

AD-ABD-498
74639

A.I.D. Project Number 650-0059

PROJECT
GRANT AGREEMENT
between
THE DEMOCRATIC REPUBLIC OF SUDAN
and the
UNITED STATES OF AMERICA
for
ENERGY PLANNING AND MANAGEMENT

Appropriation:	72-1121021-6
BPC:	GDAA-82-21650-DG13
Allotment:	246-50-650-00-69-21
Amount:	\$ 1,555,000

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Date: August 31, 1982

Between

The Democratic Republic of the Sudan, hereinafter referred to as "Grantee",
and

The United States of America acting through the Agency for International
Development (A.I.D.), hereinafter referred to as "A.I.D."

Article 1: The Agreement

The purpose of the Agreement is to set out, in the context of the
Economic, Technical and Related Assistance Agreement (Bilateral Agreement) between
the parties named above (Parties), dated March 31, 1958, and reaffirmed by exchange
of notes June 16, 1973, the understandings of the Parties with respect to the
undertaking by the Grantee of the Project described below, and with respect to the
financing of the Project by the Parties.

Article 2: The Project

SECTION 2.1. Definition of the Project: The Project, which is
further described in Annex 1, will consist of various activities designed to ease
energy - related constraints to economic recovery in Sudan and to assist Sudan to
meet requirements for domestic, agricultural and industrial uses in ways that are
economical, efficient and environmentally sound. Activities will be undertaken
to (a) increase the short-term reliability of the Blue Nile Electric Power Grid
and improve the managerial and financial capability of the National Electricity
Corporation (NEC) to generate, transmit and distribute power, and to (b) improve
the capability of the National Energy Administration (NEA) and the General Petroleum
Corporation (GPC) to plan and prepare for the most efficient use of Sudan's energy
resources. Within the limits of the above definition of the Project, elements of
the amplified project description included as Annex 1 to this Agreement, may be
changed by written agreement of the authorized representatives of the Parties
named in Section 8.2. without formal amendment of this Agreement.

SECTION 2.2. Incremental Nature of Project:

a) A.I.D.'s contribution to the Project will be provided in increments,
the initial one being made available in accordance with Section 3.1. of this
Agreement. Subsequent increments will be subject to availability of funds to A.I.D.
for this purpose, and to the mutual agreement of the Parties, at the time of a
subsequent increment, to proceed.

b) Within the overall Project Assistance Completion Date stated
in this Agreement, A.I.D., based upon consultation with the Grantee, may specify in

Project Implementation Letters appropriate time periods for the utilization of funds granted by A.I.D. under an individual increment of assistance.

Article 3: Financing

SECTION 3.1. The Grant: To assist the Grantee to meet the costs of carrying out the Project, A.I.D. pursuant to the Foreign Assistance Act of 1961, as amended, and the Bilateral Agreement agrees to grant the Grantee under terms of this Agreement not to exceed one million five hundred fifty-five thousand United States (U.S.) dollars (\$1,555,000) ("Grant"). The Grant may be used to finance foreign exchange costs, as defined in Section 6.1. below, and local currency costs as defined in Section 6.2. below, of goods and services required for the Project. It is anticipated that, subject to the conditions contained in Section 2.2., A.I.D. will make available an additional \$1,045,000 to the Project.

SECTION 3.2. Grantee Resources for the Project

a) The Grantee agrees to provide or cause to be provided for the Project all funds, in addition to the Grant, and all other resources required to carry out the Project effectively and in a timely manner.

b) The resources provided by Grantee for the Project will be not less than the equivalent of U.S. \$5,600,000, including costs borne on an "in-kind" basis.

SECTION 3.3. Project Assistance Completion Date

a) The "Project Assistance Completion Date" (PACD), which is September 30, 1987, or such other date as the Parties may agree to in writing, is the date by which the Parties estimate that all services financed under the Grant will have been performed and all goods financed under the Grant will have been furnished for the Project as contemplated in this Agreement.

b) Except as A.I.D. may otherwise agree in writing, A.I.D. will not issue or approve documentation which would authorize disbursement of the Grant for services performed subsequent to the PACD or for goods furnished for the Project, as contemplated in this Agreement, subsequent to the PACD.

c) Requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, are to be received by A.I.D. or any bank described in Section 7.1. no later than nine (9) months following the PACD, or such other period as A.I.D. agrees to in writing. After such period, A.I.D., giving notice in writing to the Grantee, may at any time or times reduce the amount of the Grant by all or any part thereof for which requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, were not received before the expiration of said period.

Article 4: Conditions Precedent to Disbursement

SECTION 4.1. First Disbursement: Prior to the first disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D.:

a) A statement of the name of the person holding or acting in the

office of the Grantee specified in Section 8.2., and of any additional representative together with a specimen signature of each person specified in such statement.

SECTION 4.2. Notification: When A.I.D. has determined that the condition precedent specified in Section 4.1 has been met, it will promptly notify the Grantee.

SECTION 4.3. Terminal Dates for Conditions Precedent:

If the condition specified in Section 4.1 (a) has not been met within ninety (90) days from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D., at its option, may terminate this Agreement by written notice to Grantee.

Article 5: Special Covenants

SECTION 5.1. Project Evaluation: The Parties agree to establish an evaluation program as part of the Project. Except as the Parties otherwise agree in writing, the program will include, during the implementation of the Project and at one or more points thereafter:

- a) Evaluation or progress toward attainment of the objectives of the Project;
- b) Identification and evaluation of problem areas or constraints which may inhibit such attainment;
- c) Assessment of how such information may be used to help overcome such problems; and
- d) Evaluation, to the degree feasible, of the overall development impact of the Project.

SECTION 5.2. Counterpart Personnel: In view of the importance of institutional development to the objectives of this project, the GOS covenants that, except as USAID may otherwise agree in writing, appropriate Sudanese officials will be assigned to work with all long-term resident advisors funded under this project.

SECTION 5.3. NEC Donor Coordination: In recognition of the importance of consistency and compatibility of all external donor-funded activities at the NEC, the GOS covenants (a) to keep USAID apprised of such activities, both ongoing and contemplated, and (b) to convene an annual meeting of such donors for the general purpose of coordinating ongoing and planned donor assistance. Such a meeting should take place approximately annually.

SECTION 5.4. Private Sector: Because of the important role that the private sector can play in improving energy efficiency in Sudan, the GOS covenants that to the maximum extent practical, GPC, NEA, NEC and other GOS entities will encourage private sector efficiency and participation in energy planning.

SECTION 5.5. Energy Policy: The parties agree to a detailed socio-economic analysis of GOS energy pricing policies. This analysis will determine the long-term, full replacement cost of electricity and petroleum fuels, compare these to current costs and prices, and suggest appropriate pricing adjustments to more fully reflect the cost of energy, in a manner that is consistent with GOS economic objectives.

Article 6: Procurement Source

SECTION 6.1. Foreign Exchange Costs: Disbursements pursuant to Section 7.1. will be used exclusively to finance the costs of goods and services required for the project having their source and origin in countries included in Code 941 of the A.I.D. Geographic Code Book (as in effect at the time orders are placed or contracts entered into for such goods or services) ("Foreign Exchange Costs"), except as A.I.D. may otherwise agree in writing, and except as provided in the Project Grant Standard Provisions Annex Section C.1.(b) with respect to maritime insurance.

Ocean transportation costs will be financed under the Grant only on vessels under flag registry of Sudan, the United States or other countries included in Code 941, except as A.I.D. may otherwise agree in writing.

SECTION 6.2. Local Currency Costs: Disbursements pursuant to Section 7.2. will be used exclusively to finance the costs of goods and services required for the project having their source and, except as A.I.D. may otherwise agree in writing, their origin in Sudan.

Article 7: Disbursement

SECTION 7.1. Disbursement for Foreign Exchange Costs:

a) After satisfaction of conditions precedent, the Grantee may obtain disbursements of funds under the Grant for the Foreign Exchange Costs of goods or services required for the Project in accordance with the terms of this Agreement, by such of the following methods as may be mutually agreed upon:

1) By submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters (a) requests for reimbursement for such goods or services, or (b) requests for A.I.D. to procure commodities or services in Grantee's behalf for the Project; or

2) By requesting A.I.D. to issue Letters of Commitment for specified amounts (a) to one or more U.S. banks, satisfactory to A.I.D., committing A.I.D. to reimburse such bank or banks for payments made by them to contractors or suppliers, under Letter of Credit or otherwise, for such goods or services, (b) directly to one or more contractors or suppliers, committing A.I.D. to pay such contractors or suppliers for such goods or services.

b) Banking charges incurred by Grantee in connection with Letters of Commitment and Letters of Credit will be financed under the Grant unless Grantee instructs A.I.D. to the contrary. Such other charges as the Parties may agree to may also be financed under the Grant.

SECTION 7.2. Disbursement for Local Currency Costs:

a) After satisfaction of conditions precedent, the Grantee may obtain disbursements of funds under the Grant for Local Currency Costs required for the Project in accordance with the terms of this Agreement, by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, requests to finance such costs.

b) The local currency needed for such disbursements may be obtained:

1) by acquisition by A.I.D. with U.S. Dollars by purchase or from local currency already owned by the U.S. Government; or

2) by A.I.D. (A) requesting the Grantee to make available the local currency for such costs, and (B) thereafter making available to the Grantee, through the opening or amendment by A.I.D. of Special Letters of Credit in favor of the Grantee or its designee, an amount of U.S. dollars equivalent to the amount of local currency made available by the Grantee, which dollars will be utilized for procurement from the United States under appropriate procedures described in Project Implementation Letters.

The U.S. dollar equivalent of the local currency made available hereunder will be, in the case of subsection (b) (1) above, the amount of U.S. dollars required by A.I.D. to obtain the local currency and in the case of subsection (b), (2) above, an amount calculated at the rate of exchange specified in the applicable Special Letter of Credit Implementation Memorandum hereunder as of the date of the opening or amendment of the applicable Special Letter of Credit.

SECTION 7.3. Other Forms of Disbursement. Disbursements of the Grant may also be made through such other means as the Parties may agree to in writing.

SECTION 7.4. Rate of Exchange: Except as may be more specifically provided under Section 7.2., if funds provided under the Grant are introduced into Sudan by A.I.D. or any public or private agency for purposes of carrying out obligations of A.I.D. hereunder, the Grantee will make such arrangements as may be necessary so that such funds may be converted into the currency of Sudan at the highest rate of exchange, which at the time the conversion is made, is not unlawful in Sudan.

Article 8: Miscellaneous

SECTION 8.1. Communications: Any notice, request, document or other communication submitted by either Party to the other under this Agreement will be in writing or by telegram or cable, and will be deemed duly given or sent when delivered to such Party at the following addresses:

To the Grantee: Under-Secretary for Planning
Ministry of Finance and Economic Planning
Khartoum, Sudan.

To A.I.D.: U.S. Agency for International Development
c/o American Embassy
P.O. Box 699
Khartoum, Sudan.

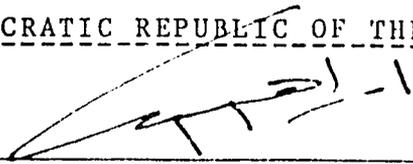
All such communications will be in English, unless the Parties otherwise agree in writing. Other addresses may be substituted for the above upon the giving of notice. The Grantee, in addition, will provide the USAID Mission with a copy of any communication sent to A.I.D./Washington.

SECTION 8.2. Representatives: For all purposes relevant to this Agreement, the Grantee will be represented by the individual holding or acting in the office of Under-Secretary for Planning, Ministry of Finance and Economic Planning and A.I.D. will be represented by the individual holding or acting in the office of A.I.D. Director/Sudan, each of whom, by written notice, may designate additional representatives for all purposes other than exercising the power under Section 2.1 to revise elements of the amplified description in Annex 1. The names of the representatives of the Grantee, with specimen signatures, will be provided to A.I.D., which may accept as duly authorized any instrument signed by such representatives in implementation of this Agreement until receipt of written notice of revocation of their authority.

SECTION 8.3. Standard Provisions Annex: A "Project Grant Standard Provisions Annex" (Annex 2) is attached to and forms part of this Agreement.

IN WITNESS WHEREOF, the Grantee and the United States of America, each acting through its duly authorized representative, have caused this Agreement to be signed in their names and delivered as of the day and year first above written.

DEMOCRATIC REPUBLIC OF THE SUDAN

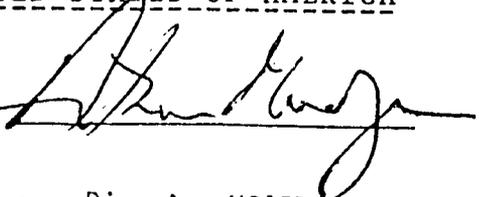
BY: 

Ibrahim Moneim Mansour

TITLE: Minister of Finance and Economic Planning

DATE: August 31, 1982

UNITED STATES OF AMERICA

BY: 

TITLE: Director USAID/Sudan

DATE: August 31, 1982

Amplified Project Description

I. Description of the Project

The purpose of the Energy Planning and Management Project (EPM) is to ease energy related constraints to economic recovery while contributing towards the long-term goal of meeting Sudanese energy requirements for domestic, agricultural and industrial uses in ways that are economical, efficient, and environmentally sound. Towards this goal, the Project will:

- a. increase the short-term reliability of the Blue Nile Electric Power Grid and improve the managerial and financial capability of the National Electricity Corporation (NEC) to generate, transmit and distribute power, and
- b. improve the capability of the National Energy Administration (NEA) to plan programs and implement strategies for the most efficient use of Sudan's energy resources.

To achieve these two objectives, the EPM project will concentrate upon strengthening three institutions within the Ministry of Energy and Mining which are charged with the primary responsibilities for energy management and planning in the public sector. These are the National Energy Administration, the National Electricity Corporation and the General Petroleum Corporation. The NEC segment of the EPM project will concentrate upon the operational problems of this public corporation. The NEA segment will address the planning and policy issues of energy management in the NEA, and the planning and policy implications of the GPC activities.

Selected use of short-term and long-term technical assistance will be coupled with a mixture of in-country and overseas training programs, and an appropriate range of commodity and local currency supports in order to conduct the EPM. The financial plan for the EPM calls for the USAID inputs of \$ 6,600,000 (including 10% contingency and project evaluation) over five years, with approximately 48.4% of the U.S. dollar budget for NEC, 45.2% for MEM/NEA and 6.4% for GPC. GOS inputs will total \$ 5,595,000 over five years, with approximately 40.7% of funds budgeted for NEC, 45.1% for MEM/NEA, 14.2% for GPC. The GOS contribution includes both financing from its recurrent budget and from GOS owned local currencies generated under the CIP Program.

At the conclusion of this five-year project (i.e. during 1987), the energy planning and management capabilities of the GOS will have been improved such that:

1. NEC will provide more reliable electricity service, through the regionalized system of electricity boards and by the combined effects of:
 - a. improved organization and management structure within NEC.
 - b. orderly maintenance and repair schedules.
 - c. effective use of spare parts provided by the CIP.
 - d. improved cash flow by accelerating the collection of accounts payable.
2. NEA will be capable of planning and advising on the implementation of energy supply and demand policies that are of optimal benefit to the Sudan.

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Annex 1

3. GPC will have reviewed the planning techniques and appropriate policies to import, process and distribute petroleum products in an orderly fashion. At the same time, GPC will be capable of responding to changing circumstances in the exploration, production, refining and marketing of domestic crude oil resources. This latter capability will be extremely important as the GOS builds a second oil refinery and moves towards becoming a potentially significant oil producer and exporter.

4. Public corporations, government institutions and larger private companies which are substantial energy users will be using their energy supplies more efficiently in the production of goods and services.

5. Commercial and financial arrangements for distribution, servicing and financing of cost-effective and energy efficient equipment will have been strengthened. The principal activities which it is expected will be conducted during the project are described below.

Major outputs of the project include:

1. National Energy Administration

The EPM project will assist the NEA to become established as a respected central source of useful energy data and policy alternatives. At the conclusion of the project, the NEA will have completed a series of analyses and plans that will benefit overall national energy management and planning in the Sudan. Trained NEA professionals will be available to work with NEC, GPC and other GOS departments to coordinate and monitor interdisciplinary energy projects that will add to the efficient use, appropriate pricing and effective management of Sudanese energy supplies. Detailed outputs of anticipated NEA activities are summarized below.

1) Adoption of an orderly transition to new organization structure.

NEA professionals have been operating as a task force in conjunction with the Energy Policy and Planning Project but have not yet been assigned permanent, structured jobs. Assignment of NEA staff professionals into working departments will be completed during the first year of the project. Written job descriptions will be prepared and issued. Individual job performance and overall organizational effectiveness will be reviewed annually.

2) National energy supply and demand planning and evaluation functions consolidated at NEA.

MEM will centralize national energy planning activities at NEA and assign multi-fuel supply policy studies to NEA. In addition, NEA will be formally charged with the responsibility to evaluate the overall energy consumption of the Sudanese economy by fuel type.

3) Energy analyses and policy option papers prepared.

NEA will prepare and disseminate energy studies on key topics of national concern, gather reactions from interested GOS and private-sector entities and frame national policy options for decision and implementation by MEM. Ten such studies will be completed during the project life. Among the topics to be considered as candidate subjects are:

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- a. efficiency of petroleum consumption in the transportation sector.
- b. cost-benefit analysis of reforestation and substitution of oil for fuelwood in the Roseires Dam watershed.
- c. economics of regional controls on fuelwood - cutting and deforestation.
- d. consumption patterns of electricity and oil in export-oriented industries, with policy recommendations to improve energy use efficiency.
- e. timing and impact on regional energy supplies of Power III, Power IV and Power V electricity - generating projects under alternative scenarios.

- 4) Detailed energy plans completed and reviewed annually.

NEA will compile an annual plan of national priorities and actions to address the orderly use of available renewable and conventional fuel resources, including anticipated electricity output and anticipated oil availability as well as projected fuelwood and charcoal use. This plan will include specific recommendations on MEM and GOS actions to promote the use of available fuels in end uses that contribute most to the well being of the nation.

- 5) Recommended policies and plans implemented.

In response to directives from the MEM, the NEA will work independently and in cooperation with GPC, NEC and other GOS entities to carry out the policy action determined from NEA recommendations.

- 6) Capacity for computer-assisted data processing and analysis expanded.

Five members of the NEA staff will be trained during the first two years of the project life in the use of microcomputers to speed project analysis and to store key data for prompt retrieval. The desk-top computer already in place at NEA will be supplemented by state-of-the-art equipment to permit customizing of software packages and semigraphics printing.

- 7) Plan for regional energy allocation developed.

NEA will prepare a region-by-region plan for the distribution of petroleum and the generation of electricity in accordance with regional economic requirements. Data will be gathered by NEA through field trips and consultation with regional governments, GPC and NEC. One outcome of this plan will be an assessment of likely regional fuelwood and charcoal requirements. The plan will reflect several alternative scenarios of fuel availability and economic activity.

- 8) Energy pricing and regulations in accordance with national development priorities implemented.

A detailed economic analysis of energy pricing for oil products, electricity, fuelwood and charcoal will be completed in the first two years of the project. Then, NEA will conduct biannual reviews of national energy pricing and regulatory practices in order to advise MEM on the relative effect that these factors are having upon national development. The assessment will cover such issues as electricity tariffs, gasoline and diesel price levels and controls, significance of black markets on oil products, and their impact upon individual regions of the Sudan.

Annex 1

- 9) Fuelwood and traditional energy subsector policy established and initial action taken.

NEA will consult with the Ministry of Agriculture and other relevant GOS agencies in order to prepare a national plan for the orderly monitoring of fuelwood harvesting and charcoal production. Implementation of this plan will provide NEA with the necessary data to propose a national policy on the use and replenishment of fuelwood and other renewable energy resources, reflecting regional government capabilities and requirements. The NEA will take appropriate actions to track the outcome of these policy directives.

- 10) Expanded use of energy-efficient equipment promoted.

The performance and cost effectiveness of various energy-using equipment will be analysed to determine their appropriateness for the Sudan. Equipment surveys will be performed at Sudanese large energy-users to determine equipment needs to improve energy utilization and energy efficiency. Strategies for improved distribution, financing and serving of energy-saving equipment will be developed and steps taken to implement these strategies.

- 11) Energy information needs prioritized and strategies implemented.

An energy information network will be established. The NEA will gather general energy publications, local energy data and analyses for its energy library. Surveys of existing mechanisms for transferring information in the Sudan will be performed. Priority information needs of government, industry, professional societies, large energy-users, schools and training institutions will be identified. Then, an energy information reference system will be made available to the appropriate entities in the energy sector.

- 12) Case studies of successful energy-efficiency operating experiences prepared and findings documented.

Where appropriate, case studies will be prepared primarily for presentation to professional societies and corporation in the trade publications. Abstracts will also be prepared for use by the media.

2. National Electricity Corporation

Project support to the NEC will center on the goal of increasing the short-term reliability of the Blue Nile electric power grid, and improving the managerial capability of the NEC to deal with the commercial issues raised by the decentralization. Specifically, the EPM project will provide a team of long-term technical advisors and training to assist this public corporation in improving its financial controls, budgeting, planning, load management efficiency and administration of inventories and stores. As detailed in the following outputs, the EPM project will contribute towards establishing the newly-created NEC as an effectively-run business.

- 1) New NEC organizational structure and management procedures developed and implemented.

Until recently one government agency (PEWC) was responsible for both electric power and water. Now the NEC is a separate organization for electricity. The Irish Electricity Supply Board (ESB) will develop a new organizational structure and related management procedures for NEC. Implementation of this new organizational structure and related management procedures will be carried out under this project. In addition to the general implementation of new management systems and controls, additional assistance will be provided in certain financial, planning and technical areas.

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- 2) Maintenance procedures reviewed and, where necessary, new procedures developed and implemented.

Proper maintenance of equipment has been a continuing problem for NEC. While many problems are due to shortages of parts, it is possible that maintenance can be improved through the development and implementation of new maintenance procedures. Doing so could enable NEC to make better use of its existing facilities and enhance the benefits to be gained from additional generating facilities now being built or planned.

- 3) Purchasing and stores procedures reviewed and, where necessary, new procedures developed and implemented.

For a maintenance program to operate effectively, the purchasing and stores systems must also function effectively. Purchasing and stores systems help support utility operations. Therefore current purchasing and stores operations will be reviewed and, where necessary, modified. Also included in this effort will be a review of technical specifications to assure they are up to date.

- 4) Planning and budgeting procedures and techniques reviewed and, where necessary, new procedures and techniques developed and implemented.

The electric utility industry is capital intensive and long lead times are associated with many capital items. Therefore good planning is required for successful operation of an electric utility. For planning to be successful, it must have management's support. Budgeting, on the other hand, is the link between planning and financial controls. Budgets are detailed financial descriptions of plans against which actual performance can be measured.

Planning and budgeting procedures and techniques will be reviewed, and, where necessary enhanced. A good working relationship will be established between NEC planning and the NEC management. NEC planning links will also be established between NEC and NEA, on such matters as support to regional governments regarding electricity generation and distribution.

- 5) Financial control system and billing procedures reviewed and, where necessary, new procedures developed and implemented.

Financial controls are required to assure that expenditures do not exceed budget levels and that collections of revenues meet projected goals. Billing procedures must be capable of providing the NEC with a smooth flow of revenues in a timely manner. The current financial control systems and billing procedures will be reviewed and, where necessary, modified, in order that the NEC can be run on good business principles.

- 6) Energy efficiency and load management programs reviewed and, where necessary, new programs developed and implemented.

One important way for NEC to balance electricity supply and demand is to improve the efficiency of electricity use. Working in conjunction with the private sector, programs will be developed to provide more output per unit input of electricity. Included in this effort will be power factor corrections. It is also necessary to plan for those times when supplies are not adequate to meet demands, even after the installation of new equipment and the introduction of improved planning and management techniques. Therefore, load management and load shedding plans will be reviewed and, where necessary new plans developed and implemented.

- 7) Electricity tariffs of NEC and regional electric systems reviewed for economic and social impact.

The rates charged by NEC and the electricity systems operated by the regional governments are supposed to reflect true costs. These charges also will have social impacts. As part of this project, the economic and social consequences of electricity tariffs will be assessed. This output will be made available to the NEA for national energy planning purposes.

3. General Petroleum Corporation

The GPC has considerable autonomy as a public corporation, with specific responsibilities for the procurement and importation of crude oil and petroleum product refining and shipping of fuels from Port Sudan to Khartoum, commercial relations with the four oil marketing companies, and monitoring of the exploration and development drilling activities of private oil companies. Sharply high oil prices in recent years have raised the value of energy inputs handled by GPC, to more than \$ 400 million per year, and have made it very important that GPC management and planning functions be executed in an orderly and cost-effective manner. These needs are addressed by the EPM project and specifications of this project are discussed in the following outputs.

1) Flexible oil products allocation system designed.

In order to be better able to make tactical decisions on the allocation of refined petroleum products, GPC will design and create a systematic model of the Sudanese oil terminal and distribution system. This tool will have the capability of providing timely information on the consequences to the oil distribution system at large of allocation decisions. The model will be able to deal with individual products and individual regions of the country. It will include lead and lag times for the movement of oil products by various transportation means.

2) Improved distribution scheduling system designed.

GPC will review procedures for procurement and importation of crude oil and refined products, and eventual distribution of refined oil products. The purpose of the review will be to identify opportunities to increase overall system reliability in scheduling products shipments. Based upon this review, actions will be taken, as warranted, to achieve the more orderly distribution of available oil products, and to advise end-users in advance of unavoidable shortfalls in deliveries. In particular, the review will examine how the skills of the private sector oil distribution companies may be used more fully to achieve smoother allocation mechanisms.

3) Reduction in crude oil and refined products purchase costs.

During the course of the EPM project, GPC will increase its awareness of international crude oil and refined products market conditions and be capable of using this improved market intelligence to achieve lower procurement costs for oil imports. GPC ability to do this must rest on a timely availability of foreign exchange. Assuming funds are available, GPC should be able to affect the equivalent of a 20 cent per bbl reduction in supply costs through a combination of lower oil prices, reduced demurrage and freight costs and extended credit terms.

4) Improved financial and management systems.

As a consequence of the EPM project, GPC management will have more time for strategic corporate planning and decisions will be based upon more rigorous analytical procedures. These improvements will be reflected in the overall financial performance of the GPC. Amongst these improvements may be a faster response time from the Bank of Sudan in financing decisions affecting the purchase of imported crude oil and refined products.

II. Contributions of the Parties

In order to achieve the purpose and objectives of the Parties, the Parties will make inputs to the Project as described below:

A. A.I.D.

1) Technical Assistance

a) Long-term

1) NEC: AID will provide \$ 3,104,200 in funding for approximately 198 pm of long-term technical assistance advisors to assist NEC and NEA/MEM in accomplishing the activities described above. A team of four specialists (Chief of Party, (48pm) maintenance/purchasing and stores, (18 pm) financial controls/budget planning (24 pm), and energy efficiency/load management (12 pm)) will be provided to NEC. The NEC Chief of Party will be resident at the NEC and will concentrate his efforts on operational matters.

2) NEA/MEM: A three-member team of advisors (Chief of Party, (48 pm), Energy Planning and Economics (30 pm) and Supply/logistics/pricing and allocations (18 pm) will be provided to NEA/MEM. The NEA/MEM technical assistance team will be lead by a Chief of Party who will divide his time between MEM, where he will be a senior policy advisor, and the NEA, where he will provide energy policy and planning aid. The job descriptions for each of these advisors have been reviewed and approved by the Parties.

b) Short-term

1) NEC: Short-term technical assistance (40 pm) will be provided to NEC in the following special areas of emphasis: interim advisor to NEC Director, manpower and staffing levels, systems analysis and operations research, computer applications and programming, and financial analysis/cash flow management. NEC will also receive short-term technical assistance from the contractor handling the procurement and installation of CIP-funded purchases to rehabilitate the BNG.

2) NEA/MEM: Approximately 32 pm of short-term technical assistance will also be provided to NEA/MEM concentrating on aspects of energy planning and management such as manpower and staffing levels, energy efficiency end-use, supply and demand analysis, computer applications and programming, national energy policy and administration, forestry and renewable energy sources, and distribution and marketing of fuels. NEA/MEM will also receive short-term technical assistance early in the project to continue energy assessment and analysis activities begun under the Energy Policy and Planning Project (936-5703).

c) General Petroleum Corporation

1) No long-term technical assistance on operational issues is budgeted for GPC. Selected planning and policy evaluation issues, such as supply planning and allocations policy, will be addressed in consultation with the GPC by the NEA/MEM long-term technical advisors.

2) Short-term technical assistance (22 pm) will be provided to GPC in the areas of manpower and staffing levels, exploration and production economics, agreements and licensing for exploration and production, and storage/distribution/logistics.

2) Training

Approximately 24 pm of long-term and 25 pm of short-term training activities will be conducted under the project. Sudanese training facilities and instructors will be used, whenever appropriate. Certain training courses and inspection visits will take place in the U.S. or third countries. For the most part, training is planned for the U.S. Short-term courses will typically be for one or two weeks in the Sudan, involving a team of U.S. and Sudanese instructors. The short-term third country and U.S. training will include a series of inspection tours. NEC training will be directed at operations and tactical problem-solving. The NEA and GPC training, on the other hand, will address long-term strategic aspects of energy planning and management. A close coordination between NEA and GPC will be necessary in the selection of appropriate issues and course attendees. The approximate anticipated breakdown of training by location is as follows:

	Foreign Exchange	
	<u>Long-term</u>	<u>Short-term</u>
U.S.	24 pm	25 pm
Third-country	-	30 pm

Additionally, funds are included for approximately 24 person months of consultancies to conduct in-country training courses for staff of the NEA, NEC and GPC. Approximately 353,000 Sudanese Pounds will be provided to support the local currency costs of in-country workshops, seminars and training programs for the NEA, NEC, and GPC. In addition, the GOS will provide salary support for personnel while they are out of the country attending training courses funded under the project.

3) Commodities

AID will provide approximately \$ 388,000 to finance the costs of various commodities required for the project. Commodities to be procured include 4 vehicles for long-term technical advisors to the NEC, spare parts, POL, audio-visual and training equipment, and microcomputers for NEC; three vehicles for the long-term technical advisors to the NEA/MEM, spare parts, POL, audio-visual and training equipment and microcomputers for GPC. GOS will provide the additional funding required for purchase of these commodities (see GOS contributions, paragraph B3 below).

B. Government of Sudan

The Government of Sudan will provide the following contributions to the project:

1. Planning, Analysis, Study and Policy Making Activities

The GOS will make the following contributions in support of their project activities: Salaries of NEC, NEA, and GPC personnel (55 pm); local currency costs of the long and short-term technical assistance contracts, costs of local consulting and study services, and office space for resident advisor.

2. Training

The GOS will provide approximately LS 353,000 to support the training programs described in paragraph A2 above. GOS support will include assistance in locating local training institutions and administrative assistance for coordination of courses. Additionally the GOS will continue salary support

for participants attending courses out of the Sudan.

3. Commodities

GOS will provide funding to meet the local currency costs of certain commodities required to support the long-term technical assistance advisors. This will include but not be limited to office supplies, fuel for vehicles and administrative support.

III. Implementation

A. Administration

The Implementing Agency for the GOS will be the Ministry of Energy and Mining (MEM) with the Minister assuming responsibility for overall project performance. More specific responsibilities for the project components will rest with the organizational heads of NEA, NEC, and GPC. These Directors will be responsible for specific project activities within their respective organizations. They will assign counterparts to all AID-financed advisors and concur in decisions about overseas and local training. The Directors or their designees will be responsible for CIP-generated local currencies which have been set aside for project activities. USAID concurrence in expenditure above a level to be determined for project implementation will be required.

On behalf of AID, the USAID Mission Director will have ultimate responsibility for the project. Day to day project coordination and monitoring will be done by the USAID Energy Officer. Likewise, contractor coordination and monitoring will be this person's responsibility. The project contractors will submit progress and other reports and documents to the GOS and to the USAID Energy Officer. The Energy officer will be the liaison between the three implementing agencies and USAID. The USAID Evaluation Officer and the USAID Energy Officer will be responsible for the conduct of the interim and final evaluations.

B. Procurement

Procurement of commodities within the project will be relatively small, amounting to a total of \$ 388,800. In accordance with AID regulations, the source and origin for grant purchased commodities will be code 941. USAID will purchase vehicles directly for the project contractors. Because of the long delivery time, the vehicles will be ordered before the contractors are selected, in order to have their arrival coincide with that of the contract advisors. All other commodity purchases required to support the technical assistance teams will be made by the respective contractor directly but the firms will receive USAID assistance. Long and short-term technical assistance services will be procured by direct-AID contract. Contracting for local consulting and study services will be the responsibility of GOS.

C. Implementation Schedule

In order to provide the immediate short-term assistance and negotiate the two long-term contracts at the earliest date, a number of project implementation orders (PIO/T's) will be issued immediately after authorization. These documents will be submitted to GOS for review and approval: Once the two contractors are selected, the Chiefs of Party will be required to prepare within the first three months of assignment a general work plan and schedule for the life of the Project, and a detailed schedule and plan for the next six months of the project. After the first six months, the COP will be required to prepare and update quarterly a 12-month plan. These plans will set time-frames for the accomplishment of the project

outputs. USAID and MEM responsibilities and required actions will be included in the plan.

<u>General Activities</u>	<u>Due Date</u>	<u>Responsibilities</u>
a. Execute Project Agreement.	August 31, 1982	USAID, GOS
b. RFP completed for long-term institutional contracts.	October 15, 1982	AID/W
c. Contracts executed.	April 15, 1983	RCO and Contractors
d. Chiefs of Party arrive.	May 31, 1983	Contractor
e. Baseline evaluation study completed.	August 31, 1983	USAID, GOS and Contractor
f. General work plan for entire project completed.	Sept. 30, 1983	Contractor
g. Final Evaluation.	April 15, 1987	Evaluator, GOS and Contractors.
h. Chiefs of Party depart	May 31, 1987	Contractor.

IV. Evaluation

A. General

Evaluation is a built-in and crucial component of this project. It is designed to insure that project purposes and assumptions as stated in the logical framework are being attained. It also attempts to measure what changes have taken place and the impact of the project over its life. There are three evaluations planned during the life of this project in addition to quarterly progress reports as shown in the following table.

Schedule of Project Evaluation

<u>Type of Evaluation</u>	<u>Estimated Duration</u>	<u>Scheduled Period</u>
Baseline	15 days	August, 1983
Interim	30 days	January, 1985
Final	30 days	April, 1987

VI. Illustrative Financial Plan

The Illustrative Financial Plan, Attachment I to this Annex, sets forth the planned contributions of the Parties. Changes may be made to the Plan by written agreement of the representatives of the Parties identified in Section 8.2 without formal amendment of the agreement, provided such changes do not cause (1) AID's Grant contribution to exceed the amount set forth under section 3.1 or (2) the GOS's contribution to be less than the amount set forth under Section 3.2.

Illustrative Financial Plan (U.S.\$000)

	AID Contribution To Date	Anticipated Future Year Contribution AID	Total AID	Total GOS	Total Project
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1. Technical Assistance	1,100.0	3,716.3	4,916.3	4,024.3	8,940.6
2. Training	100.0	547.6	647.6	394.8	1,042.4
3. Commodities	180.0	208.8	388.8	229.2	618.0
4. Local Consultancies and Studies	-	-	-	420.0	420.0
5. Project Evaluation	-	45.7	45.7	17.9	63.6
6. Contingency	75.0	526.6	601.6	508.8	1,110.4
Total	1,555.0	5,045.0	6,600.0	5,595.5	195.0

Note: Line items include inflation factors.

17.