

No. 16596

**UNITED STATES OF AMERICA
and
SAUDI ARABIA**

Project Agreement for technical cooperation in electrical power planning (with appendix). Signed at Riyadh on 29 February 1976

Authentic text: English.

Registered by the United States of America on 27 April 1978.

**ÉTATS-UNIS D'AMÉRIQUE
et
ARABIE SAOUDITE**

Accord relatif à un projet de coopération technique pour la planification de la production d'électricité (avec appendice). Signé à Riyad le 29 février 1976

Texte authentique : anglais.

Enregistré par les États-Unis d'Amérique le 27 avril 1978.

PROJECT AGREEMENT¹ BETWEEN THE MINISTRY OF INDUSTRY AND ELECTRICITY AND THE MINISTRY OF FINANCE AND NATIONAL ECONOMY, KINGDOM OF SAUDI ARABIA, AND THE DEPARTMENT OF THE TREASURY, UNITED STATES OF AMERICA, FOR TECHNICAL COOPERATION IN ELECTRICAL POWER PLANNING

Article I. SCOPE

By the terms of this agreement, the Department of the Treasury (Treasury) of the United States of America, herewith agrees with the Ministry of Industry and Electricity (MIE) and the Ministry of Finance and National Economy (MFNE) of the Kingdom of Saudi Arabia that the United States Government will contract with selected United States firms (Contractors) to provide technical assistance in the field of electrical power planning to the MIE.

Article II. AUTHORIZATION

The project will be carried out under the auspices of the United States-Saudi Arabian Joint Commission on Economic Co-operation and in accordance with the provisions of the Technical Co-operation Agreement between the Governments of the United States and Saudi Arabia signed on February 13, 1975,² which is hereby incorporated by reference and becomes a part of this agreement.

Article III. SERVICES TO BE PERFORMED

Treasury will contract on behalf of the Government of Saudi Arabia with United States firms to advise and assist MIE in the development and upgrading of the Kingdom's electric power system. The Contractors' tasks will be to (1) prepare a comprehensive 25-year national electrification plan, and (2) advise and assist MIE on a day-to-day basis regarding current electric utility needs and problems through the Kingdom. A tentative statement of the detailed responsibilities of the Contractors appears at Appendix A.

Article IV. RESPONSIBILITIES OF TREASURY

A. Treasury will negotiate and contract with the Contractors. The selection of the Contractors will be based solely on considerations of corporate capability and experience and other professional factors. Treasury will obtain the approval of MIE and MFNE of the financial and other terms of each contract and contract revision which it enters into pursuant to this agreement.

B. Treasury and MIE will monitor the implementation of the contracts. Treasury will use best efforts to see that the Contractors execute their contractual responsibilities with professional skill and dispatch.

¹ Came into force on 16 June 1976, after signature and deposit by the Government of Saudi Arabia of the initial sum covering the period 1 March 1976 through 31 March 1978, in accordance with article X.

² United Nations, *Treaty Series*, vol. 998, p. 209.

Article V. RESPONSIBILITIES OF MIE

A. MIE shall either directly or through MFNE and other agencies:

- 1) Designate an MIE official as senior project officer to work with the Contractors;
- 2) Provide all available information which may be needed by Treasury and the Contractors to fulfill their obligations under this agreement and contracts pursuant thereto, and assist the Contractors in making all necessary contacts with other government entities, private firms, and individuals involved in the electric power field in Saudi Arabia;
- 3) Assist, when requested, the office of the U.S. Representation to the Joint Economic Commission and the Contractors in locating and making available suitable housing for all United States personnel assigned to Saudi Arabia in connection with this project;
- 4) Assist the office of the Joint Economic Commission and the Contractors in providing adequate office space, office furnishings, secretarial assistance, translator and interpreter assistance, utilities, telephone facilities, and maintenance and upkeep of such office space for all U.S. personnel assigned to Saudi Arabia pursuant to this agreement;
- 5) Assist in obtaining supplies and materials as may be required for official duties by all U.S. personnel;
- 6) Assist in obtaining clearance for all U.S. personnel in matters including, but not limited to, customs, drivers, permits and other services that may involve other agencies of the Government of Saudi Arabia; and
- 7) Assist in providing other related support as may be appropriate to the conduct by Treasury and the Contractors of their official duties in connection with this project.

B. As authorized by the Technical Cooperation Agreement, Treasury may use funds advanced for this project by the Government of Saudi Arabia to defray the cost of such supplies and services as cited in items 4, 6 and 7 of Article V, A, above, to the extent they are not provided by the Government of Saudi Arabia.

Article VI. COORDINATION

Coordination in Saudi Arabia of this project with other Joint Commission activities of the United States Government will be the responsibility of the Office of the U.S. Representation to the Joint Commission in Riyadh. The Office will also serve as the point of contact for all policy related communications among MIE, MFNE and Treasury concerning this project, and will facilitate activities under this agreement.

Article VII. FORCE MAJEURE

If any party to the agreement or the Contractors are rendered unable because of *force majeure* to perform their responsibilities under this agreement, these responsibilities shall be suspended during the period of continuance of such inability. The term "*force majeure*" means acts of God, acts of the public enemy, war, civil disturbances, and other similar events not caused by nor within the control of the parties. During the period of suspension of performance caused by *force majeure*, Treasury may continue to pay normal costs of maintaining project personnel in Saudi Arabia from

funds advanced to the United States by the Government of Saudi Arabia. In the event of suspension of a party's or the Contractors' duties because of *force majeure*, the parties and the Contractors shall consult and endeavor jointly to resolve any attendant difficulties.

Article VIII. ESTIMATED COSTS

A. The costs for the services to be provided to MIE and MFNE pursuant to this agreement are composed of the costs incurred by Treasury under the contracts it enters into pursuant to this agreement (Contract Costs) and the costs incurred by Treasury as a result of its other responsibilities under this agreement (Treasury Costs). The Government of Saudi Arabia will provide Treasury in advance with funds sufficient to cover all Contract Costs and all Treasury Costs.

The contracts Treasury will enter into with Contractors will be "cost plus fixed fee" contracts. As provided in Article IV, A, above, MIE and MFNE will approve the financial terms of these contracts. It is estimated that total contract costs will be on the order of \$15,000,000 through 1981.

B. The costs for the services to be provided to MIE and MFNE pursuant to this agreement for the period March 1, 1976, through March 31, 1978, are estimated to be \$9,200,000. This estimate covers the following expenses:

Contract Costs	\$5,500,000
Treasury Costs	<u>\$3,700,000</u>
	\$9,200,000

Treasury costs would be divided as follows:

Equipment, cars, etc.	\$ 700,000
Housing for Contractor Personnel	<u>\$3,000,000</u>
	\$3,700,000

C. Budgets for subsequent periods of this project will be prepared and submitted by Treasury for acceptance by MIE and MFNE.

Article IX. DOLLAR TRUST ACCOUNT

The Government of Saudi Arabia agrees to deposit in the dollar trust account in the United States Treasury established by the Technical Cooperation Agreement the sum of \$9,200,000 to cover the estimated costs for the initial time period described in Article VIII, B, above. Upon agreement on each succeeding budget, the Government of Saudi Arabia will deposit in the said dollar trust account the dollar amount in the agreed estimate for the services to be provided by Treasury and the Contractors.

Article X. EFFECTIVE DATE

This agreement shall become effective after signature by representatives of the parties and after the deposit by the Government of Saudi Arabia of the initial sum described in Article IX, above, covering the period March 1, 1976, through March 31, 1978, and shall remain in effect until terminated by the parties hereto in accordance with Article XI, below, or the termination of the Technical Cooperation Agreement of February 13, 1975, whichever shall occur first.

Article XI. AMENDMENT, EXTENSION OR TERMINATION

A. This agreement may be amended or extended by mutual agreement in writing.

B. This agreement may be terminated by any party notifying the others 60 days in advance in writing.

Article XII. RESOLUTION OF DIFFICULTIES

Treasury and the Ministries shall consult, upon request of any party, regarding any matter related to the terms of the agreement and shall endeavor jointly in a spirit of cooperation and mutual trust to resolve any difficulties or misunderstandings that may arise.

DATED this 29th day of February, 1976.

For the Department of the Treasury:

[Signed]

WILLIAM E. SIMON

For the Ministry of Industry
and Electricity:

[Signed]

GHAZI ABDUL RAHMAN AL-GOSAIBI

For the Ministry of Finance
and National Economy:

[Signed]

MOHAMMAD ABA AL-KHAIL

APPENDIX A

DETAILED STATEMENT OF THE RESPONSIBILITIES OF THE CONTRACTOR

This project will be implemented by a Contractor selected under the auspices of the United States Treasury Department. The Contractor will undertake both elements of the project, i.e., the preparation of a 25-year National Electrification Plan for the Kingdom and the provision of technical experts to work with the Ministry of Industry and Electricity on a day-to-day basis. Overall management of the Contractor's work in the field will be provided by a Project Manager who will be assisted by a Team Leader selected from each of the resident teams. The Project Manager will, of course, work closely with the Joint Economic Commission.

A scope of work for the two elements of the project is provided on the following pages. This scope will be used as the primary document in the selection of the Contractor. It is recognized that as the project evolves, it may be necessary to modify the scope to accommodate necessary changes.

SCOPE OF SERVICES

The Contractor shall provide technical assistance to the Ministry in the electric utility field for the entire Kingdom. This assistance shall be in two major divisions, (1) the preparation of a comprehensive 25-Year National Electrification Plan, and (2) the provision of advice and assistance to the Ministry by an Operations Advisory Team.

SECTION 1. PREPARATION OF A COMPREHENSIVE 25-YEAR NATIONAL ELECTRIFICATION PLAN FOR THE ENTIRE KINGDOM (PLAN)

The Plan shall include the preparation of (I) technical studies, (II) financial studies, (III) manpower studies, and (IV) methods and procedures to assist the Ministry in providing assistance to and regulation of the electric utilities. Specifically, the Contractor shall perform the following services:

I. *Technical Studies for the Entire Kingdom*

A. Survey and inventory existing electric utilities to determine their financial, technical and manpower status. This survey shall be accomplished primarily through the use of a questionnaire which will be prepared jointly by the Ministry and the Contractor.

B. Prepare a forecast of electrical energy requirements on an annual basis over the next 25 years, recognizing differences between the various utilities and regions. In preparing this forecast, projections for industrial and other development in the current Five Year (1976-1980) shall be fully considered. For the period after 1980, the Contractor, in consultation with the Ministry, shall determine the most suitable methodology to use in making these forecasts, i.e., surveys, gross national product relationships, other or combinations thereof. Regardless of which methodology is used, the results shall be presented for each year by major user classification for each individual area and/or utility and shall show the annual percentage increase for such major user classification.

C. Prepare a long range Electric System Development Plan for the next 25 years (System Plan). This System Plan shall represent the Contractor's estimate of the most efficient and effective means to provide the electric services required throughout the Kingdom:

- (1) The optimum location and size of generating plants and transmission lines, 33 KV and above, shall be determined.
- (2) Justifiable regional and nationwide inter-connections and dispatch centers will be identified and described.
- (3) Alternate energy sources, such as Solar Energy, shall be considered and information developed as to when and under what conditions they can be incorporated into the System Plan.
- (4) Alternate approaches, i.e., annual cost, discounted present value, or others, to solving problems shall be fully considered to assure that the System Plan will result in the most efficient and effective system. The methodology used in analyzing alternate approaches shall be that which the Contractor deems most appropriate after consultation with the Ministry.
- (5) The System Plan shall be converted into a model so that it can be tested should major changes occur in parameters such as rate of growth of electrical consumption, capital costs, and fuel economics. The procedures for analyzing such changes shall be shown as well as the results of specific changes.
- (6) Existing facilities shall be considered and used where appropriate. Current plans of the utilities for construction and expansion over the next five years shall be studied and incorporated in the System Plan where appropriate. The Government desalination plans shall be incorporated into the System Plan.
- (7) The stability, reliability and continuity of services of the various systems shall be considered and must be satisfactory by standards accepted by modern electric supply entities in the industrial world.
- (8) The Contractor shall recommend transmission voltages most suitable for the System Plan. These should be kept to minimum to simplify construction and procurement. If appropriate, the Contractor shall recommend changes in the voltage of existing transmission systems to fit into the System Plan.

(9) Distribution expansion for existing utilities shall be determined and shown only in such detail as necessary for the Contractor to determine capital and operation costs. Distribution expansion for areas not now served, i.e., rural and community, shall be determined and presented in the same manner with additional detail shown so that the areas encompassed are delineated.

D. The Contractor will present the overall results obtained in A through C above for each utility, existing or proposed, bearing in mind the possible consolidation of these utilities into a system of optimum size, such as regional or national grids and generation, so they can be analyzed separately.

E. The Contractor will present all information, data and results utilizing narrative, key maps, electric circuit diagrams, charts, graphs or tables, so that results, recommendations, rationale, procedures, comparisons and analyses are clearly presented and can be used by the Ministry in implementing the expansion programs for the Kingdom.

II. *Financial Studies for each Existing or Proposed Utility or Other Entity such as Regional or National Grids and Generating Plants*

The Contractor will:

- A. Determine the present investment by years including existing systems;
- B. Determine and present all operating expenses by years;
- C. Determine and present revenue requirements from the fixed tariff and estimate necessary Government subsidies by years, so that sufficient revenue will be generated to meet all expenses and provide the guaranteed rate of return on investment fixed by the Government. Suggest alternative methods of meeting these revenue requirements.
- D. Prepare profit and loss statements and balance sheets utilizing the information developed above. These need only be prepared for the first fifteen years of the 25-year period;
- E. Present all information, data and results utilizing narrative, charts, graphs or tables, so that results, rationale and procedures are clearly presented and can be used by the Ministry in financial analyses of the expansion programs.

III. *Manpower Studies*

Review manpower training requirements to:

- A. Establish manpower requirements for the utilities by disciplines, i.e., linemen, meter readers, line superintendents, engineers, accountants, managers, technicians, bookkeepers, administrators, etc.;
- B. Determine manpower available and provide guidelines for the recruitment of additional personnel needed; accounting for dropouts;
- C. Establish training programs that will provide a reservoir of skilled personnel. These would include on-the-job training, instruction in a central training organization in Saudi Arabia, secondary school and university education and training in other countries; and
- D. Provide assistance and guidance in establishing a central training organization.

IV. *Methods and Procedures to Assist the Ministry in Providing Assistance to and Regulation of the Utilities*

The Contractor will:

- A. Review and comment on present methods of providing financial assistance to utilities, and suggest, if appropriate, alternative methods;
- B. Provide assistance in establishing a unit in the Ministry that will gather and analyze statistics necessary for the electric power industry. These statistics would relate to

- population trends, power use, establishment of industry, energy resources, cost data and the like;
- C. Suggest a reporting system to be used by the utilities to keep the Ministry informed on their annual financial and physical status;
 - D. Review the uniform system of accounts already made available to the Ministry and, if necessary, suggest revision of or replacement of the system with one tailored to conditions in Saudi Arabia for the utilities to use to assure consistency in reporting to the Ministry;
 - E. Suggest standards, including safety standards, for material and construction involved in distribution, transmission and generating systems and, to the extent practical, for other systems;
 - F. Suggest a uniform procurement system that will, to the extent possible, assure the prompt and satisfactory procurement of goods and services;
 - G. Suggest the ownership pattern of utilities most suitable for new areas to be served, i.e., private or government, bearing in mind the consolidation of these utilities to an optimum size system; and
 - H. Suggest methods to overcome problems of converting 50-Hertz systems to the national standard of 60 Hertz.

SECTION 2. ADVICE AND ASSISTANCE TO THE MINISTRY

The Contractor shall provide a team of highly skilled professional personnel, expert in specific fields of the electric utility business, to assist the Ministry in its day-to-day operations and in formulating management decisions. The team will be under the general supervision of the Contractor's Project Manager but will work directly with the Ministry's management and professional personnel. Although separate and apart from the Contractor's personnel charged with developing the plan under Section 1 above, the advisory team may receive technical support from personnel assigned to that task. The composition of the team may be changed as the Ministry's requirements change. Disciplines in the fields of electric utility administration, management, organization, transmission and distribution would be represented on the initial team. Expertise in other fields would be provided by the Contractor's home office as required.

I. *Responsibilities*

Team members will work directly with the Ministry and provide professional advice and assistance as requested. They will be immediately available to consult, provide advice and/or services for which their experience qualifies them. When questions or problems are beyond the experience or capability of the team members, assistance will be requested from the home office.

II. *Tasks*

The operations advisory team shall perform tasks as assigned or requested by the Ministry such as:

- A. Providing advice and assistance in the general area of electric utility operation and management;
- B. Diagnosing electricity problems in the Kingdom and recommending solutions to resolve them;
- C. Monitoring key activities;
- D. Recommending safety regulations;
- E. Obtaining specialized technical services where such expertise is not available on the team;

- F. Specifying and, as authorized, procuring such parts, tools, equipment or material as may be required to resolve maintenance and operating problems;
- G. Advising the Ministry concerning administration, management and organizational matters;
- H. Providing advice and assistance to utilities; and
- I. Analysing requirements and recommending methods to gather and process data.

III. *Professional Staffing*

The initial long-term staff members will include:

- A utility management expert with experience in organizational and business aspects of utility operations,
- A transmission and distribution engineer with experience in the operation of this aspect of electric power systems,
- A power plant engineer with primary experience in steam, gas turbine and diesel power plant operations, and
- An accounting and finance specialist with experience in utility accounting, audit and financial management.

As and when needed, experts and specialists such as the following will be made available for short to medium duration assignment:

- Rate specialists,
 - Procurement and contracting experts,
 - Training experts,
 - Safety experts,
 - Data processing specialists,
 - Mapping and survey specialists,
 - Rural electrification experts,
 - System and construction standards specialists, and
 - Environmental import experts.
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