used for this purpose.

CAPITAL ASSISTANCE LOAN AUTHORIZATION
Provided from: Development Loan Funds
(Turkey - Gokcekaya Transmission Lines)

Pursuant to the authority invested in the Assistant Administrator, Bureau for Near East and South Asia, of the Agency for International Development (hereinafter called "A.I.D.") by the Foreign Assistance Act of 1961, as amended, and the Delegations of Authority issued thereunder, I hereby authorize the establishment of a loan pursuant to Part I, Chapter 2, Title 1, the Development Loan Fund, to the Government of Turkey, of not to exceed Seven Million Six Hundred Ninety Thousand Dollars, (\$7,690,000), such funds to be made available to Etibank to finance the foreign exchange costs of the construction of 380 KV electrical power transmission lines from the Gokcekaya Dam and Hydroelectric Plant to the Northwest Anatolia Grid System in Turkey, the construction of related substations and facilities, and acquisition and importation of necessary equipment, materials and services in connection therewith. This loan is to be subject to the following conditions:

1. Interest rate and terms of repayment

Government of Turkey. This loan shall be repaid by the Government of Turkey within forty (40) years after the date of the first disbursement thereunder, including a grace period of not to exceed ten (10) years. The interest on the disbursed balance of the loan shall be at the rate of one percent (1%) per annum during the ten (10) year grace period and at the rate of two and one half percent (2½%) per annum thereafter.

2. Currency of Repayment

Provision shall be made for repayment of the loan and payment of interest in United States dollars.

3. Other Terms and Conditions

3.1. The Government of Turkey shall make the funds available to Etibank by means of a reloan on terms acceptable to A.I.D.

3.2. Commodities and services financed under the loan shall be of United States source and origin.

3.3. A.I.D. shall receive appropriate assurance that:

3.3.1. The funds other than the loan authorized hereby necessary for the project shall be available when and as needed.

3.3.2. Firm orders have been placed for Aluminum Conductor Steel Reinforced (ACSR), and equipment ancillary thereto, required for the project.

ANNEX IV

3.3.3. Contractural or other arrangements have been or will be completed for the study of the Turkish Power Sector currently under consideration by the International Bank for Reconstruction and Development, the United Nations Special Fund, and the Government of Turkey.

3.4. Prior to the execution of the loan agreement for this project, the loan agreement for the Gokcekaya (formerly Ciceroz) Hydroelectric and Transmission Lines Project (A.I.D. Loan 277-H-053) shall be amended to give effect to the elimination from that project of the 154 KV transmission facilities originally included therein and to the incorporation therein of a KV substation and switchyard at Gokcekaya.

3.5. This loan shall be subject to such other terms and conditions as A.I.D. may deem advisable.

William B. Macomber, Jr.
Assistant Administrator
Bureau for Near East and South Asia

Date

L O A N A G R E E M E N T

Country: TURKEY

Project: Gokgekaya Transmission Lines

Among The
R E P U B L I C O F T U R K E Y ,
E T I B A N K ,
and the
U N I T E D S T A T E S O F A M E R I C A

Draft for Loan Paper

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AGREEMENT made and entered into as of the
day of 1965, among the Republic of Turkey ("Borrower"),
Etibank, and the UNITED STATES OF AMERICA, acting through the Agency
for International Development ("A.I.D.").

ARTICLE I. The Loan.

SECTION 1.1. The Loan. Subject to the terms and conditions
of this Agreement, A.I.D. agrees to lend to Borrower pursuant to the
Foreign Assistance Act of 1961, as amended, and Borrower agrees to
borrow from A.I.D. and relend to Etibank up to seven million, six hundred
ninety thousand United States Dollars (\$7,690,000) (the "Loan") for
the foreign exchange costs of goods and services required for the
Project as defined in Section 1.3. The funds disbursed hereunder are
herein referred to as "Principal". Goods and services financed hereunder
are referred to as "Eligible Items". References herein to the "Borrower
Country" are to Turkey.

SECTION 1.2. Reloan. Borrower hereby relends the Loan to
Etibank and Etibank hereby agrees to repay the same to Borrower in
semi-annual installments within twenty-five (25) years including a
grace period of five (5) years from the date of the first disbursement
provided for herein and shall pay Borrower interest semi-annually at
the rate of three and one-half percent (3-1/2%) per annum, which
interest shall accrue from the dates of the respective disbursements
provided for herein. Repayments of Principal and payments of interests
shall be due and payable to Borrower on June 15 and December 15 of each
year. The first such payment of interest shall be due and payable on

the first June 15 or December 15, which ever is earlier, after the first disbursement hereunder, and the first such repayment of Principal on the first June 15 or December 15, after the expiration of five years from the first disbursement.

NOTE: Above language and terms suggestive only.

SECTION 1.3. The Project. As used in this agreement, the term "Project" shall mean the construction of 380 kv electrical power transmission lines from Gokgekya Hydroelectric Power Plant to the Northwest Anatolia Grid System in Turkey, the construction of related substations and facilities, and the acquisition and importation of necessary equipment, materials and services in connection therewith.

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ARTICLE II. Terms of Repayment and Interest.

SECTION 2.1. Interest. Borrower shall pay interest semi-annually to A.I.D. in United States dollars on the unrepaid Principal and on any interest due and unpaid, computed on the basis of a 365-day year and at the rates hereinafter stated. The first such payment shall be due and payable six (6) months after the first disbursement hereunder or on such earlier date as A.I.D. may specify. Interest shall accrue from the dates of the respective disbursements at the rate, for the ten (10) years following the date of such first disbursement, of one percent (1%) per annum and thereafter at the rate of two and one-half percent (2-1/2%) per annum. Disbursements shall be deemed to occur on the dates on which payments by A.I.D. are made to Borrower or to its designee or to a banking institution pursuant to a letter of commitment.

SECTION 2.2. Principal. Borrower shall repay the Principal to A.I.D. in United States dollars in semi-annual installments in accordance with the terms of this Agreement and an amortization schedule to be provided Borrower by A.I.D. after all disbursements have been made. Such amortization schedule shall provide for repayment of the Principal within forty (40) years of the first disbursement hereunder in sixty-one (61) approximately equal semi-annual payments of Principal and interest, the first installment to be payable nine and one-half (9-1/2) years after the date on which the first interest payment is due.

SECTION 2.3. Application and Place of Payment. All payments shall be applied first to accrued interest and then to Principal. Except as A.I.D. may otherwise specify in writing, payments shall be made to the Controller, USAID Mission, Ankara, Turkey, and shall be deemed to have been made when received by said controller at such address.

SECTION 2.4. Prepayment. Borrower shall have the right to prepay all or any part of the Principal, without penalty, on any date on which interest is due. Except as A.I.D. may otherwise agree in writing, all prepayments shall be applied first to accrued interest and then to the remaining installments of Principal in the inverse order of their maturity.

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ARTICLE III. Conditions Precedent.

SECTION 3.1. Conditions Precedent to Initial Financing.

Prior to the issuance of the first letter of commitment and to any disbursement hereunder, Borrower shall, except as A.I.D. may otherwise agree in writing, furnish A.I.D. in form and substance satisfactory to A.I.D.:

- (a) An opinion or opinions of counsel satisfactory to A.I.D., that this Agreement has been duly authorized or ratified by and executed on behalf of Borrower and Etibank and constitutes a valid and legally binding obligation of Borrower and Etibank in accordance with its terms and that the person signing the Agreement on behalf of each of Borrower and Etibank has the authority to act as the representative of the Borrower and Etibank, respectively, in all matters pertaining to the Loan, the Reloan and this Agreement, including the authority to designate other representatives of the Borrower or of Etibank, as the case may be, pursuant to Section 5.2.
- (b) The name of the person or persons who will act as the additional representative or representatives of the Borrower and Etibank, respectively, pursuant to Section 5.2, together with evidence of his or their authority and a specimen signature of each such person certified as to its authenticity.

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- (c) Evidence or assurances of the availability of funds, other than the Loan, necessary for the Project;
- (d) Evidence that a contract for engineering services for the Project satisfactory to A.I.D. has been entered into with a firm acceptable to A.I.D.;
- (e) Such additional plans, documents or other submissions as A.I.D. may request.

SECTION 3.2. Additional Conditions Precedent to Financing Other Than Engineering Services. Prior to the issuance of letters of commitment or any disbursement for any Eligible Items other than engineering services, Borrower shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D. and at such times and places as A.I.D. may hereafter specify in writing:

- (a) Plans and time schedules for the procurement of goods, construction, installation and training program as required for the due and timely completion of the Project;
- (b) Evidence of arrangements for the procurement of goods, the installation thereof, the supervision of construction, and training services, as required for the Project. Such arrangements shall assure that to the maximum extent practicable, the Loan will not be used to finance the procurement of goods or services otherwise eligible for financing hereunder, if comparable goods or services are produced and available in the Borrower Country in sufficient quantity, or satisfactory quality and at a reasonable price;

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- (c) Evidence that all privileges, easements, including rights of way, permits and licenses necessary for the construction of the Project and the subsequent operation of the Project facilities have been or will be obtained;
- (d) Detailed plans for maintenance and operation of the Project facilities together with evidence that arrangements satisfactory to A.I.D. have been made to train a sufficient number of qualified personnel of the Borrower Country for a length of time sufficient to assure their capacity to assume responsibility for the effective operation of the Project facilities;
- (e) Evidence that orders for ACSR (Aluminum Conductors Steel Reinforced) and ancillary equipment have been confirmed and will be delivered on schedule; and
- (f) Evidence of Contractual or other arrangements for a study of the Turkish power industry along the lines recommended in that certain reconnaissance survey completed by Ebasco Services, Inc., in January 1965 or evidence of progress towards such arrangements which is satisfactory to A.I.D.
- (g) Such additional plans, specifications, documents or other submissions in respect of the Project as A.I.D. may request.

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SECTION 3.3. Terminal Dates for Fulfillment of Conditions Precedent. Except as A.I.D. may otherwise agree in writing, if the conditions established by Section 3.1 have not been satisfied by September 30, 1965 or if the conditions established by Section 3.2 have not been satisfied by September 30, 1966, or, in either case, such later date if any as A.I.D. may specify in writing, A.I.D. at any time after whichever of such dates shall be applicable, may at its option terminate this Agreement by written notice to Borrower. Forthwith upon receipt of such notice, Borrower shall repay any unrepaid Principal and any accrued interest, whereupon all obligations of Borrower and A.I.D. under this Agreement shall cease.

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ARTICLE IV. Disbursements.

SECTION 4.1. Requests for Letters of Commitment. To obtain disbursements, Borrower may from time to time request A.I.D. to issue letters of commitment to one or more banking institutions in the United States designated by Borrower and satisfactory to A.I.D., committing A.I.D. to reimburse such bank or banks for payments made, through letters of credit or otherwise, to Borrower or any designee of Borrower, pursuant to such documentation requirements as A.I.D. may prescribe. Banking charges incurred in connection with letters of commitment and disbursements shall be borne by the Borrower and may be financed hereunder.

SECTION 4.2. Other Forms of Disbursement. Disbursements may also be made by such other means as Borrower and A.I.D. may agree to in writing.

SECTION 4.3. Terminal Dates for Requests for Letters of Commitment and for Disbursements. Except as A.I.D. may otherwise agree in writing, no letters of commitment shall be issued in response to requests received by A.I.D. after December 31, 1967 and no disbursement shall be made against documentation received by A.I.D. or the bank's referred to in Section 5.1. after December 31, 1969.

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ARTICLE V. Miscellaneous.

SECTION 5.1. Eligibility Date. As used in this Agreement, "Eligibility Date" shall mean the date of this Agreement, except as A.I.D. may otherwise agree in writing.

SECTION 5.2 Ocean Shipment. Borrower shall ensure that at least fifty percent, (50%) of the gross tonnage of all goods (computed separately for dry bulk carriers, dry cargo liners and tankers) financed hereunder which shall be transported on ocean vessels shall be transported on privately owned United States flag commercial vessels to the extent such vessels are available at fair and reasonable rates for United States flag commercial vessels. No goods may be financed hereunder which are transported on any ocean vessel (a) which A.I.D., by written notice to Borrower, has designated as ineligible to carry A.I.D. financed goods or (b) which has been chartered for the carriage of A.I.D. financed goods unless such charter has been approved by A.I.D.

SECTION 5.3 Use of Representatives. For all purposes relative to this Agreement the Borrower and A.I.D. will be represented, respectively, by the individuals signing this Agreement or any persons holding or acting in the offices now held by such individuals. In addition, the Borrower shall and A.I.D. may respectively designate in writing an additional representative or representatives who shall have authority to perform all actions on behalf of their respective principals required or permitted for the implementation of this Project.

Until receipt by the Borrower or A.I.D. of written notice of revocation by the other of the authority of any of its said representa-

tives, Borrower or A.I.D., respectively, may accept the signature of any such representative or representatives as conclusive evidence that any action effected by such instrument is duly authorized by the other.

SECTION 5.4. Communications. Any notice, request or other communication given, made, or sent by Borrower or A.I.D. pursuant to this Agreement shall be in writing and shall be deemed to have been duly delivered to the party to which it is addressed when received by such party at the following address:

To Borrower: Mail address:

Cable Address:

TO A.I.D. (two copies):

Mail Address: Office of the Capital Projects Advisor
United States Agency for International
Development
c/o American Embassy
Ankara, Turkey

In addition, one copy of any communication or documents sent to A.I.D. at the above address shall also be sent to the Office of Capital Development and Finance, Bureau for Near East and South Asia, Agency for International Development, Department of State, Washington, D.C. 20523, U.S.A.

All communications and documents submitted to A.I.D. hereunder shall be in the English language and all technical and engineering specifications therein shall be in terms of United States standards, except as A.I.D. may otherwise agree in writing.

SECTION 5.5. Standard Provisions Annex. A Standard Provisions Annex is attached to this Agreement and is hereby made a part hereof. Terms used both therein and in this Agreement shall have the same meaning in both documents. References in the Standard Provisions Annex to "the Agreement" are to this Agreement.

The REPUBLIC OF TURKEY

By: _____

Title: _____

EITBANK

By: _____

Title: _____

UNITED STATES OF AMERICA

By: _____

Title: _____

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

Ministry of Energy & Nature Resources
Republic of Turkey
Ankara, Turkey

Subject: AID Loan No.
Gokcekaya Transmission Lines
Implementation Letter No. 1

Gentlemen:

This letter sets forth the procedures for implementing the various requirements set forth in the Loan Agreement dated _____ among the Republic of Turkey (Borrower), Etibank, and the United States of America, acting through the Agency for International Development (A.I.D.) and provides information to assist you in implementing your project in conformity with the Loan Agreement. Nothing in this letter and its attachments alters the scope of the Loan Agreement or the terms of the specific sections that are herein referred to or explained in this communication. Instructions in this letter and the attachments may be supplemented or modified by subsequent Implementation Letters to meet special situations that may arise. In this letter, Agreement shall stand for the aforesaid Loan Agreement.

The Project shall refer to the Project agreed to in Section 1.3 of the Agreement. More specifically, the Project consists of the items indicated in the following table along with a preliminary estimate of costs:

Project Description and Estimates of Foreign Exchange Costs

1. Balance required for Gokçekaya Power Plant Substation and Switchyard beyond funds from 277-H-053 which will be used for ten (one spare) 35.1 MVA 14.4/380 KV single phase transformers, structures, switches, circuit breakers, and appurtenances (total cost in foreign exchange - \$4,400,000):	\$ 400,000
2. Gokcekaya - Ankara, Istanbul Transmission lines consisting of 377 km (234 miles) of 380 KV single circuit transmission line dual bundle 964 MCM ACSR, steel towers.	4,250,000
3. Ankara and Istanbul Substations, each consisting of two 380/154 KV 150 MW auto-transformers, structures, switches, circuit breakers and appurtenances.	2,960,000
4. Overseas Training of ten men in two groups of five men each, for three months for each group.	80,000
	<hr/>
Total dollar cost	\$7,690,000

Republic of Turkey

I. Conditions Precedent to Use of Loan Funds - Article III

In accordance with the requirements of Article III of the agreement, the following conditions must be met prior to the issuance of the first letter of commitment:

Section 3.1 - Conditions Precedent to Initial Financing of Engineering Services

(a) Legal Opinions

An outline of information to assist counsel in preparing legal opinions is transmitted herewith as Attachment A.

(b) Specimen Signatures

The Borrower will identify the functions and authority and designate the agencies, organizational setments of the Borrower and responsible individuals chared with carrying out the specified functions. Authenticated specimen signatures in three (3) copies are required from each individual designated as a representative.

(c) Other Funds

Borrower will furnish evidence of satisfactory arrangements assuring the availability of funds other than thos provided under th loan to finance the Project. This evidence should include (i) a certificate of a duly authorized official of Borrower with respect to the amount required for the Project from March 1, 1965 to February 28, 1966 and of its adequacy to support all activities contemplated for the Project during

Republic of Turkey

such period and (ii) assurance by Etibank that sufficient revenue exist to provide sufficient funds for subsequent fiscal years to complete and subsequently operate the Project. Evidence of actions toward this end as well as certification of subsequent actual appropriations are to be submitted until the completion of the Project upon request by A.I.D.

(d) Arrangements for Engineering Consulting Services

In order to assure Etibank that any contract is in a form satisfactory to AID, Etibank should submit three copies of contract or at minimum a draft scope of work for AID's review and comments prior to seeking proposals. Etibank should submit for AID review and approval six (6) copies of the engineering consulting services contract. In making this submittal Etibank should clearly point out all changes made in the draft contract or scope of work from that previously approved by AID. Borrower should instruct the selected consultant to submit to A.I.D. copies of the qualifications resumes submitted to Etibank for its approval.

All United States citizens performing services outside the United States, under the contract, must be acceptable to A.I.D. For further guidance, please refer to Attachment B.

Republic of Turkey

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(e) Additional Plans

No additional information is requested by AID at this time.

Section 3.2 - Conditions Precedent to Financing Other than Engineering Services

Prior to the issuance of letters of commitment for other than engineering services, the following information should be submitted for A.I.D. review and approval:

(a) Plan of Execution

Eight copies of the plan for execution of the Project should be submitted to A.I.D. The plan should include the following:

- i) Up-to-date design, procurement, and construction schedules covering all major items of Project work.
- ii) A summary of contracts--both procurement and construction--proposed for carrying out Project work and to include for each contract:
 - a. Scope of work
 - b. Estimated cost including a schedule showing the foreign exchange and Turkish lira costs and the projected dates on which disbursements to cover such costs will be required.
 - c. Time Schedule.

Republic of Turkey

iii) A completion schedule for the Project by major components and for the Project as a whole.

(b) Invitations and Contracts

After the specifications for the project have been developed, Etibank shall furnish six (6) copies of:

(i) All tender invitation documents for A.I.D. review and approval prior to their distribution to the bidders, unless A.I.D. specifically exempts Etibank from such submission in the case of minor items.

(ii) Summary of tender evaluations.

(iii) A clear listing and explanations of any substantive changes in the contract documents from the language previously agreed to by AID.

(iv) Copy of Consulting Engineer's recommendation for award of contract.

Further, six (6) copies of each proposed contract shall be furnished A.I.D. for its review and approval prior to the eligible items set forth in the contract.

(c) Privileges, Easements, Rights of Way

A statement signed by a duly authorized official of the Borrower setting out what privileges, or other forms of legal right necessary for the Project have been or will be

Republic of Turkey

obtained and setting forth in summary fashion a description of those rights already obtained and those rights to be obtained, may be submitted in satisfaction of this requirement.

(d) Operations, Maintenance and Training

Plans for operation and maintenance of the Project shall be submitted by Borrower or Etibank. Such plans should include or cover:

- (i) The operational relationship of the transmission link to other transmission and distribution facilities in the area.
- (ii) An organization chart for operation and maintenance of the Project, giving a breakdown of functions and required staff.
- (iii) The source of personnel for staffing the Project as it reaches the operations and maintenance stage. Etibank should include a description of arrangements made or contemplated to train a sufficient number of qualified personnel to provide a capable and effective operating staff for the developed in some detail and should include (but not be limited to):
 - a. An assessment of the number of personnel required in each skill or occupational category.
 - b. The content of the training program for each category-where, when and how it is to be accomplished.

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(e) ACSR Conductors

Etibank shall furnish an invoice signed by the manufacturer supplying ACSR. The manufacturer shall confirm (1) that all voltages of ACSR conductors needed for the Project can be manufactured in his facilities and (2) that the conductors can be furnished by a date specified, in ample time to insure no delay in the installation schedule developed pursuant to Section 3.2(a).

(f) Study of Turkish Power Industry

Since the effective implementation of this Project may depend in part upon the contemplated reforms in the Turkish power industry, to be specifically recommended in the anticipated report of the study currently under consideration by the IBRD, the United Nations Special Fund and the GOT, it is important that the arrangements for such study be completed prior to disbursements for commodities. Accordingly, this requirement should be met by delivery to A.I.D. of the (3) conformed executed copies of the pertaining to such study.

(g) Additional Plans

No additional information is requested by A.I.D. at this time.

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Section 3.3 - Terminal Dates for Fulfillment of Conditions Precedent

Except as A.I.D. may otherwise agree in writing, the terminal date for meeting the conditions precedent set forth in Section 3.1 is September 30, 1965 and Section 3.2, September 30, 1966.

II. Financing Procedures and Documentation - Article IV

The procedure for requesting the issuance of letters of commitment actions to be taken by Etibank after the letters of commitment are issued, and the documentation required by A.I.D. as a basis for disbursement of loan funds are described in Attachment D. Please note that unless A.I.D. may otherwise agree in writing, the terminal date for requesting issuance of Letters of Commitment is December 31, 1967 and the terminal date for requesting disbursements is December 31, 1969.

III. Rules Governing ProcurementA. Eligibility Date

In accordance with Section 6.1 of the Agreement, the Eligibility Date for this project is _____.

B. Method of Procurement

In accordance with Section 100.2, no more than reasonable prices shall be paid for any eligible items, and all items shall be procured on a fair competitive basis.

C. Small Business Notification

Information regarding proposed procurement of goods having a value greater than \$5,000 must be disseminated to interested United States suppliers in order that American Small Business shall have the opportunity to participate in furnishing Eligible Items. A.I.D.'s Office of Small Business will arrange for publication of a summary of the specifications and requests for quotations.

Republic of Turkey

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A period of at least 45 days must elapse between the date of publication and the closing date for receipt of quotations. Attachment E gives more information on A.I.D. notice requirements to U.S. business.

D. Limitations on Shipping Facilities

In accordance with Section 100.1, items otherwise eligible for financing under the A.I.D. loan will not be so financed if shipped on transportation media owned or controlled by any of the following countries:

The Union of Soviet Socialist Republics, Albania, Bulgaria, Czechoslovakia, East Germany, Danzig, Hungary, Poland, Rumania, Estonia, Latvia, Lithuania, North Vietnam, North Korea, Tibet, China (Mainland) and other Communist-controlled areas, Outer Mongolia and Cuba.

E. Special Shipping Limitation - Section 6.2 (a)

Items otherwise eligible for financing under the A.I.D. loan will not be so financed if shipped on vessels named in Attachment F which will be periodically updated, as required.

F. Application of the 50/50 Shipping Requirement

In accordance with Section 6.2, 50% of the gross tonnage of A.I.D. -financed goods shipped on ocean vessels shall, computed

Republic of Turkey

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separately for dry bulk carriers, day cargo liners and tankers, be transported to Turkey on privately-owned United States flag commercial vessels. A Quarterly Shipping Report discussed under Part V.D. of this letter must be submitted to A.I.D. by the Borrower.

G. Eligible Source of Procurement

In accordance with Section 100.1 of the Agreement, loan proceeds can be used only to finance Eligible Items, including transportation, commodities, services, and marine insurance, having their source and origin in the U.S.

Goods and services financed with other than loan funds must have been procured, pursuant to Section 100.1 of the Agreement, from sources included in Code 899 of the A.I.D. Geographic Code Book. The countries not included under Code 899 are listed in paragraph III.D., "Limitations on Shipping Facilities." Thus, no items to be used on the Project, regardless of sources of financing, may be purchased from countries not included under Code 899.

IV. Marking

In accordance with the provisions of Section 101.3, the Borrower shall cooperate with A.I.D. in making information concerning the loan public and shall have the Eligible Items and their shipping containers suitably marked. Attachment G discusses the marking requirement in greater detail. In addition, the Borrower shall erect signs at

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the Project site identifying A.I.D. with the Project. Attachment G describes the types of signs to be erected.

V. Reporting - Section 101.6

A. Quarterly Progress Reports

A.I.D. will require a report on the progress of the Project to be submitted quarterly. The report shall be prepared by the consultant and submitted through the Borrower to A.I.D. within 30 days of the close of the reporting period. The first report shall cover the period ending December 31, 1965. In the preparation of the report, the consultant shall to the extent practicable, follow the format for the progress reports described in Attachment H.

B. Final Report

A final report following the format for final reports set out in Attachment H will be due on completion of the Project and may be substituted for the last Quarterly Progress Report.

C. Quarterly Shipping Reports

With respect to Etibank's responsibilities under Section 6.2 of the Agreement concerning ocean shipment of loan-financed goods, Etibank is requested to provide A.I.D. with information indicating actual progress in meeting this requirement. These reports will show for each calendar quarter, the extent to which the requirements under Section 6.2 are being met. The report should follow the form

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presented in Attachment I. This quarterly report is to be submitted by the last day of the month following the period covered in the report. The first report, covering shipments from inception through December 31, 1966 will be due not later than January 31, 1967. Each report is to be supplemented by a covering summary statement giving the cumulative actual figures, beginning with the initial report through the month of the latest report, for U.S. and non-U.S. flag vessels by category of vessel, as applicable. If the summary report indicates a lag in complying with Section 6.2, a statement shall be included, indicating how the deficit in shipping on U.S. flag vessels is to be made up.

If no shipment of goods is made during a report period, a report should be submitted attesting to the lack of shipments. Two copies of each shipping report are to be mailed to: Agency for International Development, Resources Transportation Division, Washington, D. C. 20523.

VI. Records - Section 101.5

The records which are required under the terms of Section 101.5 insofar as they relate to eligible items and services, shall be maintained for a period of at least three (3) years after the final disbursement by A.I.D. under the loan.

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VII. Commissions, Fees and Other Payments - Section 102.2

Etibank is reminded that Section 102.2 requires that any fees or commissions in connection with the Project or the loan be reported to A.I.D.

VIII. Correspondence

All correspondence regarding the loan and the reports required under Section 101.6 should be addressed to the U.S.A.I.D. Mission to Turkey, with a copy to AID/Washington, as specified in Section 6.4 of the Loan Agreement.

A.I.D. will be glad to discuss with your representatives any problems or questions you may have concerning the implementation of this loan, or relating to this letter and its attachments.

Sincerely yours,

John D. Thompson
Assistant to the Director/Capital Projects
(USAID Mission to Turkey)

Attachments:

- A. Guide for the Assistance of Counsel in Preparing Legal Opinions
- B. Acceptability of United States Contractors and Sub-Contractors Personnel
- C. Procedures and Requirements for Approval of Construction Contracts
- D. Disbursement of Loan Funds Letter of Commitment Procedure
- E. Borrower's Notice to U.S. Business Regarding Proposed Procurement of Goods
- F. Shipping Restrictions
- G. Marking Requirements
- H. Progress Reporting Requirements
- I. Borrowers' Shipping Statement

cc: Ministry of Finance, Attn: O.I.E.C.