PD-HAA-912

UNCLASSIFIED

INTERNATIONAL DEVELOPMENT COOPERATION AGENCY

AGENCY FOR INTERNATIONAL DEVELOPMENT

WASHINGTON, D.C. 20523

MOROCCO: PROJECT 608-0180

ENERGY PLANNING ASSISTANCE

GRANT

August, 1984

UNCLASSIFIED

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: A (A = Add, C = Change, D = Delete)

Amendment Number: N/A

DOCUMENT CODE: 3

2. COUNTRY/ENTITY: MOROCCO

3. PROJECT NUMBER: 0180

4. BUREAU/OFFICE: USAID/MOROCCO 608

5. PROJECT TITLE (maximum 40 characters): ENERGY PLANNING ASSISTANCE

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 09 DD 30 YY 89

7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4)

A. Initial FY 84 B. Quarter 4 C. Final FY 86

8. COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	FIRST FY B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total	949	181	1,130	3,374	626	4,000
(Grant)	(949)	(181)	(1,130)	(3,374)	(626)	(4,000)
(Loan)	(-0-)	(-0-)	(-0-)	(-0-)	(-0-)	(-0-)
Other U.S. 1.						
Other U.S. 2.						
Host Country	12	100	112	168	1,232	1,400
Other Donor(s)	-	-	-	-	-	-
TOTALS	961	281	1,242	3,542	1,858	5,400

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	2. Loan	D. OBLIGATIONS TO DATE 1. Grant	2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	2. Loan	F. LIFE OF PROJECT 1. Grant	2. Loan
(1) SD	B741	878	N/A	-0-	-0-	4,000	-0-	4,000	-0-
(2)									
(3)									
(4)									
TOTALS				-0-	-0-	4,000	-0-	4,000	-0-

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code N/A

B. Amount

13. PROJECT PURPOSE (maximum 480 characters)

TO STRENGTHEN THE ANALYTICAL AND POLICY ADVISORY CAPABILITIES OF THE ENERGY PLANNING AND INFORMATION SERVICE WITHIN THE GOVERNMENT OF MOROCCO'S MINISTRY OF ENERGY AND MINES.

14. SCHEDULED EVALUATIONS

Interim MM 01 YY 86 MM YY Final MM 09 YY 88

15. SOURCE/ORIGIN OF GOODS AND SERVICES

[X] 000 [ ] 941 [X] Local [ ] Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a ____ page PP Amendment.)

N/A

USAID/MOROCCO CONTROLLER'S APPROVAL OF PROPOSED METHODS OF IMPLEMENTATION AND FINANCING.

MARK S. MATTHEWS

17. APPROVED BY

Signature: ROBERT C. CHASE

Title: DIRECTOR USAID/MOROCCO

Date Signed: MM 06 DD 23 YY 84

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION

MM DD YY

AID 1330-4 (8-79)

INSTRUCTIONS

The approved Project Data Sheet summarizes basic data on the project and must provide reliable data for entry into the Country Program Data Bank (CPDB). As a general rule blocks 1 thru 16 are to be completed by the originating office or bureau. It is the responsibility of the reviewing bureau to assume that whenever the original Project Data Sheet is revised, the Project Data Sheet conforms to the revision.

Block 1 -Enter the appropriate letter code in the box, if a change, indicate the Amendment Number.

Block 2 - Enter the name of the Country, Regional or other Entity.

Block 3-Enter the Project Number assigned by the field mission or an AID/W bureau.

Block 4 - Enter the sponsoring Bureau/Office Symbol and Code. *(See Handbook 3, Appendix 5A, Table 1, Page 1 for guidance.)*

Block 5 - Enter the Project Title *(stay within brackets; limit to 40 characters).*

Block 6 - Enter the Estimated Project Assistance Completion Date. *(See AIDTO Circular A-24 dated 1/26/78, paragraph C, Page 2.)*

Block 7A. - Enter the FY for the first obligation of AID funds for the project.
Block 7B. - Enter the quarter of FY for the first AID funds obligation.
Block 7C. - Enter the FY for the last AID funds obligations.

Block 8 - Enter the amounts from the 'Summary Cost Estimates' and 'Financial Table' of the Project Data Sheet.
NOTE: The L/C column must show the estimated U.S. dollars to be used for the financing of local costs by AID on the lines corresponding to AID.

Block 9 - Enter the amounts and details from the Project Data Sheet section reflecting the estimated rate of use of AID funds.
Block 9A. - Use the Alpha Code. *(See Handbook 3, Appendix 5A, Table 2, Page 2 for guidance.)*

Blocks 9B., C1. & C2. - See Handbook 3, Appendix 5B for guidance. The total of columns 1 and 2 of F must equal the AID appropriated funds total of 8G.

Blocks 10 and 11 - See Handbook 3, Appendix 5B for guidance.

Block 12 - Enter the codes and amounts attributable to each concern for Life of Project. *(See Handbook 3, Appendix 5B, Attachment C for coding.)*

Block 13 - Enter the Project Purpose as it appears in the approved PID Facesheet, or as modified during the project development and reflected in the Project Data Sheet.

Block 14 - Enter the evaluation(s) scheduled in this section.

Block 15 - Enter the information related to the procurement taken from the appropriate section of the Project Data Sheet.

Block 16 - This block is to be used with requests for the amendment of a project.

Block 17 - This block is to be signed and dated by the Authorizing Official of the originating office. The Project Data Sheet will not be reviewed if this Data Sheet is not signed and dated. Do not initial.

Block 18 - This date is to be provided by the office or bureau responsible for the processing of the document covered by this Data Sheet.

M O R O C C O

ENERGY PLANNING ASSISTANCE PROJECT

608-0180

PROJECT PAPER

GRANT

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ACRONYMS AND EXCHANGE RATES

BRPM	Bureau de Recherches et de Participations Minières
CDM	Charbonnage du Maroc
EMTP	Energy Management Training Program (Stony Brook)
ENIM	Ecole Nationale d'Industries Minières
EPES	Energy Planning and Evaluation Service (MEM)
GMAT	Graduate Management Admission Test
GRE	Graduate Record Examination
MCIT	Ministère du Commerce, de l'Industrie et du Tourisme
MEM	Ministère de l'Energie et des Mines
OCP	Office Chérifien des Phosphates
ONAREP	Office National des Recherches et d'Exploitations Pétrolières
ONE	Office National de l'Electricité
RCO	Regional Contracting Officer
SAMIR	Société Anonyme Marocaine de l'Industrie du Raffinage
SCP	Société Chérifienne de Pétrole
SNPP	Société Nationale de Produits Pétroliers
TOE	Ton Oil Equivalent

EXCHANGE RATES

October, 1983	7.80 DH/$
July, 1984	8.60 DH/$

LIST OF PROJECT AND MISSION REVIEW COMMITTEE MEMBERS: 608-0180

USAID Project Committee Members:

- Gary Bricker, Projects Manager
- Jamal Akahloun, Program Specialist
- Jay Smith, Program Economist

AID/W Project Contributors:

- Jim Bever, NE/TECH
- Pamela Baldwin, S&T/EY

MEM Contributors:

- Ahmed Bouhaouli, Energy Director, Ministère de l'Energie et des Mines (MEM)
- Abdellali Benchekroun, Deputy Energy Director, (MEM)
- Mohamed Amenou, MEM Economist

Mission Advisory/Review Committee

- Robert Chase, DIR
- Harry Petrequin, D/DIR
- Stacy Rhodes, PROG
- Mark Matthews, CONT
- Ann Williams, RLA
- Stan Nevin, RCO

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ACTION MEMORANDUM FOR THE DIRECTOR, USAID/RABAT

FROM : William S. Rhodes, USAID/PROG WSR

SUBJECT : Authorization of USAID/Morocco's Energy Planning Assistance Project, 608-0180

Problem: Your signature is required for the Project Authorization and the Project Paper facesheet of Morocco's Energy Planning Assistance Project.

Discussion: On June 12, 1984, the Mission Review Committee (MRC), under your chairmanship, reviewed and recommended conditional approval of the Energy Planning Assistance Project. The MRC felt that there remained several outstanding issues to be resolved and, therefore, further discussions and negotiations with the GOM were required prior to final Mission approval. Issues Papers dated May 14 and June 12, 1984, provide detailed discussion of the many specific issues that the MRC believed had not been adequately dealt with in the Project Paper. Approval of the project in the June 12 MRC review was made contingent upon the negotiation of acceptable language in the ProAg on the establishment of the Energy Planning and Information Service (see discussion below).

The fundamental intent of the project is to strengthen the analysis utilized by GOM officials charged with making energy policy, investment and conservation decisions. Specifically, the purpose of the project is to strengthen the analytical and advisory capabilities of the Energy Directorate and its Energy Planning and Information Service (SPD) within the GOM's Ministry of Energy and Mines (MEM). The technical assistance provided under the project will be directed toward carrying out the following activities: (1) energy policy analysis including energy pricing issues; (2) national energy investment planning; (3) review of energy project proposals; (4) promotion of energy efficiency in key economic sectors; (5) energy studies; (6) strengthening MEM's information systems; (7) training; and (8) inter-ministerial energy policy dialogue. This five-year project has a life-of-project funding of $4,000,000.

The most important substantive issue raised during the MRC reviews was the establishment, physical location and staffing of the SPD. The SPD has not yet been formally established by the MEM. Although several MEM employees are functioning as members of a planning unit in the Energy Directorate, the formal creation of the SPD is a sine qua non if the project is to achieve its long-term, institution-building objectives. During the MRC reviews, it was not clear to the Mission whether the GOM could in fact provide staff for such a service (given present budgetary constraints and hiring limitations); how such a service would be formally established; and what conditions precedent would be appropriate to assure its establishment.

Recent GOM/USAID discussions on the establishment and staffing of the SPD have been fruitful and have resulted in mutually agreed upon conditions precedent (see Article 4 of the draft Project Agreement). Pursuant to Sections 4.1(b) and 4.4(a) of the draft ProAg, the GOM will provide within 45 days of the date of the agreement a draft plan that shows (a) the organizational position of

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the SPD within the MEM; (b) its internal organizational structure; (c) positions to be filled and the types of personnel required; and (d) estimated times when positions would be encumbered. The formal establishment of an operational SPD is to be achieved by March 31, 1985, pursuant to Section 4.4(b) of the ProAg. The MEM has assured the Mission that these CPs can and will be met.

Conditions precedent have also been negotiated and agreed upon with respect to the naming of MEM (SPD) counterparts for the U.S. technical advisors to be contracted under the project. The GOM will designate counterparts as follows:

1. Under the Energy Planning component of the project, one full-time counterpart each to the Energy Economist/Policy Analyst and the Energy Efficiency and Conservation Specialist, prior to the disbursement of funds for resident technical assistance in energy planning, Section 4.2(b).

2. Under the Information Systems Implementation component, one full-time counterpart each to the Computer Programmer and Data Base Manager, prior to the disbursement of funds for resident technical assistance in information systems, Section 4.2(d).

A further issue considered by the MRC was the contracting mode. There are two major technical assistance components to the project: (1) energy planning (est. $2.6 million) and (2) information systems implementation (est. $636,000). In the June 12 review, the Mission considered the possibility of competitive procurement amongst small businesses, particularly for the energy planning component, and a possible 8-a set aside for the information systems implementation component. Further discussions with AID/W on the 8-a issue, however, resulted in a definite decision by AID/W that the Mission should attempt to negotiate an 8-a set aside for the energy planning component. The contracting mode for the information systems implementation component will be decided at a later date.

The Congressional Notification expired without objection June 27, 1984, and the budget allowance for the SDA account has been received (STATE 214666). There are no current human rights issues under Section 116 of the Foreign Assistance Act that would preclude provision of the assistance to Morocco.

Pursuant to Redelegation of Authority No. 113.3A, you have authority to authorize projects not in excess of $10 million, within which limits this $4,000,000 project falls.

Recommendation: That you approve the project and authorize project funding by signing the Project Paper facesheet and Project Authorization.

Approved: _____

Disapproved: _____

Date: 8/27/84

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PROJECT AUTHORIZATION

Name of Country: Morocco

Name of Project: Energy Planning Assistance

Number of Project: 608-0180

1. Pursuant to Section 106 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Energy Planning Assistance Project for Morocco (the "Cooperating Country") involving planned obligations of not to exceed $4,000,000 in grant funds over a four year period from date of authorization subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the project. The planned life of the project is five years and one month from the date of initial obligation.

2. The project consists of the provision of technical assistance, training, and commodities to assist the Cooperating Country to strengthen the analysis available to its officials charged with making energy policy, investment, and conservation decisions. Specifically the project will strengthen the analytical and advisory capabilities of the Energy Directorate and its Planning and Information Service (SPD) within the Ministry of Energy and Mines (MEM).

3. The Project Agreement(s) which may be negotiated and executed by the officer(s) to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate:

a. Source and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the project shall have their source and origin in the Cooperating Country or in the United States except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have the Cooperating Country or the United States as their place of nationality, except as A.I.D. may otherwise agree in writing.

Ocean shipping financed by A.I.D. under the project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

b. Conditions Precedent. The Project Agreement shall contain conditions precedent in substance as follows:

(i) 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 Cooperating Country 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 draft plan which shows on MEM's current organizational chart where it intends to establish the SPD, describes the internal organization of the SPD, provides

the titles, minimum professional and academic qualifications, typical duties and proposed authorities of permanent and temporary positions within the SPD, and estimates when each professional and support position within SPD will be encumbered.

(ii) Prior to disbursement under the Grant, or the issuances by A.I.D. of documentation pursuant to which disbursement will be made for technical training, the Cooperating Country shall submit to A.I.D. evidence it is in the process of establishing within the Energy Directorate an energy planning and information service consistent in form and function with the draft plan submitted in conformance with section (i) above.

(iii) Prior to disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made for resident technical assistance in energy planning, the Cooperating Country shall provide to A.I.D. in form and substance satisfactory to A.I.D., a statement designating the MEM enployee who will be the full-time counterpart to the Energy Economist/Policy Analyst and the MEM employee who will be the full-time counterpart to the Specialist in Energy Conservation.

(iv) Prior to disbursement under the Grant or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made for any academic training, the Cooperating Country shall provide to A.I.D. a ministerial certification substantiating that the SPD has been established within the Energy Directorate and is operational.

(v) Prior to disbursement under the Grant for resident technical assistance in information systems, the Cooperating Country shall provide to A.I.D. in form and substance satisfactory to A.I.D. a statement designating the SPD staff member who will be the full-time counterpart to the Computer Programmer and the SPD staff member who will be the full-time counterpart to the Data Base Manager.

(vi) Prior to disbursement under the Grant for planning network equipment, the Cooperating country shall provide in form and substance satisfactory to A.I.D. (a) evidence that the Grantee will receive exemption from or will pay local taxes associated with commodity procurement from local suppliers; (b) the names of all network organizations, including the names, duties, and professional qualifications of all individual correspondents having access to the network; and (c)a plan showing in detail how the member organizations will coordinate, manage, and fund on a continuing basis the operation, maintenance, and repair of network equipment procured under the Project upon the departure of the resident information systems advisors.

d. Covenants. The Project Agreement shall contain covenants in substance as follows:

(i) Counterparts to the Energy Engineer. Prior to the arrival of the resident Energy Engineer, the Cooperating Country will provide to A.I.D. a statement designating the MEM employee who will be the full-time counterpart to the Energy Engineer and a statement certifying the temporary assignment to the SPD of a full-time technical advisor from each of the following three operating agencies: l'Office National de l'Electricite, Charbonnage du Maroc, and l'Office National de Recherches et d'Exploitations Petrolieres.

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(ii) Recruitment of Additional Counterparts. As the Cooperating Country recruits additional counterpart staff to support the project, it will provide to A.I.D. a statement certifying the names, academic and professional qualifications, and effective dates of assignment of all new employees to the project, including the identification of the SPD positions which they are to encumber.

(iii) Logistic Support. The Cooperating Country agrees that MEM will provide the logistic support that is described in Annex I to the Project Agreement.

(iv) Participant Training. The Cooperating Country agrees that MEM will provide to A.I.D. in writing that its employees receiving technical and academic training will have their normal salaries maintained and that after training they will continue to work within MEM in areas that will be oriented towards serving the goals of this project.

Signature: _____
Director
USAID/ Morocco

Date : 8/23/84

Clearances

OTP: 8/8/84
RLA: 8/15/84
PROG: 8/17/84
CONT: 8-17-8
D/DIR:

MOROCCO

ENERGY PLANNING ASSISTANCE PROJECT 608-0180

THE PROJECT SUMMARY AND RECOMMENDATIONS

A. Grantee: Government of Morocco (GOM)

B. Implementing Agency: Energy Directorate of the Ministry of Energy and Mines

C. Terms: This activity is to be grant-funded from the Selected Development Activities (SDA) Account (Section 106 of FAA, as amended).

D. Total Project Cost: The total project cost is $5.40 million of which $4.000 million is provided by AID over the LOP and the equivalent of $1.40 million from Morocco.

E. Description of the Project: The Project is a sustained effort in institutional development and the transfer of technology. Economists and Energy Technologists will provide policy analysis and investment planning assistance to the Energy Directorate of the Ministry of Energy and Mines. The Directorate's new Energy Planning and Information Service (SPEI) will be strengthened so that by the end of the Project it will be able to generate its own analyses and advisory opinions regarding energy investment opportunities and pricing options in Morocco.

E.1. Goal: The macro-economic goal of the Energy Planning Assistance Project is to address Morocco's balance-of-payment deficit, external debt burden, foreign exchange shortage and development constraints to the extent they are related to commerciable (but underdeveloped) local energy resources and large energy imports which are uneconomically allocated.

Sub-Goal: To improve the functioning of Morocco's energy sector so that the nation may meet its long-term energy supply/demand needs at a lower overall cost to the economy.

Optimization of the national energy sector will result in accurate "price signals" to public and private decision-makers thereby encouraging them to react more effectively and productively. Goal achievement assumes that the GOM (1) will foster market-clearing price structures, (2) will prioritize its investments using private market principles, and (3) will manage its regulatory and tax system to attract local and foreign investors.

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E.2. Purpose: To strengthen the analytical and advisory capabilities of the Energy Planning and Information Service within the GOM's Ministry of Energy and Mines.

The technical assistance and training components of the Project will transfer and institutionalize the use of financial and econometric techniques. The Project intends to provide a better basis for GOM officials to make energy policy, investment and conservation decisions.

E.3. PROJECT OUTPUTS:

The primary output of the project will be a fully staffed and effectively operating Energy Planning and Information Service. This will include trained personnel (see E.4. below) and institutionalized, automated analytical systems. The following capabilities will have been established:

a) to analyze energy pricing structures
b) to prioritize national energy investment components
c) to review specific energy investment proposals
d) to effectively promote improved energy efficiency and conservation
e) to conduct critical energy studies
f) to operate/maintain micro-computer network with key operating agencies/ministries
g) to maintain energy data base
h) to sustain an intra- and inter-ministerial energy policy dialogue.

E.4. PROJECT INPUTS:

U.S. Contribution ($4.000 million):

1) Technical Assistance

- 3 long-term energy planning advisors (114 pm)
- short-term economic advisors as needed (31 pm)
- two long-term information system advisors (36 pm)
- short-term energy audit/industrial conservation advisors as needed (6 pm)
- information systems needs assessment (8 pm)

2) Training:

- 3 candidates for Masters degree (72 pm of academic and 12 pm of private U.S. internships)
- 8 participants for U.S. short-term (15 pm)
- 33 attendees at U.S. seminars/workshops (17 pm)

3) Commodities:

- a network of about 10 micro-computers
- software
- office equipment

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The Technical Assistance will be provided via AID direct contracts awarded to U.S. firms.
Five resident advisors with the following residency durations will be involved:

Energy Economist/Policy Analyst (Chief-of-Party)	:	57 person-months
Energy Efficiency and Conservation Specialist	:	24 person-months
Energy Engineer	:	33 person-months
Computer Specialist	:	18 person-months, and
Data Base Manager	:	18 person-months.

GOM Contribution ($1.400 million equivalent):

1) Salaries of Energy Planning and Information Services (SPD) counterparts

8 MEM employees
3 cooperating agency representatives
occasional short-term counterparts from related agencies/ministries
TOTAL (358 pm)

2) Salary Maintenance of Participants

Short-term participants (15 pm)
Academic participants (84 pm)
Conferences/seminar participants (17 pm)

3) Office Space, Equipment/Supplies (approx. $333,000 equivalent)

The SPD's organizational chart plans for the eventual staffing of up to five sections focused on various aspects of energy planning and evaluation:

- Management Section for the National Energy Model
- Section for Forecasts and Socio-Economic Analyses
- Evaluation Section for Energy Generating and Consuming Projects
- Energy Information Section, and
- Energy Conservation Section.

4) Energy Audit/Industrial Conservation

- Counterparts (operating agency executives and engineers) (18 pm)

5) Travel

- 3 round trips for Masters, 10 for short-term trainees, 33 for workshop attendees

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6) Computerized Energy Planning Net Work

- Operation, maintenance, and repair.

F. End of Project Status:

(1) SPD staffed, trained and operating with an appropriate mix of professionals.

(2) MEM and operating agencies consistently applying coherent energy planning techniques.

(3) MEM budgeting, selecting an inventory of projects, and providing pricing guidance, using objective financial indicators for all proposed GOM energy investments;

(4) MEM assisting industrial/commercial enterprises to assess energy efficiency of operations and recommending conservation measures.

G. Critical Assumptions to Achieve Project Purpose:

(1) Appropriate employment incentives provided SPD staff;

(2) MEM/MOF will fund known recurrent costs pursuant to Project's financial plan;

(3) Operating agencies provide temporary technologist staff to new SPD;

(4) MEM will fund phase-in of GOM staff beginning in second year of Project.

H. Recommendations:

The Mission Review Committee has reviewed the draft Energy Planning Assistance Project Paper 608-0180 and recommends that the USAID/Morocco Director:

1) Approve the $5.400 million project proposal and authorize $4.000 million for AID's contribution to the Project.

2) Negotiate a Project Agreement based on the PP with the GOM.

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I. PROJECT BACKGROUND AND RATIONALE

A. MOROCCO'S ENERGY SECTOR: BACKGROUND

1. High Dependence on Imported Fuel:

Morocco relies on foreign sources of energy for over 85% of its commercial fuel needs. 50% of Morocco's 1981 export earnings were spent on imported energy. This level of reliance is rendered even more precarious by changes in the international monetary structure. For example, between January and June 1983, when international oil prices around the world were dropping and OPEC's consensus on price floors was eroding, prices for petroleum products actually rose 14% in Morocco simply due to dirham devaluation against the dollar (the international oil trade is entirely denominated in U.S. dollars).

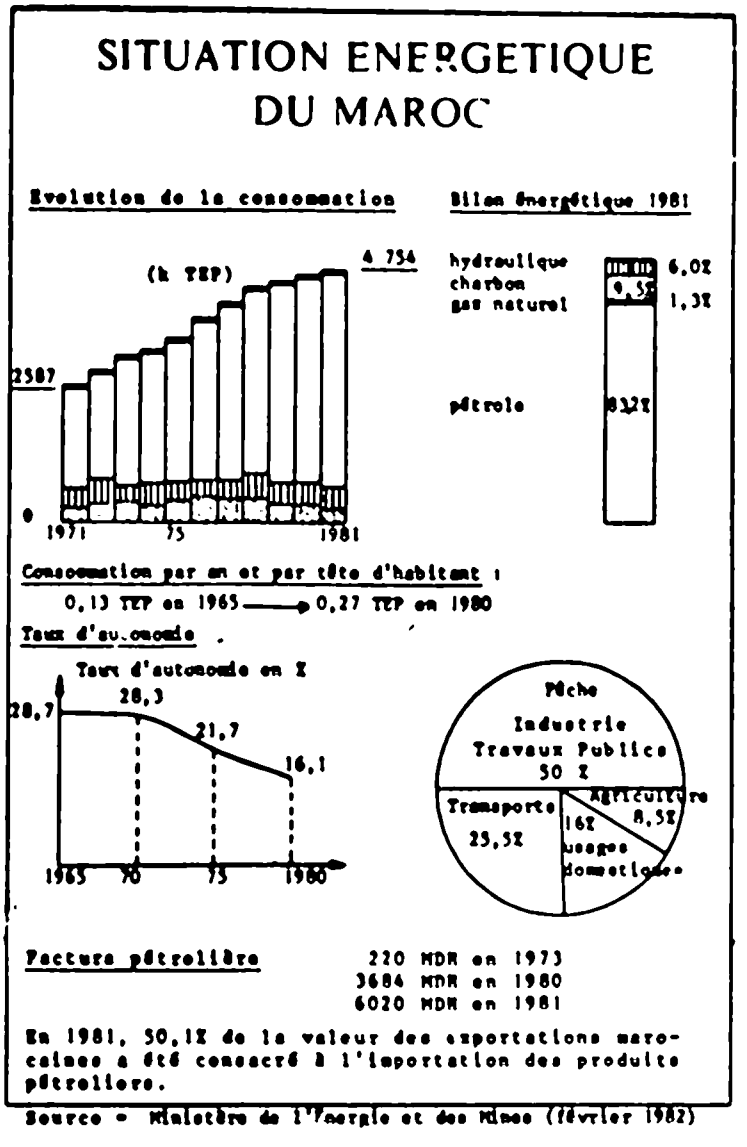
The rising oil bill, which exceeded $1.0 billion in both 1981 and 1982, has been one of the major reasons for a marked deterioration in Morocco's economic performance in the past several years. However, the Government of Morocco has taken significant steps to address this growing problem. The Government is attempting to curb the growth of energy demand through price increases and an active campaign to induce energy savings. In an effort to expedite development of domestic energy supplies, it has also begun to implement a number of important investments in petroleum exploration, expansion of hydroelectric power generation capacity, the development of oil shale deposits, and reforestation for fuelwood.

Regrettably, persistent drought conditions have severely reduced the nation's limited hydro power generation which is now at 1/20th of rated capacity. Also, during the past 18 months many oil-fired utilities have switched to cheaper coal-fired-burners requiring the nation to expand coal imports several fold. (The one local coal mine is difficult to operate and, based on detailed feasibility studies, is not expected to become profitable or even economically self-sustaining at current local prices).

If the present dependence on fossil fuels continues, crude oil imports could rise from 4.4 million ton oil equivalent (TOE) in 1980 to as much as 11.3 million TOE in 1995, entailing an increase in the oil import bill from about $0.9 billion in 1980 to nearly $3.5 billion in 1995.

GOM efforts to reduce this dependence focus both on the growing demand and on potential domestic supplies. On the demand side, a large portion of Morocco's fuel oil consumption offers (directly or indirectly) a variety of opportunities for inter-fuel substitution and conservation. On the supply side, imported coal, nuclear power, natural gas from the Meskala/Toukimt fields and oil shale could displace imported oil on a large scale in the mid- to long-term.

Figure 1



Source : Ministère de l'Energie et des Mines (février 1982)

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2. GOM Energy Policies

Current GOM energy policy is established largely through a political process at the highest levels, with particularly strong government intervention in controlling consumer prices, generating/assuring supplies, and more recently in encouraging investment through fiscal reform. The key policy instrument used by the GOM for the past several years has been to encourage conservation by maintaining sales prices of most imported fuels above world market prices. Overpricing of "white fuels" has allowed the GOM to cross-subsidize lower octane "black fuels" such as diesel and heating oil.

Over the coming 5-10 year horizon, the GOM espouses three main policy objectives for the energy sector: (i) promotion of domestic production for energy import substitution; (ii) promotion of efficient energy use; and (iii) increasing domestic resource mobilization and budgetary savings through reductions in subsidies. In conjunction with an ambitious plan for investment, the GOM is seeking to institute these improvements through a number of institutional and policy measures of which the most important involve (a) reinforcement of the process of selection and coordination of energy-related investments, (b) streamlining the management and organization of energy sector enterprises, and (c) improvements in the present pricing structure and in the incentives for private foreign investment.

The Ministry of Energy and Mines is the clearing house for key policy decisions which are usually authorized by the Prime Ministry (especially on pricing) and the Finance Ministry.

3. AID Energy Policies:

AID's main policy thrust in advising energy sector decision-makers in developing countries is to emphasize the benefits of non-subsidized, market-clearing rates for energy consumers. This policy assures that the economy in question can respond to international price signals. AID's corollary policy of encouraging private enterprise should also foster investment in energy generating industries.

The GOM's policies and actions over the past three years fit squarely within AID's Energy Policy. Morocco's key policy thrust to develop domestic resources to permit import substitution also conforms to Congressional guidance. Congress determined that "assistance for the production of energy from indigenous resources ... would be of direct benefit to the poor in developing countries because of the overwhelming impact of imported energy costs upon the lives of the poor and their ability to participate in development". (FAA, Section 106 (D)).

I. B. PROJECT RATIONALE

1. Predecessor Projects:

AID has worked actively with the Ministry of Energy and Mines since 1979. First efforts addressed the potential for renewable energy development, a focus that continues to be an important area of cooperation in the ongoing Renewable Energy Development Project 608-0159. The GOM's expressed needs for technical assistance soon expanded to include analysis of potential oil shale development for presentation in a request for IBRD funding. These two areas of inquiry led to a recognition that a broad energy-sector planning capability, based on an expanded data base, should be developed if the GOM was to address the full range of energy options (conventional fossil fuels, hydropower, oil shale, renewable and traditional resources), and to examine these options in light of broader Moroccan economic development plans and fiscal constraints. As a result of several discussions between MEM officials and energy specialists from AID/W and outside consulting firms and universities, AID's Office of Energy initiated in 1980 a program of technical assistance in energy planning. This activity, entitled the "Evaluation of Energy Perspectives", was a component of a worldwide Energy Policy and Planning Project (936-5703).

Events both within and outside Morocco between 1980 and 1982 caused the energy planning project to assume far greater significance and a somewhat different identity from that originally planned. The second oil price shock of 1979/80, combined with economic stagnation in much of the developed world, profoundly affected plans for energy development in Morocco. Mounting oil import costs made promotion of indigenous resource development even more critical for Morocco, and more attractive for investors, with the result that IBRD loans were executed for both oil shale and oil and gas exploration. Early indications of promising natural gas discoveries came just as major American corporate investors in oil shale development abandoned their pilot projects in the Western United States, leading Morocco to reorient its own long-term energy strategy away from oil shale and toward natural gas. The IBRD also undertook a diagnostic assessment of Morocco's energy sector, thereby eliminating the need for the "Energy Perspectives" project to undertake such an assessment. The IBRD assessment highlighted several promising areas for intervention and raised new questions about plans for electric sector expansion (especially in hydropower) and about energy pricing policies.

The net result of all these events was a clear need to develop a new analytical framework for evaluating multiple energy options in a fast-moving situation where initial assumptions and variables could no longer be treated as givens. The complexities of Morocco's changing energy future required greatly strengthened analytical capacities and tools in MEM, and the centrally-funded project set out to build those capacities and tools.

At the end of the first two-year energy planning activity, the GOM had just begun to make use of such a tool, a microcomputer-based energy planning model called EnVest, which was developed jointly by the

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U.S. contractor staff and the MEM staff. The value of an on-site energy advisor had been demonstrated, and the MEM was eager to see AID's technical assistance continue in order to take full advantage of EnVest and the work accomplished to date. The Office of Energy had by that time replaced its earlier worldwide project with a new one, Energy Policy Development and Conservation (936-5728). Under this project, a new agreement between AID and the Government of Morocco was signed in September 1982; activities under that agreement have continued through the present time but will expire in November, 1984.

The EnVest energy planning model has been most important as a catalyst for institutional strengthening, better policy analysis, information management and inter-agency coordination, and more rigorous financial and economic analysis of a broad range of energy scenarios for Morocco's future.

According to the MEM, the two AID predecessor projects have already proved their worth by identifying a number of proposed projects which are not viable, though earlier they had been thought to be productive investments. For example, an approach proposed by the national petroleum agency (ONAREP) to develop a small cash flow from its Meskala field while awaiting a major sales contract was convincingly demonstrated to be financially marginal. Similar analyses have been performed on proposals for nuclear-fired electrical generation plants and domestic coal mine expansion. Among other issues the AID-GOM energy planning team has addressed are: 1) electricity pricing; 2) the place of coal in Morocco's future; 3) the economics of Morocco's first natural gas field; 4) the potential for solar energy; 5) the prospects for a viable oil shale industry, including a possible small-scale direct combustion program to serve off-grid electricity needs; 6) the dimensions of the fuelwood problem and the need for reforestation; and 7) the need for mixed energy scenarios that avoid over-dependence on any single energy source or technology.

Although tentative conclusions have been reached about several of these issues, virtually all require further analysis as Morocco continues to strengthen its capability to carry out such analyses.

2. Identified Problem Areas in Morocco's Energy Sector

Morocco currently suffers from an inefficient pattern of energy consumption and resource allocation, subsidized electricity pricing structures, a need for more energy conservation programs, and a sometimes inefficient distribution network. The Project will analyze and determine the steps which must be taken, and in what order, to rationalize these consumption and allocation patterns. GOM decision-makers have expressed a need for better understanding and consideration of the role of energy in the Moroccan economy, and in particular the energy demand that is created by the development of other sectors of the Moroccan economy, including industry, transportation, agriculture, housing and urban development. These relationships will be analyzed, described and integrated into a national energy model under the Project.

There is a shortage of trained manpower in MEM and in some of its operating agencies, especially in the areas of energy economics and

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financial analysis. The Project will address this need directly.

The need for an improved data base and dynamic data management and information system in MEM is critical to improve ongoing energy analysis. The Project will provide the hardware, software, and training required for the establishment of such a system.

The failure thus far to develop Morocco's reasonably good domestic resource base appears due in large part to the shortage of investment capital and poor access to recent technological innovations on the part of private investors. This in turn has been caused in part by occasionally dysfunctional GOM investment policies. The Project will provide for the fuller analysis of these "dysfunctions" and promote appropriate adjustments in the investment code.

3. MEM Responsiveness to AID Technical Assistance:

The principal GOM decision-makers in the MEM and its operating agencies have been remarkably responsive to the sometimes critical policy dialogue and debate in these predecessor projects. MEM has continued to ask for increasing levels of technical assistance in this area, in part to improve its regulatory and budgetary management of its subordinate but well-financed operating agencies. The predecessor projects have provided the GOM with a capacity to project systematically on a sectoral scale the nation's energy supply and demand picture and to assess alternative energy policies with respect to importation, pricing, and domestic resource development. These projects have been extremely important to the GOM and have enabled AID to place American experts in positions from which they are able to affect policy substantially. In order to assure continuity of services, and in order to maintain an opportunity for American contributions to this important sector USAID has strongly supported these centrally-financed activities, and proposes a follow-on mission-funded project.

4. Project's Adherence to Congressional and Agency Energy Sector Policy

The design of the USAID-sponsored follow-on project reflects Congressional guidance, Agency policy, and AID's energy strategy. Congress has authorized AID to furnish assistance in the energy sector in the form of data collection and analysis, training, research and development, institutional development and scientific interchange. In its Energy Policy guidance, the Agency has stated its intent to "emphasize those areas in which AID has special competence and experience: analysis and planning assistance, project preparation and feasibility studies, training and institution-building..."

The Project is also consistent with the four priority concerns of the Administration -- policy dialogue, institutional development, technology transfer and reliance on the private sector.

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5. **Rationale Summary**

The 1983 field evaluation of the "Energy Management and Conservation" project strongly advocated that AID extend and expand assistance to MEM for analysis of its (1) investment choices, (2) budgetary allocations, (3) pricing structures, and (4) the role of the private sector in the country's energy supply and demand. The timing for the proposed Energy Planning Assistance Project is particularly propitious since the current economic climate has strained GOM's own resources to the point that key investment decision-makers are increasingly receptive to policy reform and private market solutions to energy development problems. They are especially open to consider real cost pricing. The new climate within the public administration is very conducive to sound policy dialogue leading to increased reliance on the private sector and a more cost-effective use of limited GOM funds.

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II. DETAILED PROJECT DESCRIPTION

A.1. Goal:

Macro-economic goal of the Energy Planning Assistance Project is to address Morocco's balance-of-payment deficit, external debt burden, foreign exchange shortage and development constraints to the extent they are related to commerciable (but underdeveloped) local energy resources and large energy imports which are uneconomically allocated.

Sub-Goal:

To improve the functioning of Morocco's energy sector so that the nation may meet its long-term energy supply/demand needs at a lower overall cost to the economy.

Optimization of the national energy sector will result in accurate "price signals" to public and private decision-makers thereby encouraging them to react more effectively and productively. Goal achievement assumes that the GOM (1) will foster market clearing price structures, (2) will prioritize its investments using private market principles, and (3) will manage its regulatory and tax system to attract local and foreign investors.

By strengthening the GOM's internal capability to analyze and design long-term energy policies, market-based strategies, feasible energy investment programs and viable projects, the Energy Planning Assistance project will nurture an environment more conducive to expatriate and local private investment in Morocco's energy sector. Attractive investment codes, generous tax structures, and rational price incentives are the legal and regulatory framework needed to foster increases in investment for domestic power generation. Of course, they alone cannot substitute for good business decisions. The Project will provide guidance to the MEM in its continuing effort to put in place the elements necessary for normal market forces and private investors to respond to Morocco's recognized domestic energy potential.

B. Purpose:

To strengthen the analytical and advisory capabilities of the Energy Planning and Information Service (SPD) within the GOM's Ministry of Energy and Mines.

The Project intends to strengthen the ability of the GOM to conduct more effective energy planning, policy analysis and investment programming and to promote national energy conservation and efficiency measures. An overall objective of the project is to help the MEM rationalize the GOM's budgetary and investment priorities in the energy sector. The project will demonstrate methodologies of energy policy analysis based on private market principles. The training component of the Project will transfer and institutionalize "state of the art" energy planning and econometric techniques. In short, the project intends to provide a sound basis for GOM officials to make decisions on energy development and conservation investments.

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C. Project Activities/Outputs:

At least eight complementary activities/outputs will be undertaken through the project to grapple with the problems summarized above. The specific activities should be planned flexibly so as to allow for annual workplan revision, as appropriate. The following key areas of activity are expected to remain throughout the 5-year effort: (1) pricing analysis, (2) national energy investment planning (both annual and five-year), (3) review of specific energy investment proposals received by the GOM or generated by the GOM for external funding consideration, (4) promotion of improved energy efficiency in key economic sectors, (5) conduct of critical energy studies on subjects such as energy security, (6) operation of a computer network, (7) maintenance of an energy data base, and (8) intra-and inter-ministerial energy policy dialogue.

These activities/outputs will be undertaken by the MEM's new Energy Planning and Information Service (SPD) with considerable initial technical assistance from a team of AID-funded resident and short-term advisors. Over a dozen professionals will be involved at any one time during the five-year Project.

In addition to the activities/outputs described above to be provided via a resident U.S. contractor, the Project will train three Masters level professionals including summer internships. Technical training in energy management will be received, and SPD and project-related Moroccan counterparts will attend numerous energy planning workshops and seminars. USAID will also contract directly for two comprehensive project evaluations.

The activities/outputs combined with a diverse training program are expected over the life-of-project to develop within the SPD an internal capability to continue these services to GOM decision-makers without further resident technical advisors. Thus, the eight activities are outputs during the course of the Project. At the close of the Project this internal capability will lead to an end-of-project status whereby the MEM's SPD is conducting "business as usual" without further reliance on long-term advisors.

The Project outputs furnished by the SPD staff of AID-fund technical advisors and GOM-funded counterparts are elaborated below:

(1) Energy Pricing Analysis:

The SPD will develop shadow prices of energy products, estimate opportunity costs of alternative investments, simulate modeling of alternative price structures; advise on appropriate pricing systems for oil products, gas, coal, electricity and renewable energy; review the traditional fuel sector (wood and charcoal), its pricing structures and production/marketing bottlenecks.

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(2) National Energy Investment Planning:

The SPD will prioritize investment portfolios for the consideration of the Energy Director, the Minister of Energy and Mines and other governmental budget and policy setting bodies. SPD will provide advice on how to optimize domestic energy production, consumption and imports, consonant with the application of true market-clearing prices in Morocco. The portfolios would be developed in concert with MEM operating agencies which will supply an inventory of prospective projects with associated budgets and benefits for the economy.

(3) Review of Specific Energy Investment Proposals:

SPD will review a wide variety of energy investment proposals coming from operating agencies, other ministries, foreign governments, multilateral agencies, and multinational corporations. Based on a wide range of investment indicators (e.g. internal rate of return, net present value, risk analysis on cash flow projections, benefit/cost ratios, cost per energy unit, competing alternative energy sources, even budgetary and political factors) the MEM decision-makers should benefit from a quantifiable and qualitatively clear analysis before accepting, rejecting, or negotiating the modification of any given investment proposal. This will be an on-going service of the project which, as the operating agencies prepare their annual requests, is expected to become a regular planning process.

MEM's Energy Planning and Information Service will also review the energy implications of new projects in the agricultural, housing and transportation sectors. Supported by its own cadre of professional energy analysts, the GOM will also be far better able to critique and improve upon joint venture options.

(4) Promotion of Energy Efficiency and Conservation:

The SPD will provide technical assistance and arrange for use of diagnostic equipment so that the MEM can more effectively identify and promote opportunities for an accelerated energy economy program. The conservation program would operate a) within the MEM's own operating agencies in the energy and mining sectors, b) with other GOM Ministries (especially Industry and Transportation) and their operating agencies and c) in the private sector (private industry, commerce, residential, and private transport). This will include review of existing governmental regulations, legislation, building codes, fiscal policies, investment codes, and private banking loan requirements, as well as proposals for improvements in these areas to stimulate energy savings without sacrifice of production and services.

The early economic analysis of given sectors will be one of the tasks of the resident TA advisors as assisted by MEM and cooperating agency counterparts. Specific factories or manufacturing concerns needing assistance in developing/implementing conservation measures will be identified by this Project for potential follow-up under AID Office of Energy Project (936-5728).

Under this related project, energy audit services and feasibility studies to advise interested parties will be available to examine the viability of investments in energy-saving techniques or equipment. Furthermore, training may be given to private architectural and engineering firms, bank staffs, the National Electrical Utility and autonomous electricity suppliers (regies), and petroleum product distributors in energy audits and financial analysis of energy conservation investments.

(5) Critical Energy Studies:

The SPD will conduct a series of energy-related studies judged to be critical for improved management of the energy sector. Illustrative of these will be studies on:

a) Technical and financial feasibility of computer linkage with mainframe systems in MEM's operating agencies (O.N.E., SNPP, SAMIR and SCP) and in other Ministries, especially Plan.

b) Petroleum products emergency acquisition and distribution plan.

c) Regional energy supply and demand for inter-regional energy flows.

d) Rural energy supply plan for isolated zones.

e) Energy-Agriculture inter-relationships, including fuel-wood-induced deforestation, soil erosion, power reservoir siltation.

(6) Operation of a Computer Network

The SPD will be responsible for operating, maintaining, and repairing a small micro-computer network of energy economists and technologists representing the major energy supply/demand decision-makers: The MEM's Energy Directorate; its Mining Directorate; Office Chérifien des Phosphates (OCP); Office National des Recherches et d'Exploitations Pétrolières (ONAREP); Office National de l'Electricité (ONE); Société Nationale de Produits Pétrolières (SNPP); Société Autonome du Maroc de l'Industrie de Raffinage, (SAMIR); the Ministry of Commerce, Industry, and Tourism; the Energy Parastatal Section of the Finance Ministry, Société Commerciale de Charbon et Bois (SOCOCHARBO); Eaux et Forêts, and the Renewable Energy Development Center (CDER) would be prime institutions concerned with generating data on a regular basis to feed into the network. They would receive periodic training on the micro- and macro-economic functions available through the SPD-managed computerized model of the Moroccan energy sector.

The U.S. energy planning contractor will conduct an information system needs assessment to install such a network within the first three years of the Project.

A resident contractor will advise on the procurement, installation, and training aspects of such a computerized network.

(7) Energy Data Base Management

The SPD will improve the quality of energy data needed for effective energy planning. MEM's SPD will be formally charged with collecting, filing, analyzing, and updating the array of economic and technical data needed to assure a national energy data base. (Heretofore, data exchange was the prerogative of the cooperating agencies). The data base management service will be among the first to be fully assumed by the MEM as it is a natural prerogative of the Ministry to solicit and update vital energy data.

(8) Intra-Ministerial and Inter-Ministerial Energy Policy Dialogue:

The SPD will support mechanisms for improved collaboration between MEM and its operating agencies and between MEM and other GOM Ministries. Intra-Ministerial coordination between MEM's Energy Directorate and key operating agencies such as O.N.E., ONAREP, SNPP, and CDER will be strengthened by training and equipping both the staff of the Energy Directorate responsible for relations with such agencies and their counterpart contacts in each subordinate operating agency. Cooperation between MEM and other Ministries, (especially Industry, Transportation, Agriculture, Public Works, Housing, Finance and Plan) and Morocco's private sector (particularly chambers of commerce and cement associations, sugar associations, textile associations, etc.) will be strengthened by allowing them (1) potential access to the analytical capabilities of the SPD and (2) potential access to Project 936-5728's energy audit and conservation advisory services. Especially important will be the strengthened ability of MEM to prepare energy analyses for inter-ministerial policy formulation in the Prime Minister's National Energy Commission and its affiliated Sub-Commissions (Energy Conservation, Agriculture, Hydroelectricity, etc.).

More importantly, perhaps, the SPD staff will also acquire the capability to prepare reports and presentations, to formulate and support recommendations for policy decisions at the highest policy level. To reach this level of sophistication in four years the U.S. resident contractor will provide, especially during the first two years, the necessary guidance and backup to the SPD in its interaction with top-level decision-makers in the Ministry of Energy and Mines and elsewhere. This support will assume many forms, ranging from direct work with counterparts in the preparation and review of specific plans (or scenario/portfolio combinations) to technical backup regarding specific issues, either of an engineering or a business or financial nature. Such support is essential in going from the current rudiments of national energy planning to an effective and lasting energy planning capabilitywithin MEM so that it may play a key role in shaping the country's energy future.

D. Project Components (Inputs)

1. Professional Staff Time

The fundamental project input from both governments is professional staff working together to strengthen the SPD's capabilities such that it may be sustained largely by MEM in-house staff. To reach this goal the PP design team has estimated the professional level-of-support to be allocated to each of the eight output categories.

In essence, the amount of time dedicated by the SPD staff and resident advisors is the key input. (This level-of-effort will be closely monitored by USAID and MEM to assure that the contractor time is dedicated to the priority issues.)

For priority activities, the PP design team has taken into account the special planning emphasis to develop Morocco's next five-year plan, and the phased integration of academic trainees into the MEM's Planning Service. During the Project the SPD staff and resident advisors will focus primarily on four key activities: pricing, investment planning, review of specific investment proposals, and conservation studies.

The GOM will provide about 396 professional work-months of which 230 work-months are directly attributable to SPD staff, about 112 from operating agencies representatives within SPD, and 54 from industry.

In addition to the estimated 396 work-months, the PP design team projects that Moroccan professionals will dedicate an additional 123 person-months receiving in-country training dispensed within SPD by the resident contract advisors. The allocation of the participant-months is projected as follows: 70 pm from MEM employees of SPD, 40 pm from operating agency staff within EPES, and 13 participant-months from other ministries, operating agencies, or private industry representatives.

The AID-funded resident contractors will provide about 158 professional work-months to the Project. The short-term energy audit contractor will provide 6 additional professional work-months to the U.S. effort and other short term advisers will provide 31 more work months as the need arises. An additional 8 work months is estimated to be necessary to carry out a full information system needs assessment.

2. Training

The Project has an intensive training component in view of its goal to transfer computerized financial analysis capabilities to the SPD. The complex Training Program is summarized in the chart below, where types of training and responsible parties are identified:

Training Mode:	Responsible Party: Direct AID	AID via Contract	GOM
1) On-the-job experience in Morocco	--	X	X
2) English Language Training	X	X	X
3) Conference/Workshop Participation	--	X	X
4) Short-term Technical Training in U.S.	X	X	X
5) Academic Training in U.S.	X	--	X

Table 1, "Academic, Technical, and English Language Training Matrix" projects the timing and emphases of all training opportunities with the exception of "on-the-job training" explained under D.1. above.

SPD staffers, and occasionally other GOM officials will participate in international meetings and study tours, in the U.S. on subjects related to energy planning, policy analysis, energy conservation and energy technology assessment. Brief occasional papers will be prepared by staff participating in such activities, including trip reports and lessons learned, so that their experience can be disseminated at the meetings and to other countries' energy officials. The contractor's field residents are to join their Moroccan counterparts in attending several international conferences held in the U.S. In this manner, a cohesive team effort shoud slowly evolve around the theme of sound energy finance/policy.

Both AID and the contractor will provide to SPD staffers and to planning network members or industry representatives short-term technical training in the U.S. Also, 3 members of SPD will receive academic training in the United States in order to gain skills necessary to sustain the unit at the conclusion of the Project. Academic Training will be directly arranged by AID.

The GOM will participate actively in international conferences/seminars and host 10 inter-ministerial colloquia.

TABLE 1

ACADEMIC, TECHNICAL,[1] AND ENGLISH LANGUAGE TRAINING MATRIX

608 -0180

Type of Training	Funded by	Provided by	Final Date for Nomination	Minimum English Score: At Nomination	Minimum English Score: Before Trg.	Training Period: Begin	Training Period: End	Duration Months	Number of Participants: MEM	Number of Participants: Para-stat	Number of Participants: Oth.	Total Participant-Months (LOP)
Regular English Lang. Trg. Classes	608-0178	ALC/Rabat or ALC/Casa	1/84	N/A	See below	1/84	9/84	9	6	2	0	N/A
Regular English Lang. Trg. Classes	608-0180	ALC/Rabat or ALC/Casa	6/84	N/A	See below	9/84 post ProAg	9/84 post Contr.Field.	3	6	2	0	
Energy Mgt. Trg. Program	608-0180	S&T/EY via SUNY, Stony Brook	5/84	55 ALICU (35 ALICU if followed by intensive courses)	65-70 ALICU	9/84	11/84	1.5	1	1	0	22.5
			12/85			4/85	6/85		1	1	0	
			5/85			9/85	11/85		1	0	2	
			12/85			4/86	6/86		1	0	1	
			5/86			9/86	11/86			1	0	
			12/86			4/87	6/87			1	0	
			5/87			9/87	11/87		1	0	1	
			12/87			4/88	6/88			0	2	
Four Masters in	608-0180	S&T/EY via IIE contract		55 ALICU; (35 ALICU if intensive courses offered)	TOEFL - 500 or as required by school, 85-90 ALICU					N/A	N/A	72.0
Energy Economy			1/85			9/85	9/86	24	1			
Energy Tech.			1/86			9/86	9/87	24	1			
Bus. Admin.			3/85			1/86	12/88	24	1			
-month energy mgt. internships during academic period in U.S. (2 per Masters candidate)	608-0180	Contractor	3/85	N/A	N/A	6/85	6/85	1.0	1	N/A	N/A	10.0
			3/86			6/86	6/86	1.0	3			
			3/87			6/87	6/87	1.0	1			
Active GOM participation at seminars/conferences outside Morocco	608-0180	Contractor (All Admin. & Financ.Proced)	3 months before depart. to U.S.; 4.5 months and waiver request for non-U.S. conferences	50-55 ALICU	50-55 ALICU	per requests	per requests	abt. 0.5	21	5	5	17.0
Reg.Engl.lang.class. intensive-optional	608-0180	Contractor via ALC/Lab.or Cas	N/A	N/A	N/A	9/84	6/87	—	yes	yes	yes	—

1) Technical Training excludes conference/seminar attendance of contractors.

3. Commodities:

AID via a resident information systems contractor will fund a small micro-computer network estimated at $80,000. The contractor will be asked to design a network responsive to an information needs assessment developed earlier.

4. Special Energy Audit and Industrial Conservation Services

In addition to services provided directly by USAID or services contracted through a financial/economic advisory firm resident in Morocco, USAID will also fund services to conduct energy audits and advise industry on energy conservation measures. These services will be furnished by a U.S.-owned firm already under contract to AID's Office of Energy in Washington. The services will include about 6 short-term consultant months in Morocco of a U.S.-owned firm over a three-year period. It is estimated that 18 counterpart-months will be provided by Moroccan industrialists in the form of managers and factory engineers.

E End of Project Status

By nurturing over a five-year period MEM's internal capabilities to quantitatively analyze investment and pricing options, the Energy Planning and Inforamtion Service will at the end of the Project be staffed by 8-12 analysts of whom 3 will have received U.S. master's training in Energy Technology and Economics.

The SPD will provide three continuing services to the GOM:

(1) providing pricing guidance, energy budgeting, selecting an inventory of projects, using objective financial indicators for all proposed GOM-related energy investments;

(2) assisting industrial/commercial enterprises to assess energy efficiency of operations and recommending conservations measures; and

(3) acting as a clearing house for MEM and its parastatals to consistently apply coherent energy planning techniques.

The resident advisors will train and collaborate with SPD on real-life case studies to establish such analytical capabilities. The MEM will during and after the Project call upon the SPD to provide analysis and advice for GOM decision-making. If the Project were working solely in a private business environment, the SPD would be very akin to the final staffing

and operations of a small financial advisory firm specialized in energy and serving the investment community. Indeed, it is intended to function in this capacity regarding conservation measures for private industry.

If SPD advice is taken, it is the Project hypothesis that the following indirect benefits will be fostered:

- Better decisions
- More productive use of GOM investment
- Better economic equilibrium
- Stabler more defensible pricing
- Lessened drain on current account funding
- Reduced foreign borrowing
- Improved balance of payments

III. COST ESTIMATES AND FINANCIAL PLAN

A. COST ESTIMATES

Tables 3 and 4 summarize the respective USG and GOM financial contributions by U.S. Fiscal Year; Table 5 provides the GOM contribution in Calendar Year. The $5.40 million project disburses at a steady rate during its life with about 16% of the USG contribution incurred in local currency expenditures and about 11% of the GOM expenditure incurred in foreign exchange as shown in Table 6. The costing of project outputs/inputs, Table 7, shows that the GOM is financially implicated in all aspects of the project with a strong presence in funding counterparts, office/computer equipment/supplies, and industrial conservation. Both the USG and GOM contributions presume a 6% per annum inflation rate which has been factored into the estimates. The AID-funded contract charges allow a 10% contingency factor. Detailed Cost Estimating Sheets are found in draft PIO/T's provided to the Regional Contracting Officer.

Recurrent Cost Analysis:

The MEM is establishing an Energy Planning and Information Service (SPD) within its Energy Directorate. The USG contribution to the project will support the Service during its early days. Therefore, the main purpose of the project will be institution-building. As SPD is a new Service, the MEM is committing itself to higher net recurrent costs. Table 8 estimates of these substantial recurrent costs equivalent to up to 3/4's of the GOM's annual contribution during the LOP. GOM's annual recurrent costs are estimated to be 1.30 million DH per year ($150,000). Two-thirds of the recurrent costs go to salary maintenance of SPD's 12-member professional staff. It is imperative for Project success and viability that Planning Service professionals receive competitive market rates for their services or equivalent professional incentives and perquisites to stay with SPD. "Civilist" staffing of the Service will not provide the MEM with the continuity, analytical depth, or professional experience needed to sustain what is essentially MEM's investment advisory group.

The key energy operating agencies assisting the MEM's Planning Service should be prepared to make similar personnel commitments.

B. FINANCIAL PLAN

USAID's contribution will come from Development Assistance in the SDA Account (Section 106 of FAA, as amended). The AID contribution will be obligated in tranches, the first of which will be approximately $1.13 million in FY 1984. MEM has given USAID its assurances that it has requested appropriate outlays for this Project. MEM will request that USAID proceed with placement of at least one academic candidate in those areas where S&T/EY has already negotiated training contracts. (The first diploma candidate must be identified no later than 1/85 for normal placement starting 9/85.) MEM will request USAID to arrange for short-term training in the fall of 1984 through the Energy Management Training Program. Operating agency representatives are also expected to participate in these short-term training opportunities.

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TABLE 2

TOTAL U.S. CONTRIBUTION TO 608-0180 PROJECT

Estimated Expenditures

- Summary -

(000's $ in FY)

ITEMS	1984	1985	1986	1987	1988	1989	TOTAL
A. Primary Contractor's Home Office	0	103	96	102	108	111	520
B. Primary Contractor's Field Operations	0	330	394	385	360	280	1,749
C. Primary Contractor's U.S. Training	0	21	23	41	25	0	110
D. Primary Contractor's Field Training	0	2	5	5	4	0	16
E. Primary Contractor's Fee	0	36	41	43	40	32	192
F. Contingency for Primary Contract	0	49	56	58	54	44	261
G. Primary Contract Budget (A-F)	0	541	615	634	591	467	2,848
a. Secondary Contractor's Home Office	0	0	72	77	0	0	149
b. Secondary Contractor's Field Operations	0	0	178	318	0	0	496
c. Secondary Contractor's Fee	0	0	20	32	0	0	52
d. Contingency for Secondary Contractor	0	0	27	43	0	0	70
e. Secondary Contract Budget (a-d)	0	0	297	470	0	0	767
1. English Language Training	2	0	0	0	0	0	2
2. Technical Training in Energy Economics/Management	0	11	24	13	14	0	62
3. Three Masters Level Programs	0	0	23	48	51	27	149
4. Energy Audit/Conservation Services	0	20	21	22	0	0	63
5. Comprehensive Evaluations	0	0	35	0	40	0	75
6. Contingency for U.S. Direct Procurement	0	3	10	8	10	3	34
7. Total Budgeted for U.S. Direct Procurement (1-6)	2	34	113	91	115	30	385
TOTAL ESTIMATED U.S. CONTRIBUTION TO 608-0180 PROJECT (G + e + 7)	2	575	1,025	1,195	706	497	4,000

TABLE 3

608-0180 ENERGY PLANNING ASSISTANCE

GOM'S CONTRIBUTION

ESTIMATED EXPENDITURES

- Summary -

($ equivalent of 000's DH in U.S. FY)

	8-9/84	10/84-5	10/85-6	10/86-7	10/87-8	10/88-9	TOTAL
MEM AND INDUSTRY							
A.1. Professional Salaries	5	35	86	94	111	100	
A.2. Support Staff Salaries	2	6	6	6	7	7	
B. Inter-Ministerial Colloquia in Morocco	0	40	42	44	46	50	
C. Office Furniture/Equipment	25	0	3	0	3	0	
D. O - M - R for Computers	3	9	12	11	71	74	
E. Office Operations	19	43	44	47	50	53	
F. Industrial Conservation Counterparts	0	28	29	32	0	0	
G. Counterparts and Operations	54	161	222	234	288	284	1,243
TRAINING							
A.1. Academic	0	0	11	31	24	4	
A.2. Related Travel for Academic Trg.	0	0	1	2	1	1	
B.1. Short-Term Training	0	1	4	2	1	0	
B.2. Related Travel	0	1	3	1	2	0	
Travel Related to Seminars/Conf.	0	20	15	21	11	0	
C. Training	0	22	34	57	39	5	157
GOM ESTIMATED CONTRIBUTION TO PROJECT (G + C)	54	183	256	291	327	289	1,400

6% p.a. inflation factored into estimates.

TABLE 4

608-0180 ENERGY PLANNING ASSISTANCE
GOM'S CONTRIBUTION

ESTIMATED EXPENDITURES

- Summary -

(000's of DH in CY)

	8-12/84	1985	1986	1987	1988	1989	TOTAL
MEM AND INDUSTRY							
A.1. Professional Salaries	125	413	757	850	959	622	
A.2. Support Staff Salaries	31	54	55	54	55	47	
B. Inter/Ministerial Colloquia in Morocco	86	343	359	382	406	312	
C. Office Furniture/Equipment	218	8	16	8	16	0	
D. O + M + R for Computers	47	88	94	226	618	476	
E. Office Operations	335	367	390	413	437	265	
F. Industrial Conservation Counterparts	62	242	265	203	0	0	
G. Counterparts and Operations	904	1,515	1,936	2,136	2,491	1,722	10,704
TRAINING							
A.1. Academic	0	23	140	250	156	23	
A.2. Related Travel for Academic Trg.	0	0	8	8	8	8	
B.1. Short-Term Training	8	16	32	16	8	0	
B.2. Related Travel	8	16	32	16	8	0	
Travel Related to Seminars/Conf.	39	148	148	164	70	0	
C. Training	55	203	360	454	250	31	1,353
GOM ESTIMATED CONTRIBUTION TO PROJECT (G + C)	959	1,718	2,296	2,590	2,741	1,753	12,057

6% p.a. inflation factored into estimates.

TABLE 5

ENERGY PLANNING ASSISTANCE PROJECT 608-0180

SUMMARY COST ESTIMATE AND FINANCIAL PLAN a)

(U.S. $ 000 or equivalent of DH Estimates)

SOURCE	AID		GOM		TOTAL	
	FX	LC	FX	LC	FX	LC
USES						
RESIDENT TA and TRG CONTRACTS and GOM COUNTERPARTS (1-10)	(2,998)	(569)	(109)	(848)	(3,107)	(1,417)
1. Home Office + TDYers' Salaries	183	0	-	-	183	0
2. TA Field Salaries & SPD Counterparts	541	38	0	420	541	458
3. Travel, Per Diem, and Counterpart Training	171	171	5	20	176	191
4. Field Office Equipt.+Comp.Net.	-	-	68 b)	32 b)	68	32
5. SPD Office OE + Network OMR	0	47	6	139	6	186
6. Advisors' Ldg., Hsg., Ed. Allow.	34	130	-	-	34	130
7. Information Systems Contract	430	168	-	36	430	204
8. Benefits, Overhead, contingency fees(Contractors + SPD staff)	1,528	0	0	153	1,528	153
9. Summer Trg in US for Masters	35	0	0	6	35	6
10. SPD Attendance at Inter'l. Conf./Sem. and English Trg.	76	15	30	42	106	57
11. ENERGY AUDIT/INDUSTRIAL CONSERVATION SERVICES	100	39	0	99	100	138
TRG FUNDED BY USAID VIA ST/EY CONTRACT EXCEPT ENGLISH (12-14)	(211)	(8)	(0)	(80)	(211)	(88)
12. US Masters	149	0	0	70c)	149	70
13. US Short-Term	62	0	0	10	62	10
14. English at ALC	0	8	0	0	0	8
15. PROJECT EVALUATIONS FUNDED VIA AID/W IQC's	65	10	0	10	65	20
16. INTER-MINISTERIAL COLLOQUIA	0	0	47 d)	195	47	195
$/DH Apportionment (est.)	3,374	626	156	1,244	3,530	1,870
AID, GOM, TOTAL PROJECT COSTS	4,000		1,400		5,400	

a) 6% p.a. inflation factored into estimates

b) 3/4 of office equipment/supplies charged to FX, balance to LC. No comp. network purchases by GOM.

c) $6,000 in summer internships for Masters candidates charged to 10.

d) Est. honoraria for GOM guest speakers.

TABLE 6

ESTIMATED COSTING OF PROJECT OUTPUTS - PROJECT 608-0180 - TITLE: ENERGY PLANNING ASSISTANCE

($000 or DH equivalent)

PROJECT INPUTS W/M = Work months P/M = Participant months	PROJECT OUTPUTS SERVICES OR GOODS DELIVERED WITHIN THE PROJECT Advice on Energy Pricing, Nat'l. Inv. Planning, Spec. Inv. Proposals, Efficiency/Conservation Studies, Data Base Mgt., Computer Networking, Policy Dialogue, Field Office Mgt.	Energy audit/conservation for industry 936-5728	On-the-job training including conferences/colloquia, contract-funded short term	Three Masters AID Direct	Short-term Energy Mgt. Training AID Direct	Office Equipment Computer Network	Two comprehensive Evaluations	TOTAL
AID Contribution:								
150 resident advis. w/m 39 TDY w/m	3,440							
6 TDY w/m		63						
Short-Term Training (29 p/m) (contract)			131					
Scholarships (72 p/m)				149				
Short-term training (AID Dir.)					62			4,000
Procurement						80		
IQC Costs							75	
GOM Contribution:								
(MEM/ Operating agencies, other) 399 w/m	663							
18 w/m		90						
29 w/m			230					
3 candidates 72 p/m				69				1,400
10 participants 15 p/m					21			
Logistic Support O+M+R						317		
Sr. Staff Time							10	
TOTAL	4,103	153	361	218	83	397	85	5,400

TABLE 7

ESTIMATE OF MINIMUM RECURRENT COSTS FOR MEM's ENERGY PLANNING AND INFORMATION SERVICE

RECURRENT COST ITEM	1984 Base Prices (Monthly) DH	A	B	A/B
1. MEM's Energy Planning and Information Service (Salaries)	67,000			
2. Support Staff	4,000			
Salaries	71,000			
3. Office Rent	20,000			
4. Telex	3,000			
5. Phone	2,000			
6. Utilities, Maintenance, Repairs	1,100			
7. Perishable Office Supplies	3,750			
8. Official car maintenance	2,350			
9. Computers' O+M+R	4,000			
Other (3-9)	36,200	Annual Recurrent Costs (x12)	Estimated CY 1985 GOM Contribut. to Project	Approximate Recurrent Cost as % of GOM Contribut
TOTAL DH	107,200	1,286,400 DH	1,718,000 DH	75%
TOTAL $ equivalent 1)	12,470	$150,000	$ 200,000	

1) 8.6 DH/$ Exchange Rate

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Both long-term and short-term PIO/P's will be funded by the AID contribution to the project. Costs of training directly funded by AID and provided via existing S&T/EY contracts would total about $211,000 over LOP

The major project cost, the energy planning contract, will be provided via competition among 8-A companies. An early and orderly transition from the current S&T/EY-funded project will be sought. Funding for the cost reimbursement (level-of-effort) plus fixed fee contract would be partially comitted at contract signing. Subsequent contract financing would be forth-coming subject to availability through the AID allowance process and pursuant to recommendations from project-funded evaluations arranged by USAID. Evaluation recommendations will impact on the contractor's revisions to the workplan and associated refined budgets which USAID will require of the contractor.

C. ASSESSMENT OF THE METHODS OF IMPLEMENTATION AND FINANCING FOR PROPOSED PROJECT ACTIVITIES

The USAID/Morocco's "Financing Policy and Procedures" document prepared by the USAID/Morocco Controller stipulates existing methods of financing USAID activities in Morocco. The PP design team has reviewed these options and believes that in light of the GOM's severe austerity measures MEM does not have the financial resources available to make timely payments for AID-funded goods and services and to seek reimbursement from USAID.

Rather USAID has selected the direct AID cost reimbursement contract method for technical services, limited commodity procurement, and some short-term training having an estimated value of 82% of the USG contribution to the Project (77% - technical advice, 3% - training, 2% - commodities). The USAID/Controller will utilize direct payment procedures. As most of these contract services will be provided in Rabat, Morocco, adequate monitoring and oversite will be assured. (See Table 9 below). Internal control is deemed to be good.

The other key Project component, short-term and academic training equivalent to 6% of the USG contribution to the Project, will be AID direct training under existing AID/W agreements with technical back-stopping by AID's Office of Energy and S+T/IT. Payments will be made from AID's Participant Training Master Disbursing Account.

2% of the USG Project contribution will cover evaluation/monitoring services to be secured via one of a dozen AID/W IQC's qualified in energy planning and finance. USAID/Morocco will issue a PIO/T for specific scopes of work under these existing IQC arrangements to reduce the administrative burden of full competition and duplication of effort.

Finally, 9% of the USG contribution is held for contingencies.

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TABLE 8

PROJECT 608-0180: ENERGY PLANNING ASSISTANCE

- Methods of Implementation and Financing -

USAID Contribution

Method of Implementation	Method of Financing	Approximate Value (U.S. Dollars 000)
1. USAID Direct Contracts: Technical Assistance Training in U.S. and Morocco, some commodities; information systems (cost reimbursement fixed fee)	USAID-Contractor Agreement executed by RCO in Rabat Direct Payment	3,284 - 82% (3,078 in TA and fees, 80 in commodities, 126 in training)
2. Energy Audit/Industrial Conservation Services Work orders under existing S+T/EY-managed contract	Direct Payment to Contractor to supplement contract managed by S+T/EY (Project 936-5728)	63 - 2%
3. U.S. Academic Training (Existing S+T/EY Contracts)	USAID to transfer funds to supplement S+T/EY-managed Training Contracts under AID/W Projects	149 - 4%
4. U.S. Short-Term Training (Existing S+T/EY Contracts)		62 - 2%
5. English Language Training in Morocco (Trainee enrollment using USAID letter)	Direct Payment to ALCs	2 negligible
6. T.A. for Evaluations - work orders under existing S+T/EY managed IQC's	Direct Payment to Contractor to supplement IQC's managed by S+T/EY	75 - 2%
7. Contingencies	To be determined if/as necessary	365 - 9%
	TOTAL USAID CONTRIBUTION	4,000 - 100%

A 6% per annum inflation projection has been factored into USAID's intern cost estimates.

It is believed that the above methods of implementation and financing are the most effective, provide thorough oversite by USDH's, and are expeditious. Project-funded auditing will not be required in view of the direct AID management of most of the funds and a generous evaluation/monitoring budget. The "Project Officer Check List for Administrative Approval of Vouchers" (see page 10 of AA/M "Payment Verification Policy Implementation Guidance" memo of 12/30/83) will be used by USAID.

The USAID/Morocco Controller concurs with Project 0180's Method of Implementation and Financing Plan and has been delegated the authority to approve the Project Paper authorized in the field by USAID/Morocco's Director. The Controller's approval appears on the Project Data Sheet.

IV. IMPLEMENTATION PLAN

A. Technical Assistance and Training Contract

Following authorization of the Project, USAID/Morocco will negotiate a Project Agreement with the Ministry of Energy and Mines, and the Ministry of Finance. The agreement will designate MEM as the GOM implementing agency with its Energy Directorate having daily technical oversight responsibilities.

The Energy Director of MEM (or his designee) will participate as an observer on the mission's 8-A contract selection committee. MEM will also be present during contract negotiations which will be held at USAID/Morocco under the chairmanship of the Regional Contracting Officer (RCO).

Once the technical committee has selected the firm with which it intends to negotiate a contract, representatives from the U.S. firm will meet with the RCO to negotiate contract terms. No later than three weeks after successfully executing a contract, the contractor will send its resident chief-of-party and home office project director to Morocco to prepare for mobilization of resident staff, to hire local secretaries and administrative assistants, and to finalize to USAID's satisfaction a work plan and detailed budget for the first 13-months of residency based on the scope of work and overall budget negotiated with the RCO.

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Once the work plan for the first 13-months of residency is approved, the entire resident staff would be authorized by AID to be fielded, provided MEM has satisfied all prepatory convenants.

USAID's Request for Proposal will include:

- a statement of the Project's overall objectives;
- a summary of the Project's context and rationale;
- a detailed description of the project elements and related requirements for personnel, corporate capabilities and scope of work;
- a schedule for activities;
- a list of commodities to be provided; and
- criteria for contractor selection.

Annex K is a detailed S.W suggested for the RFP for the energy planning contract.

The proposer will be directed to respond with its corporate qualifications and experience, a description of the general approach it would propose to take including arrangements for fielding and backstopping the resident team, the resources it would draw upon to provide short-term technical assistance, resumés of persons to fill professional positions, and a cost estimate.

Annex I details the key considerations in selecting participants and arranging for their training needs whether their training is funded under the T.A. contractor or via USAID.

The USAID/Morocco Controller will make payments directly to the Contractor on receipt and review of monthly invoices. Payment method will be negotiated during contract negotiations.

A solid MEM commitment to support its new Energy Planning and Information Service is a prerequisite to Project success. SPD will need frequent well-coordinated exchanges with counterparts, key operating agencies (ONE, CDM, and ONAREP) and related Ministries especially MOF and MCIT. A smooth flow of information provided in a timely fashion will also be necessary for Project success. The MEM may wish to formalize its relationships with the key operating agencies and Ministries in so far as Project 608-0180 is concerned. Or it may be satisfactory for it to exercise vigorously its oversite and regulatory authority vis-à-vis the operating agencies.

As the purpose of the Project is to strengthen a newly formed administrative component of the GOM's Ministry of Energy and Mines, a

thorough review of the GOM's efforts to nurture and reinforce the new Service is in order. This institution-building effort has both an implementation planning character as well as features of administrative or management analysis. See Section VI. D. and Annex H for futher discussion. Table 9 "Phased Arrival of Resident Advisors and SPD Staff" shows how the SPD positions will be phased in and coordinated with contract advisor presence over the LOP.

B. Training Plan

Decision-making for energy investment requires a multi-disciplinary team of technologists, financiers, analytical experts, as well as advisors trained in economics and management science. The Project intends to train MEM staff in this broad range of disciplines so that at the close of the project the Ministry will be receiving investment guidance from a team capable of critiquing and developing investment proposals from a variety of view points.

By establishing a PACD of 9/30/89, the project can afford to train local staff to replace contractors who will take the lead in managing much of the work during the first two years. Long-term training in the United States combined with summer internships and directed thesis research in Morocco on Moroccan energy issues should orient the participants on their future position within SPD and assure their professional identification with the Service.

Academic Training, Associated Internships and Thesis Preparation:

The U.S contribution will fund Masters level diploma training for three MEM employees selected to be the main cadres of the new Energy Planning and Information Service. Energy Economics, Energy Technologies, and Business Administration or Management Science will be the areas of academic training. The AID contribution to the project will provide supplementary funding to S&T/EY's 936-9997 project in energy training to fund and place these 3 candidates. The first 12-months of the Project will see the departure of at least one academic candidate so as to allow for his/her complete integration into the Service while resident T.A. contractors are still available as counterparts. It is critical that at least 1 candidate be nominated by January, 1985 to guaranty the minimum time typically necessary for English and scholastic testing and competitive placement in U.S. universities o/a 9/85. The second 12-months of the Project would see the departure of the remaining two academic candidates in Energy Technologies and Business Administration/Management Science.

In order to lend a sense of pragmatic realism to the course of study to be undertaken in the U.S. by the three Masters candidates, they will each receive two two-month practical internships in their respective fields during the traditional summer holidays. This training with local energy businesses in the United States will be arranged by the Home Office of the T.A. contractor. Also, during their academic course of study each Masters candidate may return to MEM/Rabat to work in the SPD for the remaining months of the summer. During their practical summer

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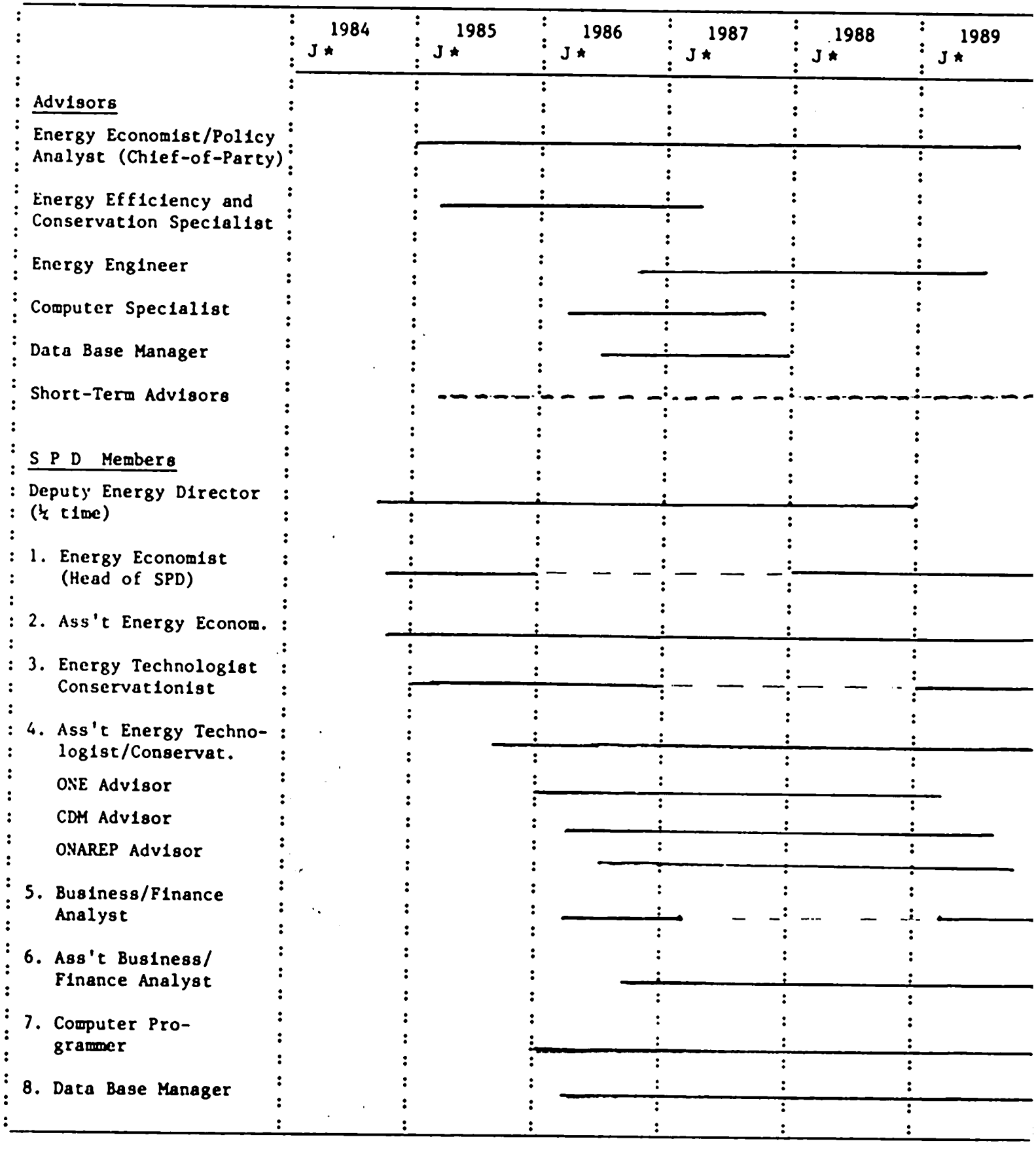
TABLE 9

PHASED ARRIVAL OF RESIDENT ADVISORS AND SPD STAFF
(U.S. Fiscal Years)



*January

work at MEM, the three candidates would be able to research their thesis topics and receive guidance from the resident T.A. advisors. Thesis topics will treat energy investment and/or planning issues in Morocco.

Short-Term Training:

Not all staff members of the Planning and Evaluation Service will receive academic training under Project 608-0180. For SPD staff members and their colleagues in MEM operating agencies and other Ministries who do not receive academic training, a variety of short-term training opportunities will be made available. The U.S. contribution to the Project has budgeted for 15 participants to attend short-term courses in the United States for approximately 6 weeks each. See Table 2 for currently projected allocation of short-term training among MEM, MEM operating agencies, and other Ministries. These short-term training programs will be arranged by USAID by providing supplemental funding to S+T/EY's portfolio of energy training projects.

To be eligible for such training, USAID must receive written notification from the MEM Energy Directorate explaining the function the individual fills in SPD or if the individual does not work directly within the Service, what his relationship is to the Service. Normally a candidate not working within the Service must dedicate a significant portion of his time to energy planning within his respective operating agency or Ministry to be eligible for short-term training under 608-0180. Also, the candidate would normally be his organization's operational link in the Service's information and analytical network. Short-term training candidates will need to demonstrate proficiency in English at an average of 70 ALIGU level before departing Morocco. (See Annex I for complete guidance on qualifications for training).

Attendance at Seminars/Conferences in the United States

MEM, its operating agencies and related Ministries will actively participate in a wide variety of seminars/conferences where they will deliver technical papers on energy investment planning or act as workshop leaders. Attendance at conferences/seminars outside the United States may be approved by USAID if a waiver is requested and justified.

The resident T.A. contractor will handle all funding and administrative arrangements for conference/seminar participants. Once a conference/seminar related to the Project's purposes has been identified, MEM through the resident T.A. contractor will notify USAID of its intent to fund attendance under the contract. Notification will include a

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recent English language score of participant, name, administrative relationship to Project, abstract in English of paper he will deliver or specific role he will play at conference, immediate supervisor's approval letter, and if other than a MEM Planning Service staff member, approval from the MEM project representative that MEM wishes to sponsor the attendee. Before departure for the conference, AID must receive a typed copy of the technical paper to be delivered by the participant, if he is to make such a presentation.

The resident T.A. contractor will provide RT air travel to the conference/seminar site and per diem in accordance with AID regulations.

English Language Training:

Members of the MEM Planning and Information Service (8 MEM employees and 3 operating agency representatives) may receive regular English language training at ALC/Rabat so long as they work with the Service. The resident T.A. contractor will fund this training.

The fifteen short-term participants mentioned above may receive English language training, in order to reach the minimum score necessary to attend the training session. Their language testing and training will also be funded by the resident T.A. contractor.

On-the Job Training for Moroccan Counterparts

A substantial amount of on-the-job training will take place in Morocco as contractors and their GOM counterparts interact. A Moroccan sub-contractor may provide to operating agencies and other Ministries much of the redundant training on how to use most effectively the micro-computer network. The Moroccan sub-contractor will also introduce his MEM counterparts to the data base management system structured by the U.S. prime contractor in consultation with MEM and to the various professional contacts in Moroccan organizations. The U.S. resident advisors will train on usage of the computerized energy investment model key technicians in each MEM operating agencies so that they may adapt the methodology to their own planning and budgeting systems as desired.

C. Commodity Procurement

About 2% of the technical assistance and training contracts will include commodity procurement for (1) the U.S. T.A. contractors' field office, (2) SPD itself and (3) offices of key operating agencies or other Ministries cooperating with SPD in its micro-computer network. Annex K. and associated PIO/T specify a commodity procurement list as part of the T.A. contractor's services. This equipment with spare parts and perishable supplies will be ordered by the contractor promptly after

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contract execution so that its delivery may coincide with the arrival of the field staff who will arrange for local installation. Contractor will arrange for local training on items such as the micro-computers, word processors, and printers. Operation, maintenance, and repair of the equipment will fall to MEM and the micro-computer network beneficiary agencies.

December, 1983 USAID commissioned a survey of the local market for micro-computer hardware, software, programming services, maintenance and repair. The consultant summarized rather favorable market conditions regarding availability of U.S.-manufactured products having French keyboards and software and appropriate electrical configurations (220 V, 50 HZ). Waranties, maintenance service and repair contracts had, according to the consultant, a significantly greater chance of being honored if the equipment were purchased from local dealers. However, prompt availability of spare parts was sometimes a problem due primarily to constantly changing import regulations. On the whole, it seems that commodity procurement from local sources would present a far more effective and expeditious procurement plan than relying on US-based suppliers. However, MEM would have the additional burden of paying the high local taxes on this equipment.

It is believed that the equipment available in Morocco bearing U.S. manufacturers' names will be preferred by the offerors in their proposed commodity package, especially in so far as the planning network hardware is concerned. It is recommended that U.S. computer commodities be purchased locally to avoid procurement delays, to add a note of local market realism, and to assure SPD equipment a prolonged operational capability with locally available services and accessories.

D. Source/Origin of Goods/Services

The T.A. firms awarded the primary contract shall be a U.S.-owned company with home offices in the United States. At least 1 of the 3 resident U.S. professional positions will be filled by a staff member of the prime contractor. The Chief-of-Party should be from the prime. All training outside Morocco will take place in the United States unless third country training is specifically approved. Procurement of goods and services of Moroccan source/origin or shelf-items normally imported from Code 935 countries will be eligible for reimbursement under AID's contribution to the Project, up to the amounts allowed under AID procurement regulations.

E. Transitional Period

Based on a MEM request and recommendations from an annual evaluation, of predecessor projects, the current Project for Energy Management and Conservation was supplemented by $0.4 million and extended to November 30, 1984. This bridge funding was provided on a "procurement by negotiation" basis awaiting the results of general competition for a multiple-year USAID funded contract.

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Consequently, the time from the signing of the Energy Planning Assistance Project Agreement to November 30, 1984 will be a transitional period for the technical assistance and training currently being provided to MEM. For prudent planning purposes and cautious budgeting it is assumed that the contractor currently in place will be replaced. The new technical assistance team may have perhaps 4 weeks of overlap with the two departing resident advisors to exchange dossiers, meet information network counterparts, and to familiarize themselves with MEM administrative procedures.

Via the USAID/Morocco Sector Support Training Project 608-0178 regular English language training has been provided for Energy Directorate staffers since January, 1984. Once the 608-0180 Project Agreement is signed, USAID will shift funding of English language training from the Sector Support Project to 0180.

TABLE 10

PROJECT 608-0180 SUMMARY IMPLEMENTATION CALENDAR

DATE	RESPONSIBLE PARTY	A C T I O N
8/84	MEM, MOF, AID	Sign ProAg
8/84	AID	Issues Request for Proposal for energy planning
9/84	Steering Committee	First meets
9/84	MEM	Nominates first two staff members to future SPD
10/84	MEM	Submits documentation to meet conditions precedent to first disbursement under the Grant
11/84	MEM	Nominates Energy Conservationist member of SPD
10/84	AID and Contractor	Sign energy planning contract
11/84	Contractor's Chief-of-Party (Energy Economist/Policy Analyst	Arrives
Fall 84	MEM	Sponsors 1st Inter-ministerial colloquia
12/84	Planning Contractor	Issues first semi-annual progress report
1985		
1/85	U.S. Energy Efficiency and Conservation Specialist	Arrives
3/85	GOM/MEM	Establish SPD
3/85	MEM	Submits complete dossier for SPD Energy Economist to receive academic training
Spring 85	MEM	Sponsors 2nd Inter-ministerial colloquia

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5/85	AID, MEM, Planning Contractor	Initiate information systems design
9/85	ONE advisor	Joins SPD
9/85	SPD Energy Economist	Departs for academic training
10/85	MEM	Nominates computer Programmer to SPD
10/85	AID, MEM, Planning Contractor	Agree on information systems design

<u>1986</u>

1/86	MEM	Nominates Business/Finance Analyst to SPD
1/86	U.S. Computer Specialist	Arrives
1/86	MEM	Nominates Data Base Manager to SPD
1/86	CDM Advisor	Joins SPD
1/86	AID and MEM	Evaluate Project's Performance
3/86	ONAREP Advisor	Joins SPD
3/86	MEM	Submits complete dossiers for SPD Energy Technologist/Conservationist to receive academic training
6/86	U.S. Data Base Manager	Arrives
6/86	MEM	Submits complete dossier for SPD Business/Finance Analyst to receive academic training
6/86	U.S. Energy Engineer	Arrives
9/86	SPD Energy Technologist/ Conservationist	Departs for academic training
10/86	Planning Advisors	Submit to MEM and AID formal assessment for information systems needed and options for commodity procurement
11/86	MEM	Submits documentation describing logistic support program for an energy planning network

12/86	Information Systems Contractor	Begins to procure/install planning network
12/86	SPD Business/Finance Analyst	Departs for academic training
1987		
1/87	U.S. Energy Efficiency and Conservation Specialist	Departs
6/87	U.S. Computer Specialist	Departs
9/87	SPD Energy Economist	Returns from academic training
9/87	U.S. Data Base Manager	Departs
1988		
9/88	AID and MEM	Evaluate Project's performance
9/88	SPD Energy Technologist/Conservationist	Returns from academic training
12/88	SPD Business/Finance Analyst	Returns from academic traing
1989		
1/89	ONE Advisor	Departs SPD
3/89	CDM Advisor	Departs SPD
3/89	U.S. Energy Engineer	Departs
6/89	ONAREP Advisor	Departs SPD
6/89	Energy Planning Contractor	Issues twelfth and final semi-annual report
6/89	Energy Planning Chief-of-Party (Energy Economist/ Policy Analyst)	Departs
9/30		Project Assistance Completion

V. MONITORING PLAN

The bulk of the Project represented by the technical assistance and training contracts will be monitored by the USAID Technical Projects Office and MEM's Deputy Energy Director. The technical assistance contractor's home office will report regularly on short-term technical assistance provided in the United States as well as on the conduct of conferences and summer internships in the U.S. Academic trainees and some short-term trainees funded directly by USAID via AID/W will be monitored by existing AID/W conventional energy training contractors who will report to USAID and MEM via S&T/EY.

Monthly the MEM Deputy Energy Director, the USAID OTP Division Chief, and the contractor's Chief-of-Party will meet to review progress and issues for monitoring and trouble-shooting in the short-term.

The major monitoring device will be submission by the resident contractor of semi-annual reports describing progress in attaining goals or targets set by their detailed annual work plan and the overall work plan. Issues, proposed resolutions, and budget status will also be discussed. Upon receipt of these reports, USAID and MEM will convene a Steering Committee meeting chaired by the AID Director and the MEM Energy Director or their respective designees. The resident contractor will also attend represented by the Chief-of-Party. In addition to reviewing progress and issues, the Steering Committee will be used as a forum to approve or modify the detailed scopes of work which the contractor is to undertake within the frame work of his negotiated work plan and budget. In that spirit, the contractor will submit draft SOWs and budgets for special tasks to be undertaken during the following six months.

Minutes of the Steering Committee meetings will be kept by MEM and distributed to all attendees including the contractor's Project Director in the United States and any local sub-contractors.

To assure adequate support and timely preparation, the contractor will notify MEM and USAID by telex of the arrival of the proposed short-term advisors stipulating the duration and terms of reference. USAID will indicate its concurrence to the contractor before departure of the short-term advisor to Morocco.

VI. SUMMARY OF ANALYSES

A. Summary of Technical Analysis

The technical feasibility of the project is assured so long as GOM agencies are forthcoming in providing up-dated information. What is unknown is GOM's ability/intention to take economic actions indicated by the analyses in view of the potential political/social effects of such decisions. Whether GOM decision-makers do or do not pursue avenues opened up by the Project or SPD is frankly outside the purview of the Project, though it is, of course, desired. From the viewpoint of sovereign decision-making and practical political reality, it is inappropriate to expect that GOM decision-makers would necessarily follow what might seem to be the optimal economic solution. The Project will, however, be responsible for generating economic options which would otherwise not have been considered.

The Energy Planning Assistance Project will provide in most cases a variety of scenarios to resolve identified economic issues. Analyses will be quantified as much as possible relying on a growing data base and a realistic simulation of the GOM decision-making process. As such, the administrative assumptions and ministerial support for the Project are as important as its technical feasibility.

Pricing and investment portfolio analysis to serve the GOM's macro-economic decision-makers must be based on the premise that planning and policy formulation is a continuous process-evaluating alternative courses of action under changing conditions. Thus, any computerized techniques to assist decision-makers improve their pricing and investment options must be able to simulate scenarios, and aggregate hypothetical investment portfolios reflecting the nation's entire supply/demand of energy and be capable of intensive man-machine interaction. The art of diplomatic compromise which characterizes all governments' budget setting process must be one of the foundations of the model - not the optimization of any one objective function. A computer model which can accurately and quickly simulate real life impacts in a "what-if or question-answer" mode using feedback loops will be a technical requirement of the Project. Such simulation is feasible and will accelerate MEM's review and debate over parastatal proposals for investment or the government's proposals for price changes.

For this type of policy analysis to be effective it must simulate dynamically the complex relationship between the energy sector of the economy conceived narrowly and all the other major consuming sectors since in the long-run the generation of energy is but a means to an end-consumption.

At this level of analysis the technical virtuosity of any model or narrow micro economic indicator starts to be overshadowed by political factors and considerations of inter-personal behavior. The resident advisory team members and their EPES counterparts must have the confidence and trust of the Minister's office before they are asked to criticize/examine, if only academically, some of the fundamental precepts of the Moroccan economy. Thus, the Project team must early on develop a thorough understanding of the fiscal, regulatory, and legal ramifications of any proposal to alter the national energy portfolio, if the Energy Planning Assistance Project is ever to provide useful, realistic policy analysis.

B. Summary Financial Analysis

Although the Energy Planning Assistance Project's subject matter is almost exclusively quantitative analysis of energy pricing and investment options, the Project itself does not have an inherent monetary value. It is not a revenue producing investment but rather a "human infrastructure" program emphasizing training and advice to high-level appointed officials who in turn are directly responsible for managing the GOM's energy investments and setting national pricing policies. The Project does not lend itself to standard analyses of financial viability such as internal rates of return or net present values.

Based on 3 1/2 years of Mission/MEM experience with predecessor projects, the MEM continues to voice strong support for econometric advice. During this time period, five developments have shown a growing commitment by MEM to foster on portfolio-style quantitative analyses:

(1) Emergence of SPD;

(2) Adoption of and support for state-of-the-art planning systems;

(3) Acceptance of predecessor projects' methodology as the analytical approach desired by many of the specialized energy agencies;

(4) Expressions of readiness to share more data between operating agencies and MEM; and

(5) Desire of MEM to use predecessor project methodologies in its annual budget exercises.

From the GOM's viewpoint, there is a very practical and defensible element of self-interest in the need for the Project. The GOM's Ministry of Finance and international donors are more likely to be attracted by the new analytical environment in which investments are compared not only for their technological feasibility but also for their relative economic value to the nation. The MEM is aware that IBRD and its affiliates support technical assistance aimed at improving MEM's skills in financial and economic analysis. MEM's technical/financial dossiers have in the past been markedly improved by this type of rigorous review.

Traditionally, the GOM has not contracted with local private firms to advise it on national investments, rate structures, or policies. Thus, to rely entirely on Moroccan firms to analyze and review a wide range of politically charged options would be unacceptable to the MEM. Furthermore, Moroccan economic/management advisory firms are inexperienced in dispensing this type of advice. This is not to say that this type of skill could not be developed in Morocco. Rather, the sensitive nature of the GOM energy policy process makes it impractical. Thus, full reliance on local advisory firms while cheaper would be untenable.

The approach most likely to succeed in delivering the needed technical assistance is to rely on foreign resident advisors for conceptualization of the model and macro economic analysis while MEM's economist counterparts receive training and internship experiences which build their professional skills to assume these duties. The Project design does suggest that the information systems development, a Project feature not so laden with policy considerations, could be handled by local firms or professionals. Relying on locally available skills will reduce costs and will introduce the MEM to the option of "contracting out" for its less sensitive analyses.

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The major cost reduction impacting the early U.S. contribution to the project will be the phase out of computer programming and data base management services from AID funding and the provision of these necessary services by the MEM. The obligation of the MEM to fund these locally available skills serves two purposes: (1) it provides for an early sign of their increased commitment to the Project and (2) it helps the MEM to confront the recurrent cost implications of staffing its new Energy Planning and Evaluation Service. Thus, several programming features of the Project tend to support a "least cost" approach to meeting the Project's purposes.

C. Summary Economic Analysis

The GOM has a long history of controlling prices of energy products and food stuffs to meet social and income redistribution goals. Yet, in the new standby arrangement with the IMF, the GOM is to liberalize some of its prices and to rely more on market forces. This may or may not include some energy products, but it is most likely the GOM will attempt to retain its traditional role of guiding the economy through price setting.

Furthermore, the GOM is expected to continue adjusting its energy prices to conform more with market clearing rates largely due to the impact of austerity and the GOM's recognition that it can not sustain the same level of subsidies as in the past. Despite anticipated reforms, there is a high probability that the economy will continue to be adversely impacted regarding balance of payments, terms of trade, and dirham devaluation.

The Project will serve an important function in quantifying the consequences of different investment and pricing options and has the potential for greatly improving the return on energy-related investments. Five characteristics of Morocco's energy sector make it vital to have experienced investment advisors and economists available: (1) the array of potential alternative energy sources, (2) the risks common to oil and gas development, (3) the alternatives for importing oil, coal or gas, (4) the significance of planned investment streams for energy projects, and (5) the anomalies which remain in the energy pricing structure.

The most important potential economic impact of the Project will be in the area of pricing. To foster equilibrium between effective supply and demand for energy products it is hoped that price incentives might be increased in several parts of the energy sector without either giving up Government control over critical points in the economy or allowing unregulated monopolies to develop. The potential benefits are an improvement in economic performance as price incentives and market forces replace administrative controls and a reduction in the use of scarce Government staff resources in the administration of regulations. Specifically, price incentives might be given a greater role in petroleum refining and product distribution, coal importation, and electricity generation.

Specifically, the Project will attempt to determine "shadow prices" for various energy resources available to Morocco as compared to the actual sales price of these resources established by Government fiat. By employing shadow prices (or at least border prices) to assess the net benefits and costs of competing energy investments to the economy, the project should have an effect on the decision-making process. It is presumed that thanks to comparative analyses, the GOM can make more realistic decisions which do not distort the real market value of energy. Already many operating agencies have expressed the need for certain price revisions to reflect true economic costs without which they find it difficult to accumulate the necessary funds required for their share of investments. This is especially critical for electricity rates. It is hoped that the project would enable the MEM to make a better case for policy changes which, in turn, may give the GOM greater credibility in financial markets. Thus, pricing and investment decisions are interdependent components in the development of the GOM's portfolio of budget-funded investments.

The underlying assumption of sustained MEM receptivitiy and desire to organize and prioritize its energy-related investments in an objective fashion is the sine qua non for the Project to proceed. AID recognizes this as a potential risk. However, there exists a three-year history of fruitful policy discusssion with the MEM. In fact, advice provided under predocessor projects has been listened to very closely. This receptivitiy lends credence to the Project's underlying hypothesis that if some of the advice is taken then a number of dysfunctional aspects of Morocco's energy sector may be reformed or at least modified to be less wasteful to the society as a whole and to constitute less of a drain on the GOM Treasury.

Though it would be unrealistic to presume that all advice generated by the Project will be applied, it is expected, however, that some of the Project's advisory comments will be incorporated into GOM pricing and investment plans. The potential benefits to the society due to regulatory reform and market-clearing rate structures can not yet be estimated. (It is noteworthy that such an effort is a key component of the project description). Via the Project, the MEM decision-makers will at least be more conscious of the likely impact of price changes on resource use and economic efficiency.

D. Summary Administrative Analysis

The Ministry of Energy and Mines formulates and carries out national policies in the areas of energy, mining, and geology. MEM is also charged with major budgetary matters, manages the purchase and distribution of virtually all petroleum products in Morocco, and controls the national phosphate company responsible for most of the nation's hard currency earnings. In view of the broad respcnsibilities and far reaching authorities provided by MEM's mandate, it is indeed an understatement to confirm that MEM perceives its central role quite rightly as that of a manager of critical resource for the economic development of the entire country.

MEM sets budgets for operating agencies of which seven are directly involved in energy exploration, production, or distribution. These groups comprise almost a complete network of national and local public and semi-public enterprises. Also some private firms operate under the financial control and price regulation of the Ministry of Energy and Mines.

The Energy Directorate's three key responsibilities follow:

1) controlling and monitoring the energy operating agencies of the Ministry;

2) preparing and advocating to the Ministries of Finance and Plan the Five-Year Energy Plans and annual budget proposals for energy;

3) initiating new regulatory, pricing, administrative or institutional actions and activities relevant to the energy sector.

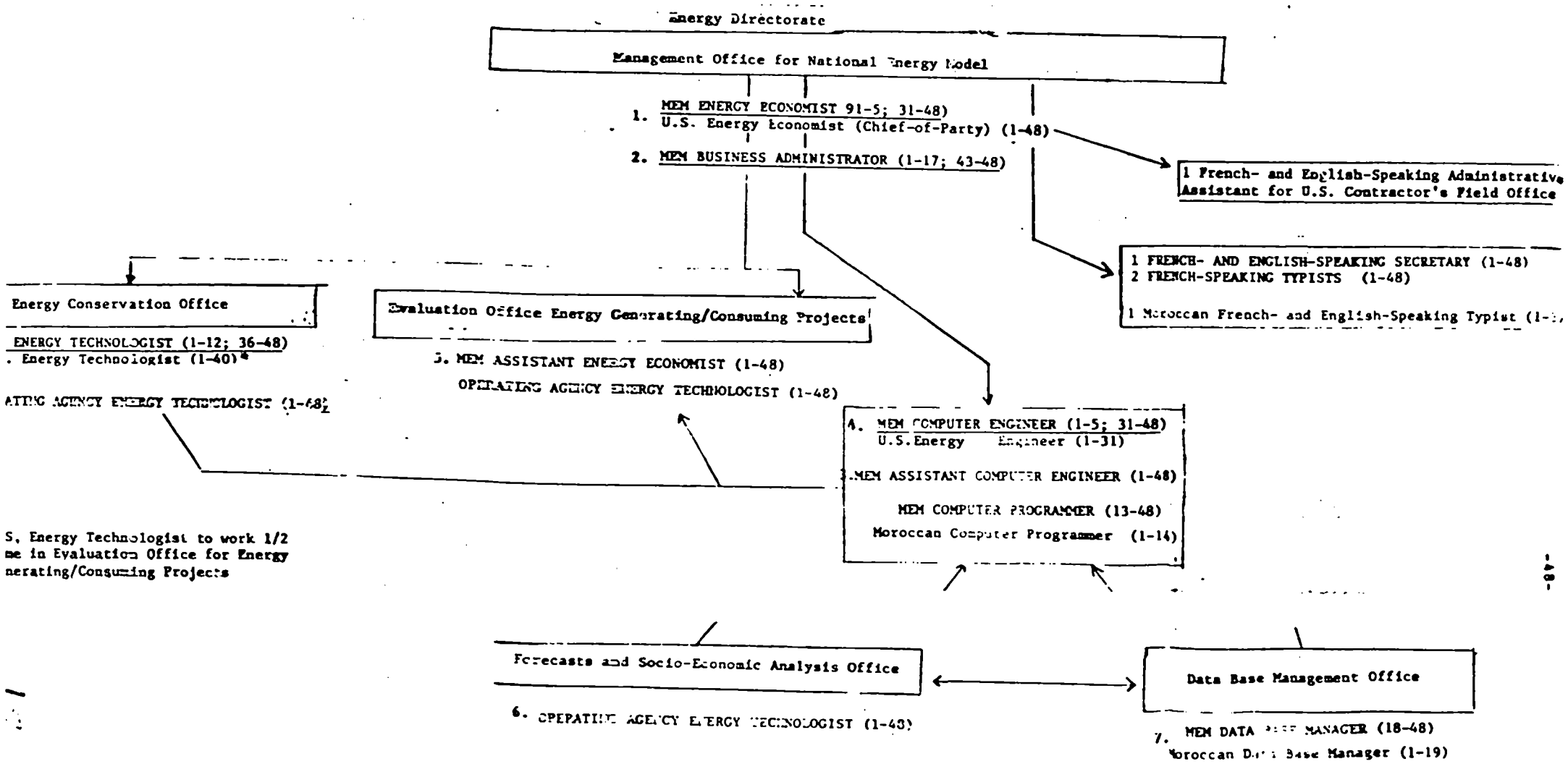
It is noteworthy that energy prices are set by the Prime Ministry in consultation with the MEM. Without a doubt the choice of the MEM's Energy Directorate as the implementing agency for this Project is bureaucratically correct. This Directorate is especially appropriate since the Project will ideally lead to discussion of regulatory, legal, and pricing reforms.

Morocco's commercial energy sector is characterized institutionally by a large number of public and semi-public enterprises and a smaller number of private firms operating under detailed regulation of prices, operations and investments, mostly by the Ministry of Energy and Mines. Other Ministries are also involved, however. The Ministry of Interior, through its oversight of local governments, plays a key role in electricity distribution. The Ministry of Industry, Commerce and Tourism (MCIT) among others, regulates enterprises which consume much energy. Thus, effective inter-ministerial coordination will impact project success since administrative coordination perhaps via the National Energy Commission will be required for the advice developed by MEM to be applied outside its immediate mandated sphere of influence focused on the energy and mining parastatals. Key examples of administrative limits of the Project would be commercial energy conservation and biomass.

In the spring of 1982, an Energy Economy working group was formed to promote energy conservation activities, as well as energy-related environmental safeguards. At the same time, a working group for the Evaluation of Energy Perspectives was established. Equipped with an improved, computerized national energy data base of supply, demand and project cost information, the two working groups have been responsible for assisting in development of national energy plans, annual budgets, and national energy investment portfolios, as well as other related analysis on energy pricing, and other energy issues.

FIGURE 2

FIGURE 2 Organizational Chart and Staffing Pattern of MEM'S New Energy Planning and InformationService



MEM has transformed the ad-hoc working groups into a new branch ("Service") within the Energy Directorate known as the Energy Planning and Information Services (SPD).

It is important, however, that the staff of the service have stability. At present the Moroccan professionals assigned to SPD lack the identification with a permanent office and the status that such an association brings. Also, there appears to be budgetary constraints that make the acquisition of relatively inexpensive computer hardware or software components difficult.

The PP team discussed these concerns with the MEM Energy Director in January, 1984. He assured USAID that SPD will become an official part of MEM and that MEM had set aside funds to assure an acceptable working environment. However, salaries above the normally very low ministerial scale were unlikely to be authorized. The Energy Director suggested that during the first two years of the Project, strong prospects for Project-funded training would retain most of the talented Moroccan staff, while the hope of a permanent tenured position with EPES was likely to assure stability in the long-term.

F. Structure, Duties, Authorities of the MEM's New Planning and Information Service

Under the project the Ministry of Energy and Mines will form a new Energy Planning and Information Service within the Directorate of Energy which will report to the Assistant Director of Energy on a daily basis. It is expected that the Chief of the new Service will be an Ingénieur d'Etat (5-year engineering degree), as will his assistant. The Service will ultimately have five offices, each headed by an Ingénieur d'Application (3-4 year degree in engineering/statistics/economics) and staffed by a technician (up to 2-years administrative degree). It is expected that the offices and their functions will be as follows:

MEM's ENERGY PLANNING AND INFORMATION SERVICE RESPONSIBILITIES BY OFFICE

1. Management Office for the National Energy Model: (Advisory and Integrative Function)
(Bureau de Gestion du Modèle Energétique)

   i) manage the development of the energy planning and investment model;
   ii) manage the data base;
   iii) coordinate with other Ministries and MEM operating agencies' models, planners, and computer specialists;
   iv) produce different options for energy investment programming;
   v) produce different options for annual MEM energy budget analysis and planning;
   vi) edit, monitor, update the Five-Year Energy Plan.

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2. Evaluation Office for Energy Generating and Consuming Projects: (Programming Function)
(Bureau d'Evaluation Energétique des Projets de la Production et de la Consommation)

i) technical and economic analysis of energy supply, conversion, and distribution projects including imported fuels;
ii) energy analysis of new industrial, transport, construction, housing agriculture projects;
iii) coordinate with MEM operating agency staffs, other Ministries, and private sector commercial associations;
iv) keep the MEM, its operating agencies, and other Ministries informed of recent advances in new energy technology.

3. Energy Conservation Office: (Programming Function)
(Bureau de Rationalisation de l'Utilisation de l'Energie)

i) follow technological, economic, and institutional advances for rationalizing energy use;
ii) identify opportunities to rationalize energy use in Morocco's economy;
iii) conduct energy audits and feasibility projects to identify, at the consumer level, the technical and financial requirements to rationalize energy use;
iv) study the Moroccan private sector market, laws, policies, building codes, bankloan conditions and financing which affect successful energy rationalization investments/ actions and recommend options for improving the institutional and legal etc. basis for energy rationalization;
v) plan special technical training and public information programs to advance rational energy use.

4. Forecasts and Socio-Economic Analyses Office: (Informational Function)
(Bureau de Prévisions et Analyses Economiques et Sociales)

i) analyze national economic indicators;
ii) develop energy demand forecasts;
iii) identify data gaps;
iv) fill data gaps from secondary sources estimates and/or design, execute and analyze surveys as needed;
v) examine national energy and economic policies, legislation, and regulation;
vi) coordinate energy-economic analyses with MEM operating agencies and other Ministries;
vii) develop proposals to improve energy pricing structures.

5. Energy Information Office:(Informational Function)
(Bureau de Documentation et d'Information Energétiques)

i) organize seminars, workshops and training sessions,
ii) develop an energy planning library;
iii) publish results of energy planning activities;
iv) prepare and publish statistical and activity reports on MEM operating agencies

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G. Organizational Relationships and Authorities Within the Energy Planning and Information Service

The new service is divided into two distinct functions requiring timely and thorough exchange of information: 1) a programming function and 2) an informational function. The programming function will be largely subsumed in the activity of the Energy Conservation Office and the Evaluation Office for Energy Generating and Consuming Projects. Using the latest data base and forecasts, these two offices will analyze various energy-related proposals.

The informational function will be focused on the Energy Information Office and the Forecasts and Socio-Economic Analysis Office which together will provide data and projections to the computer team responsive to the Service's head office and to the other two offices charged with energy programming.

The lead office of the Service, the Management Office for the National Energy Model, will have an integrative and advisory function. It will verify the coherence of analyses from the programming offices, request new energy related data from the informational offices, advise its three computer engineers on necessary software changes to make, and advise the Ministry through the Deputy Energy Director on a wide range of energy planning subjects. While the computer function will be kept in the Management Office it will be a lower-ordered function when compared to the programming offices since these last two offices advise on the commitment of funds.

With reference to Figure 2 the job titles in capitals are permanent positions within SPD. Underlined positions will eventually be held by the Moroccan participants receiving academic training in the U.S. Positions where titles appear in both capital and lower case script are temporarily encumbered by both AID-funded contractors and GOM counterparts. The numbers in parentheses denote the months during the 48-month contract advisory period when a given position will be filled with a full-time working staff member. In this way, the phase-out of contract staff and their replacement by permanent GOM staff may be followed.

VII. CONDITIONS PRECEDENT AND COVENANTS

1. Prior to the first disbursement under the Grant, AID shall receive within 45 days from execution of the Project Agreement the following documentation:

> a draft plan which (1) shows on the Ministry of Energy and Mines current organizational chart where it intends to establish the Energy Planning and Information Service (SPD), (2) describes the internal organization of the SPD, (3) provides the titles, minimum professional and academic qualifications, typical duties and proposed authorities of permanent and temporary positions within the SPD, and (4) estimates when each professional and support position within SPD will be encumbered.

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2. Prior to disbursement under the Grant for technical training, the Grantee shall submit to AID evidence it is in the process of establishing within the Energy Directorate an Energy Planning and Information Service consistent in form and function with the draft plan previously submitted.

3. Prior to disbursement under the Grant for resident technical assistance in energy planning, the Grantee shall provide to AID in form and substance satisfactory to AID, a statement designating (1) the MEM employee who will be the full-time counterpart to the Energy Economist/Policy Analyst and (2) the MEM employee who will be the full-time counterpart to the Specialist in Energy Conservation.

4. Prior to disbursement under the Grant for any academic training, and in no case later than March 31, 1985, the Grantee shall provide to AID a ministerial certification substantiating that the Energy Planning and Information Service has been established within the Energy Directorate and is operational.

5. Prior to disbursement under the Grant for resident technical assistance in information systems, the Grantee shall provide to AID a statement designating (1) the SPD staff member who will be the full-time counterpart to the Computer Programmer and (2) the SPD staff member who will be the full-time counterpart to the Data Base Manager.

6. Prior to disbursement under the Grant for planning network equipment, the Grantee shall provide to AID

(1) evidence that the Grantee will receive exemption from or will pay local taxes associated with commodity procurement from local suppliers;

(2) the names of all network organizations, including the names duties, and professional qualifications of all individual correspondents having access to the network; and

(3) a plan showing in detail how the member organizations will coordinate, manage, and fund on a continuing basis the operation, maintenance, and repair of network equipment procured under the Project upon the departure of the resident information systems advisors.

7. 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 of progress toward attainment of the objectives of the Project;

(b) Identification and evaluation of problem areas of 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.

8. Prior to the arrival of the resident Energy Engineer, the Grantee will provide to AID a statement designating the Ministry of Energy and Mines employee who will be the full-time counterpart to the Energy Engineer and a statement certifying the temporary assignment to the SPD of a full-time technical advisor from each of the following three operating agencies: l'Office National de l'Electricité, Charbonnage du Maroc, and l'Office National de Recherches et d'Exploitations Pétrolières.

9. As the Grantee recruits additional counterpart staff to support the Project, it will provide to AID a statement certifying the names, academic and professional qualifications, and effective dates of assignment of all new employees to the Project, including the identification of the SPD position which they are to encumber.

10. The Grantee agrees that MEM will provide logistic support for the Project as described in Article III. A. of Annex I of the Project Agreement.

11. The Grantee agrees that MEM will assure AID in writing that its employees receiving technical and academic training will have their normal salaries maintained and that after training they will continue to work within MEM in areas that will be oriented towards serving the goals of this Project.

VIII. EVALUATION PLAN

The Project will undergo comprehensive evaluation twice: a mid-project evaluation about January, 1986 and a final evaluation scheduled about September, 1988. These evaluations will focus on progress in establishing a stable group of Moroccan professionals to manage the MEM's Energy Planning and Information Service. The second key aspect of each evaluation will be a qualitative assessment of the economic advice being provided by the Service. A third major point of inquiry will be the T.A. contractor's performance and the value of the training received. Each evaluation will provide recommendations to GOM agencies, USAID/Morocco, the contractor and S&T/EY training contractors on how to assure that Project purposes will be met before the PACD.

USAID with NE/TECH assistance will select an energy sector IQC whose contract validity spans the two evaluation periods (11/85-9/89) so that it may return to conduct the subsequent evaluation. This contracting strategy should permit better continuity in the evaluation plan and insight as the Project evolves. In each case a multi-disciplinary French-speaking team will be selected to conduct the evaluation. The team should include the following expertise:

1. Energy Policy and Pricing Advisor (Chief-of-Party) experienced in macro-economic computer applications (Ph'd in Economics);

2. Public Utility Management Advisor experienced in financial operations and State regulation of public-owned utilities and corporations (Law degree/Public Administration);

3. Energy Investment Advisor experienced in advising private and public clients on investments in energy generating/conserving opportunities (Finance/Management/Business degree .

A detailed scope of work will be prepared for each comprehensive evaluation at the appropriate time; however, the following illustrative topics will be addressed in each instance:

1. Are the U.S. contract advisors of sufficient professional calibre?

2. Are hardware/software choices appropriate for the Moroccan environments?

3. How have the U.S. contractor, any Moroccan subcontractor, and EPES staff members alloted their time compared to that mentioned in the ProAg.

4. Provide summary of trainee interviews, especially academic candidates in the U.S. Are their courses of study being adequately followed by the S&T/EY contractor and their university professors?

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5. Assess the potential for the Project to assist in the establishment of a stable cadre of professionals within the MEM's Energy Planning and Evaluation Service:

   a) Service's authorities
   b) Logistic support budget
   c) Grade and Salary structure compared to local private market
   d) Incentives for MEM personnel to stay
   e) Timeliness of USAID and GOM funding
   f) Staffing pattern vs. encumbered positions
   g) MEM/parastatal staff arrangements.

6. Is an energy advisory network being established between the Service and key energy generators/consumers in Morocco?

7. How has the MEM used the Service during the evaluation period? (Cite specific investment advice, rate structure analysis, amount of short-term training or seminar experiences, assistance in budget development). Review actual SPD work products provided to advise GOM decision-makers.

8. Do current indications concerning the use of the Service's advice lead the evaluation team to believe it is being used optimally? How might it become more effective?

9. U.S. contractor professional rapports with any Moroccan subcontractor or Moroccan consultants.

10. Impact of MEM's inter-ministerial colloquia on GOM energy policy/pricing dialogue.

11. Quality of data base used by the Service.

Prior to departure to Rabat the evaluation team will interview academic candidates located in the United States and visit the U.S. contractor's home office to conduct interviews and review pertinent material. The evaluation contractor will be responsible for providing a written draft of evaluation findings and recommendations before departure and shall deliver to USAID 10 English and 20 French copies of their final report within 6 weeks of departure.

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ANNEXES

A. NEAC Authorization to Develop Project Paper
B. Logical Framework
C. Statutory Checklist
D. MEM Request for Assistance
E. Detailed Technical Analysis
F. Detailed Financial Analysis
G. Detailed Economic Analysis
H. Detailed Administrative Analysis
I. Participant Procedures
J. Environmental Clearance
K. Draft SOW for Energy Planning Contract

L. Draft Annex I of Project Grant Agreement
M. Results of Mission Review Committee meeting to Examine Draft Project Paper 608-0180

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INFO: DIR, A/DIR, ~~OTT~~, RCO, PROG, CHRON, RF.

AIDAC

E.O. 12355: N/A
TAGS:
SUBJECT: NEAC REVIEW OF EVALUATIONS OF MOROCCO ENERGY POLICY DEVELOPMENT AND CONSERVATION SUB-PROJECT (936-5728) AND MOROCCO CONVENTIONAL ENERGY TECHNICAL ASSISTANCE SUB-PROJECT (936-5724)

REFS: A) NEAC ISSUES PAPER 7/6/83; B) S. KLEIN/E. HUGHES-LEONARD MEMO TO J. BOLTON, JULY 7, 1983; C) S. KLEIN/J. BEVER 7/13/83 MEMCON RE: MTNG W/ALT. U.S. EXEC.DIR.TO IBRD; D) RABAT 6917 E) RABAT 6410

1. NEAC MET ON JULY 7, 1983 AND WAS CHAIRED BY AA/NE W. ANTOINETTE FORD. IN SUMMARY, NEAC REVIEWED THE EVALUATIONS OF THE TWO SUBJECT S&T/EY SUB-PROJECTS, WHICH WERE UNDER CONSIDERATION IN THE MOROCCO FY84 ABS FORME FUNDED FOLLOW-ON PROJECTS AS ENERGY PLANNING ASSISTANCE PROJECT (608-0180) FOR AT LEAST FOUR YEARS AND CONVENTIONAL ENERGY PROJECT (608-0176) UP TO AT LEAST THE END OF 1985. NEAC AUTHORIZED USAID TO PROCEED TO PROJECT PAPER DEVELOPMENT FOR EACH OF THESE FOLLOW-ON PROJECTS.

2. NEAC DISCUSSION OF ISSUES FOLLOWS:

A) LACK OF USE OF STANDARD PROJECT EVALUATION SUMMARY (PES) FRAMEWORK TO ORGANIZE WRITING OF THE EVALUATIONS. NEAC AGREED THAT FOR FUTURE EVALUATIONS OF S&T BUREAU PROJECTS AND SUB-PROJECTS WHICH OPERATE IN THE NE REGION, NE PROJECT OFFICERS SHOULD ENCOURAGE S&T TO REQUIRE I.S STAFF AND EVALUATION CONTRACTORS TO USE THE PES FRAMEWORK.

B CONCERN THAT CONVENTIONAL ENERGY EVALUATION TEAM DID NOT PROVIDE SUFFICIENT DOCUMENTATION FOR ITS CONCLUSIONS. NEAC NOTED THAT SUCH INTERIM EVALUATION TEAMS NEED TO BE GIVEN MORE TIME IN THE FIELD AND SHOULD, WHERE POSSIBLE,-BE PERFORMED AT A TIME IN THE PROJECT WHEN MORE CONCRETE EVIDENCE IS AVAILABLE.

C. MORE ATTENTION NEEDED IN THE ENERGY PLANNING PROJECT IN THE AREAS OF SHADOW PRICING, DEMAND DATA COLLECTION AND ANALYSIS, AND USE OF EXISTING ENERGY MODELS AND SOFTWARE. NEAC AGREED THAT IN THE FUTURE, THE PLANNING PROJECT ADDRESS ENERGY PRICING ANALYSES USING, AT LEAST,

BORDER PRICING AND THAT THE PRICING ANALYSES BE PROGRAMMED FOR GREATER FLEXIBILITY AND EASE OF USE; THAT MORE EMPHASES BE GIVEN TO ENERGY DEMAND DATA COLLECTION AND ANALYSES, IN COOPERATION WITH OTHER MINISTRIES; THAT EXISTING NATIONAL ENERGY PLANNING MODELS AND EXISTING COMPATIBLE SMALL COMPUTER SOFTWARE BE REVIEWED AS NEEDED FOR ADAPTATION OR USE AS APPROPRIATE. FURTHERMORE, GIVEN THE MISSION'S EMPHASIS IN AGRICULTURE, NEAC EMPHASIZED THE IMPORTANCE OF FURTHER ENERGY DEMAND ANALYSES IN THE AGRICULTURE SECTOR AS PART OF FURTHER AID FUNDED ENERGY PLANNING WORK IN MOROCCO. NEAC SUGGESTED USAID MAY WISH TO CONSIDER EITHER A CP IN THE PRO AG OR A PIL REQUIRING MINISTRY OF ENERGY FORMATION OF AN OFFICIAL OFFICE ("SERVICE" IN GOM TERMS) FOR ENERGY PLANNING AND POLICY ANALYSIS UNDER THE FOLLOW-ON PLANNING PROJECT, IN ORDER TO ASSURE CONTINUITY OF GOM COUNTERPARTS AND REINFORCE THE PROJECT'S INSTITUTION-BUILDING ASPECTS.

D. THE DEGREE TO WHICH THE CONVENTIONAL ENERGY PROJECT WITH ONAREP, A PARASTATAL OF THE MINISTRY OF ENERGY, ADDRESSES PRIVATE SECTOR CONCERNS. NEAC AGREED THAT AID SHOULD BE WILLING TO CONSIDER FOLLOW-ON ASSISTANCE TO ONAREP WITHIN THE CONTEXT OF PROMOTING AND ENCOURAGING MAXIMUM PARTICIPATION BY THE PRIVATE SECTOR. SPECIFICALLY, AID WOULD SUPPORT ONAREP: (I) IN STREAMLINING ITS MANAGEMENT TO FUNCTION MORE CLOSELY AS A PRIVATE OIL COMPANY; (II) IN CONSIDERING THE FORMATION OF AN EVENTUAL JOINT VENTURE DRILLING COMPANY; (III) IN ENCOURAGING BORDER PRICE-EQUIVALENT RATES FOR ITS GAS; AND (IV) IN STIMULATING PRIVATE INVESTMENT THROUGH

IMPROVEMENTS IN HYDROCARBON TAX LAWS AND INVESTMENT CODES AND PROMOTION OF PRIVATE SECTOR INVESTMENT SEMINARS. FURTHERMORE, SUBSEQUENT TO NEAC'S REQUEST, BEVER OF NE/TECH/HRST AND KLEIN OF PPC MET ON 7/11/83 WITH THE ALTERNATE U.S. EXECUTIVE DIRECTOR TO THEWORLD BANK (USED), GEORGE HOGUET, AND CONFIRMED THAT AID'S SUPPORT FOR TECHNICAL ASSISTANCE IN CONVENTIONAL ENERGY IN MOROCCO WAS CONSISTENT WITH USED POLICY ON OIL AND GAS ASSISTANCE FROM THE WORLD BANK FOR MOROCCO. (SEE REFS B AND C.)

E. ESF/DA SPLIT AND LOAN/GRANT SPLIT. NEAC CONFIRMED THE FY84 ABS PLAN TO FINANCE THE FOLLOW-ON CONVENTIONAL ENERGY PROJECT OUT OF THE ESF ACCOUNT AS A GRANT AND THE FOLLOW-ON ENERGY PLANNING ASSISTANCE PROJECT FROM THE DA ACCOUNT, ALSO AS GRANT. HOWEVER, GIVEN ONAREP'S STATUS AS A "PRODUCTIVE ENTERPRISE," AND IN ORDER TO EMPHASIZE TO THE GOM THE IMPORTANCE OF ENCOURAGING A PRIVATE SECTOR PHILOSOPHY FOR DEVELOPMENT OF OIL AND GAS BY ONAREP, NEAC REQUESTED THAT USAID PROVIDE FINANCING FOR THE FOLLOW-ON

CONVENTIONAL ENERGY PROJECT AS A GRANT TO GOM AND THAT GOM, IN TURN, LOAN THE FUNDS TO ONAREP AT THE GOING OFFICIAL GOM INTEREST RATES. NEAC SUGGESTED THAT USAID CONSIDER A CP IN PROAG TO EFFECT THIS ARRANGEMENT.

F. BRIDGE TRANSITION FINANCING AND CONTRACTING FOR BOTH PROJECTS. IN ORDER TO ASSURE CONTINUITY OF THE CURRENT AMERICAN TECHNICAL ASSISTANCE UNTIL FOLLOW-ON CONTRACTING IS COMPLETE, NEAC APPROVED NE COOPERATIVE FINANCING WITH S&T OF THE TRANSITION PERIOD FOR THE EXISTING S&T SUB-PROJECTS UNTIL SUCH TIME AS THE NE FOLLOW-ON PROJECTS BEGIN, INCLUDING TIME FOR OVERLAP IF NEW CONTRACTORS ARE SELECTED. NE WOULD PROVIDE FOR TRANSITION UP TO DOLS. 175,000 SDA AND UP TO DOLS. 400,000 ARDN IN FY83 FUNDS, WITH ANY ADDITIONAL FY84 FUNDS TO BE DETERMINED AT A SUBSEQUENT STAGE IN FY84. FYI, DOLS. 600,000 PROVIDED IN FY 83 TO S AND T. END FYI.

G. AT NEAC'S REQUEST, NE/TECH/HRST HELD SUBSEQUENT MEETINGS WITH SER/CM, GC/NE AND GC/COM TO DISCUSS COMPETITIVE VERSUS NON-COMPETITIVE FOLLOW-ON CONTRACTING MODES. THIS ISSUE WAS RESOLVED WHEN THE NON-COMPETITIVE REVIEW BOARD REQUIRED COMPETITION FOR THE FOLLOW-ON CONVENTIONAL ENERGY PROJECT AS A CONDITION TO APPROVING NON-COMPETITIVE EXPANSION OF BECHTEL'S CONTRACT TO COVER THE COSTS OF THE TRANSITION PERIOD (WHICH-THE BOARD APPROVED IN MID-AUGUSTAFTER RECEIVING;REF D), AND WHEN USAID SENT REF (E) IN FAVOR OF COMPETITION FOR THE FOLLOW-ON ENERGY PLANNING PROJECT (AFTER WHICH THE BOARD

APPROVED, IN MID-SEPTEMBER, NON-COMPETITIVE EXTENSION OF DEVELOPMENT SCIENCES INC.'S CONTRACT FOR THE TRANSITION PERIOD).

H. PROJECT DEVELOPMENT SCHEDULE FOR EACH PROJECT. NEAC AUTHORIZED USAID TO PROCEED DIRECTLY TO PP DEVELOPMENT FOR BOTH FOLLOW-ON PROJECTS BEING FUNDED AND-MANAGED BY THE NE BUREAU. NEAC REQUIRED THAT THE EVALUATION PLAN FOR THE FOLLOW-ON CONVENTIONAL ENERGY-PROJECT BE PLANNED SO AS TO CAREFULLY MONITOR ONAREP'S PROGRESS TOWARDS ENCOURAGING PRIVATE SECTOR INVESTMENT AND-ITS DEVELOPMENT OF A PRIVATE ENTERPRISE MANAGEMENT STYLE. SHULTZ
BT
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ENERGY PLANNING ASSISTANCE 608-0180

PROJECT LOGICAL FRAMEWORK

NARRATIVE SUMMARY Program or Sector Goal:	OBJECTIVELY VERIFIABLE INDICATORS Measures of Goal Achievement:
Goal: The macro-economic goal of the Energy Planning Assistance Project is to enhance the GOM's efforts to address Morocco's balance-of-payment deficit, external debt burden, foreign exchange shortage and development constraints to the extent they are related to underdeveloped but commerciable local energy resources and an inordinately large energy import bill. Sub-Goal: To improve the functioning of Morocco's energy sector so that the nation may meet its long-term energy supply/demand needs at a lower overall cost to the economy. Optimization of the national energy sector will result in accurate "price signals" to public and private decision-makers thereby encouraging them to react more effectively and productively. Goal achievement assumes that the GOM (1) will foster market-clearing price structures, (2) will prioritize its investments using private market principles, and (3) will manage its regulatory and tax system to attract local and foreign investors.	(1) from Treasury winning battle to lower debt service ratio. (2) greater amount of foreign currency available cf. to import needs. (3) MEM depending any regulatory/administrative reforms to lower fiscal/legal barriers to private investment. (4) Market-clearing pricing.
Project Purpose:	**End of Project Status:**
To strengthen the analytical and advisory capabilities of the recently established Energy Planning and Evaluation Service within the GOM's Ministry of Energy and Mines.	(1) MEM budgeting, selecting an inventory of projects, providing pricing guidance, using objectif financial indicators for all proposed GOM energy investments; (2) MEM assisting industrial/commercial enterprises to asses energy efficiency of operations and recommending conservation measures; (3) MEM's SPD staffed with appropriate mix of professionals; (4) MEM and operating agencies consistently applying coherent energy planning techniques.
Outputs:	**Magnitude of Outputs:**
Following capabilities established within MEM: a) to examine pricing proposals b) to prioritize national energy investment components c) to review specific energy investment proposals d) to effectively promote improved energy efficiency in key economic sectors	Capabilities: a) annual and as ordered b) annually, five-year plan, as ordered c) as ordered d) 9 or so industries reviewed

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Outputs: (con't)	Magnitude of Outputs: (con't)
Capabilities within MEM (con't):	Capabilities (con't):
e) to conduct critical energy studies	e) 3 or 4
f) to operate/maintain micro-computer network	f) 10 micros between Rabat and Casa
g) to maintain energy data base	g) quarterly updates and on-going
h) to sustain an intra- and inter-ministerial energy policy dialogue	h) semi-annual colloquia
Training:	Training:
a) Masters in Energy Economics/Technologies	a) three
b) short-term	b) 8 for 15 person-months
c) conferences	c) 33 for 17 person-months

Inputs:	Implementation Target:
1. Technical Assistance	1. Technical Assistance 5 long-term for 150 person-months numerous short-term for 45 person-months
2. Masters Scholarships	2. Three
3. Short-Term Training	3. 8 for about 15 participant-months
4. Seminars/workshops	4. 33 for about 17 participant-months
5. Computer Network	5. About 10 micros
6. Salaries of Counterparts	6. About 399 counterpart/months
7. Salaries of Participants	7. About 104 participant/months

ENERGY PLANNING ASSISTANCE 608-0180

PROJECT LOGICAL FRAMEWORK

IMPORTANT ASSUMPTIONS	MEANS OF VERIFICATION
1. Ministerial Cabinet remains supportive of objective analytical approach	1. 5-year plan
2. MEM's initiative will have demonstration effect on other ministries	2. IBRD sectoral assessments
3. GOM adheres to IMF austerity guidelines	3. Bulletin Officiel publication of fiscal/investment codes
4. Vested interests to not thwart regulatory reform aimed at more competitive market-oriented supply/demand system	4. Number of actors in the supply/demand sector and Parliamentary record
1. Appropriate employment incentives provided SPD staff	1. Analysis of SPD operating budget and "status du personnel"
2. MEM/MOF will fund known recurrent costs pursuant to Project's financial plan	2. MOF-approved operating statut levels
3. Operating agencies will provide temporary technologist staff to MEM's SPD	3. SPD organizational chart/staffing pattern
4. MEM will fund phase-in of GOM staff beginning in second-year of Project	4. SPD organizational chart and staffing pattern
1. USAID/resident T.A. advisors retain confidence of MEM in their exploration of prudent pricing/investment options	1. Semi-Annual Steering Committee debate, audits, and evaluations
2. Personnel continuity within SPD	2. SPD organizational chart and staffing pattern
1. U.S. prime contractor can manage multi-faceted training program.	1. Contractor's track record, proposal, home office performance during contract
2. SPD staff demonstrate early English Language proficiency	2. ALC class attendance and testing

ENERGY PLANNING ASSISTANCE 608-0180

PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A. includes criteria applicable to all projects. Part B. applies to projects funded from specific sources only: B.1. applies to all projects funded with Development Assistance Funds, B.2. applies to projects funded with Development Assistance loans, and B.3. applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

A. GENERAL CRITERIA FOR PROJECT

1. FY 1982 Appropriation Act Sec. 523; FAA Sec. 634A; Sec. 653(b).

(a) Describe how authorizing and appropriations committees of Senate and House have been or will be notified concerning the project;	(a) Congressional Notification
(b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than $1 million over that amount)?	(b) YES

2. FAA Sec. 611(a)(1). Prior to obligation in excess of $100,00, will there be (a) YES

	(a) engineering, financial or other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?	(b) YES
3.	FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?	N.A.
4.	FAA Sec. 611(b); FY 1982 Appropriation Act Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973? (See AID Handbook 3 for new guidelines.)	N.A.
5.	FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed $1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?	N.A.

6.	FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.	NO NO
7.	FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; and (c) encourage development and use of cooperatives, and credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.	"Will provide advice to improve the technical efficiency of industry, agriculture and commerce, either by proposing market-clearing energy price adjustment or by demonstrating energy saving techniques which decrease cost of a given unit of production."
8.	FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).	U.S. Academic Training will be provided by U.S. institutions.

9.	FAA Sec. 612(b), 636(b); FY 1982 Appropriation Act Sec. 507. Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.	GOM together with private industry will contribute at least 25% of the cost of the project.
10.	FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?	U.S. does not own excess foreign currency of Morocco
11.	FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?	YES
12.	FY 1982 Appropriation Act Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?	N.A.
13.	FAA 118(c) and (d). Does the project comply with the environmental procedures set forth in AID Regulation 16? Does	N.A.

the project or program take into consideration the problem of the destruction of tropical forests?

14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)?

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec. 102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and

otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?	"(c) Will support self-help effort of Morocco to meet more of its own energy needs in an economically balanced manner by encouraging market-clearing price structures and by introducing objective methods to prioritize competing investment options using standard financial indicators."
b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used?	YES
c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?	YES
d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activitiy with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)?	The GOM together with private industry will contribute at least 25% of the cost of the project.

e. FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country "relatively least developed"? (M.O. 1232.1 defined a capital project as "the construction, expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than $100,000, including related advisory, managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character.	NO
f. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?	YES
g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage	"The Project recognizes the need for Morocco to adapt energy rate structures which more equitably distribute the burden of energy costs. The project responds to the desire to rationalize the selection process by which the GOM invests its tax monies for domestic energy development. The project emphasizes local intellectual capacity by urging that data base services be sub-contracted to local

	institutional development; and supports civil education and training in skills required for effective participation in governmental processes esential to self-government.	firms. Thirteen of the sixteen professionals involved in direct project implementation may be Moroccan citizens. The host country's implementing agency will sponsor colloquia in which representatives from government, commerce, universities, and consulting firms will contribute to the national energy debate in a publicized open forum.
2.	Development Assistance Project Criteria (Loans Only)	
a.	FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan, at a reasonable rate of interest.	N.A.
b.	FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an 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?	N.A.
c.	ISDCA of 1981, Sec. 724 (c) and (d). If for Nicaragua, does the loan agreement require that the funds be used to the maximum extent possible for the private sector? Does the project provide for monitoring under FAA Sec. 624(g)?	N.A.
3.	Economic Support Fund Project Criteria	
a.	FAA Sec. 531(a). Will this assistance promote economic or political	N.A.

	stability? To the extent possible, does it reflect the policy directions of FAA Section 102?	
b.	FAA Sec. 531(c). Will assistance under this chapter be used for military, or paramilitary activities?	N.A.
c.	FAA Sec. 534. Will ESF funds be used to finance the construction of the operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the President certified that such use of funds is indispensable to nonproliferation objectives?	N.A.
d.	FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?	N.A.

TRANSLATION

Letter from the Energy Director
Ministry of Energy and Mines

No. 11831 October 26, 1983

To: Mr. C. Chase
Mission Director

Subject: Technical Assistance Project No. 608-0180

Mr. Director:

Pursuant to the meetings which have taken place during the period from October 3-15, 1983 between the Ministry of Energy and Mines and AID, I hereby confirm the Moroccan party's request for the initiation of the technical assistance agreement No. 608-0180 regarding energy planning.

This assistance scheduled for a 4-year period will be aimed at the development and the broadening of the studies and work already initiated under our previous agreements. We have noticed that under the new agreement particular attention will be given to the following points:

- Energy products' pricing structure studies
- Investment planning in the energy sector
- Relation strengthening with other energy institutions (Ministerial departments and operating agencies)
- Improvement and promotion of a rational energy utilization in the economic key sectors
- Specific studies on supply security, computer systems connection between operating agencies, etc.
- International cooperation for energy techniques and planning information/experiences exchange with other countries.

- Training of Energy Directorate and operating agencies' staff.

We are confident that the "team spirit" and the high quality of our relationship will make the achievement of these tasks possible and enable us to reach our goals.

Thanking you for your continuous assistance in this particular field, we remain,

sincerely yours,

Ahmed Bouhaouli
Directeur de l'Energie

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RABAT, LE 26 OCT. 1983

ROYAUME DU MAROC

المملكة المغربية

MINISTERE DE L'ENERGIE ET DES MINES

608-0180

وزارة الطاقة والمعادن

DIRECTION DE L'ENERGIE

OFFICIAL FILE

N° 11831/DE.1

LE DIRECTEUR DE L'ENERGIE

A

ACTION: OTP. DUE: 12/2.
INFO: DIR, A/DIR, PROG, CHRON, RF.

MONSIEUR LE DIRECTEUR DE L'USAID
137, AVENUE ALLAL BEN ABDELLAH

- R A B A T -

OBJET/ : Projet d'assistance technique n° 6.080.180.

Monsieur le Directeur,

Faisant suite aux différentes réunions qui ont eu lieu au Ministère de l'Energie avec les représentants de l'AID entre le 3 et le 15 Octobre courant, j'ai l'honneur de vous confirmer la demande de la partie marocaine, concernant la mise en place de l'accord d'assistance technique n° 6.080.180 relatif à la planification énergétique.

Cette assistance qui s'étalera sur une période de 4 ans portera sur le développement et l'approfondissement des études et travaux déjà entrepris dans le cadre de nos accords précédents. Nous avons bien noté qu'une attention particulière sera accordée par le nouvel accord aux principaux points suivants

- Etudes sur la tarification des produits énergétiques.
- Planification des investissements dans le secteur de l'énergie.
- Moyens de renforcement des relations avec les institutions concernées par l'énergie (départements ministériels et sous tutelles).

- Amélioration et promotion de l'utilisation rationnelle de l'énergie dans les secteurs clés de l'économie.

- Etudes spécifiques sur la sécurité d'approvisionnement, l'interconnexion des systèmes informatiques des sous-tutelle etc...

- Coopération internationale pour l'échange avec d'autres pays des informations et expériences sur les technique de planification énergétique.

- Formation du personnel de la Direction de L'Energie et de ses sous-tutelles.

Nous sommes persuadés que"l'esprit d'équipe" et la qualité des rapports qui se sont instaurés entre nous, favoriseront la réussite de ces travaux et nous permettront de mener à bien cette entreprise commune.

En vous remerciant pour l'aide que vous n'avez cessé de nous apporter dans ce domaine, je vous prie d'agréer Monsieur le Directeur, l'expression de mes sentiments distingués.

Le Directeur de l'Energie

Signé : Ahmed BOUHAOUS

DETAILED TECHNICAL ANALYSIS

I. Summary: The Energy Planning Assistance Project will provide pricing and investment advice to the GOM's energy development decision-makers. It will provide in most cases a variety of scenarios to resolve identified economic issues. Analyses will be quantified as much as possible relying on a growing data base and a realistic simulation of the GOM decision-making process. As such, the administrative assumptions and support for the project outweigh its technical feasibility. However, the technical means by which the Project can manage the multiplicity of factors contributing to the energy sector merit review and confirmation at this time.

Availability of an Appropriate Data Base:

The data and statistical formating among GOM agencies varies widely. Two predecessor projects have helped render the available information more uniform. Since the GOM's interventions in the energy sector have been more on the supply side than demand management, this portion of the data base is currently more refined. The MEM will continue to use its offices to provide data and information held by other Ministries. Traditional, rural energy patterns are also poorly documented. Extrapolation of information contained in a recent 10-year census, an intercensal household consumption survey, and rural energy use patterns being developed by the GOM's Centre de Développement des Energies Renouvelables should provide the MEM's Energy Planning and Evaluation Service with increasingly more accurate data.

Economic/Financial Analytical Requirements:

Firms able to provide sound pricing and investment advice are common in the United States and usually specialize to serve specific commercial or industrial groups. There are, of course, a dozen or so companies which have specialized in advising government regulatory commissions on a wide range of macro-economic issues. The higher level macro-economic and rate structure advice requires knowledge of how a given administration makes decisions and fiscal/regulatory issues beyond the realm of mere micro-economic analysis of a given project's viability. For these reasons, it is believed that a dozen or so U.S.-based firms could provide these services.

The Moroccan market place for micro-economic analysis and management advice is limited to a given client's portfolio of projects. These Moroccan advisory firms share the same analytical tools as their American counterpart consulting firms, yet to the best of our knowledge they are not called on to provide broad-gauged economic advice to the GOM. World Bank agencies have tended to be the most frequent source of outside macro-economic advice to GOM's decision-makers. For these reasons, economic or management consulting firms in Morocco remain focused almost exclusively on projectized investment analysis.

The RFP for T.A. and Training issued to U.S. proposers will encourage the offerors to consider tapping Moroccan talent to provide in the early months of the project computer programming and data base management services until the MEM arranges to provide these essential services during the second year.

Consulting Firms in Morocco:

In December, 1983 USAID developed a source list of local consulting firms. Eight consulting firms were identified which deal with systems analysis and computerization activities. Many of the consulting firms are involved in software development and custom programming as well ac doing computer work for clients on large systems (service bureau). At the current time several of these firms are expanding to resell microcomputer systems.

CONSULTING FIRMS
INFORMATION SYSTEMS AND COMPUTER SOFTWARE FIRMS

IMEG	Mr. Ben Mokhtar Rabat	36A Bd Anfa Résidence Anagi Casablanca
ISMA	Mr. Abdenbi Jaidi 147, Rue Mohamed Smiha Casablanca	Casablanca Phone:30-61-52 30-64-61
SOGERTI	Société d'Etudes de Gestion et de Réalisation des Traitements de l' Information CHARIF-KHALIFI M. Directeur Commerical 381, Rue Mostafa El Maani Casablanca Phone: 26-28-54/55 - Telex: 21088 Direction Informatique 36, Rue de Dinant Casablanca Phone: 24-88-87 Also have the International Data Processing Angle Rues Pegaud et Branly Casablanca Phone: 26-23-54/55	
S E M A	6, Rue Lapébie Casablanca Phone: 26-09-80/81	
SOMAIGE	Km. 12, Route de Rabat, Casablanca Phone: 35-35-85/35-33-12/35-33-41 Mr. Palermo, General Manager	

SG2/
SAGOTEC 52, Av. Hassan II
Casablanca
Phone: 22-16-34

M2I Management, Marketing et Informatique
42, Ave. Hassan Séghir
Casablanca
Phone: 27-08-21

I M S Information Management Service
10, Ave. des F.A.R.
Casablanca

Morocco's Educational Programs in Computer Science:

Morocco has just created an Ecole Nationale Supérieure d'Informatique et d'Analyse des Systèmes (ENSIAS), which will open in 1984 and will provide technical instruction in computer science and systems analysis with particular emphasis on research development for technological applications.

Other higher institutes offer some training in micro-electronics and computer science including the Ecole Mohammedia d'Ingénieurs. Schools not depending on the Ministry of Education which have some computing facilities and teach courses in computer science include:

L'Ecole Hassania
L'Ecole des Mines
L'Institut des Postes et Télécommunications
I N S E A
I N A V
I S C A E

Little in the way of using the newest micro computer technology as tools to accomplish specific tasks is being taught within these computer curriculums.

INSEA, Institut National de Statistiques et d'Economie Appliquée, is in the best situation, as INSEA started teaching computer programming in 1973 (a one year course in COBOL) and now has a 4 year undergraduate program to train computer analysts. Students serve a practicum within an agency having computer facilities to gain practical experience before graduation.

But the emphasis at INSEA remains on programming (Fortran, Cobol, Pascal, Assembly Language) using a Honeywell Bull 64/20.

Availability of Hardware and Support:

Three international computer firms have for many years been supplying the needs of Morocco - IBM, Honeywell-Bull and Burroughs by installing large mainframe and mini computer systems.

Morocco is just now experiencing a widening of the market and more outlets for micros through private dealers. A number of good micro computer systems are now available in country with service agreements, training in operation and software application packages in French (Wordstar, Apple Writer II, DBase 2, DB Master, Multiplan, Supercalc, Visicalc, Calcstar, Basic Francais). Of these systems only Apples and IBM PCs are being sold and supported in Morocco. (Official announcement of IBM PCs is forthcoming in January, 1984). Local vendors require maintenance contracts of 10% of the cost of the equipment.

The following list of hardware/software vendors indicates the rapidly changing market environment in this fast-growing sector.

December 15, 1983

COMPUTER VENDORS

I B M	:	15, Rue Idriss Lahrizi, Casablanca Phone: 22.14.21 - 22.22.61 Mr. Hassan Terrab, Director
BURROUGHS	:	5, Bd. Abdellah Ben Yacine, Casablanca Phone: 30.58.49 Mr. Rachid Iba, Commercial Engineer
HONEYWELL BULL	:	644, Bd. Mohamed V, Casablanca Phone: 24.48.03 - 24.78.52 Mr. Alain Pilod, Director General
N C R	:	12, Rue Théophile Gauthier, Casablanca Phone: 24.48.03
NIXDORF	:	23, Bd. Girardot, Casablanca Phone: 30.76.39
S E M A (Hewlett-Packard)	:	6, Rue Lapébie, Casablanca Phone: 26.09.80 - 26.09.81
OLIVETTI	:	2 à 6, Rue Mohamed Diouri, Casablanca Phone: 30.10.22
RUF MAROC	:	C.B.T. Maroc - 22, Rue de Béthume, Casablanca Phone: 30.90.86 - 30.84.42
TOSHIBA	:	C.B.T. Maroc - 22, Rue de Béthume, Casablanca Phone: 30.90.86 - 30.84.42
LOGABAX/CSM	:	298, Bd. Mohamed V, Casablanca Phone: 30.96.45/84
W A N G	:	Data System - 63, Rue Bir Anzarane, Casablanca Phone: 25.16.44 Mr. Claude Kramer, Technical-Commercial Director

PHILIPS	:	4, Zankat Tamaslohat, Rabat Phone: 649.76
I. D. P. International Data Processing (Digital-Rainbow) (IBM PC)	:	Angle Rues Pégoud et Branly, Casablanca Phone: 26.28.54/55 Telex: 210.88 Mr. Charif-Khalifi, Commercial Director
I S M A (IBM PC)	:	147, Rue Mohamed Smiha, Casablanca Phone: 30.61.52/30.64.61 Mr. Jaidi, General Manager Consulting Services
A M E C American Micro Computers (APPLE)	:	Tour des Habous, Av. des FAR, Casa- Phone: 31.00.25/32 Telex: 228.35 Mr. H. M. Housni, Director General
S C R M (Thomson)	:	75, Av. Fal Ouled, Agdal, Rabat Phone: 749.97
SOMAIGE (Micral)*	:	km. 12, Route de Rabat, Casablanca Phone: 35.35.85 - 35.33.12 - 35.33.41 Mr. Palermo, General Manager Service Bureau and Consulting Services
SOFATEL (Micral)*	:	km. 7, Route El Hajeb, Meknes Phone: 246.08 Mr. Mernissi, General Manager Consulting Services in Pharmaceutical Manufacturing Control Resell Honeywell Bull System Mini-6 and Micral
O R S (Micral)*	:	95, Bd. Mohamed V, Casablanca Phone: 31.00.77 - 31.27.47 Mr. Spiteri, General Manager Mr. Francis Rousier, Director General
DIGITAL ELECTRONICS	:	36, Bd. Anfa, Résidence Anafi, Casablanca Phone: 27.19.82 - 27.31.48 Mr. Taib Shairi Dealers for ITT, Apple, Honeywell Bull, Texas Instrument, Sinclair

Service: All servicing for above brands and in addition they can do servicing for other brand names provided they can get the schematics and spare parts.

Supplies also sold.

SUPPLIES (Informatique) : 52, Rue Omar Eben Katab, Agdal, Rabat
Phone: 717.77/78
Diskettes paper

* Honey-Bull assures maintenance of Micral Micros, not the sole responsibility of reseller.

Type of Computerized Analysis Required by the Project:

Pricing and investment portfolio analysis to serve the needs of GOM's macro-economic decision-makers must be based on the premise that planning and policy formulation is a continuous process-evaluating alternative courses of action under changing conditions.

Thus, any computerized techniques to assist decision-makers improve their pricing and investment options must be able to simulate a scenario, agregate its effects with a composite of investment scenarios characterizing the nation's entire supply/demand of energy and be capable of intensive man-machine interaction. The art of diplomatic compromise which characterizes all government's budget allocation process must be one of the foundations of the model - not the optimization of any one objective function. A computer model which can accurately and quickly simulate real life impacts in a "what-if or question-answer" mode using feedback loops will accelerate MEM's review and debate over operating agencies' proposals for investment or the government's proposals for price charges.

As noted by the MEM's Deputy Energy Director, for this type of policy analysis to be effective it must simulate dynamically the complex relationship between the energy sector of the economy conceived narrowly and all the other major sectors since in the long-run the generation/consumption of energy is but a means to an end.

As such the model must weigh the feasibility, cost, and risks associated with a variety of technological means to satisfy a given energy need. Thus, the system used by the policy analysts will have to take into account the effects of prices on demand, as well as interfuel substitution, conservation and other effects that might influence the fuel use matrix. Other sub-routines such as a regionalization and a further disaggregation of demand and supply would be desirable and should be considered for the last two years of the contractor's residency. The econometric services provided via the T.A. and training contractor should include a review of the numerous energy software programs which are available and mentioned in the literature. The services provided will also review/comment on legal and regulatory factors affecting energy price structures in Morocco or impeding new investments in this sector.

A Caution Against Inflated Policy Expectations from an Economic Model:

At this level of analysis the technical virtuosity of any model or narrow micro economic indicator starts to be overshadowed by political and personal factors. The resident advisory team members and their counterparts must have the confidence and trust of the Minister's office before they are asked to criticize/examine some of the fundamental precepts of the economy. Discretion and tact, as well as technical skill, are required to present in a convincing manner the numerous alternatives to the status quo.

Thus, the team members must develop a thorough understanding of the fiscal, regulatory, and legal ramifications of any proposal to alter the national energy portfolio, if the Energy Planning Assistance Project is ever to reach the heights of policy analysis.

In conclusion, the technical feasibility of the project is assured so long as GOM agencies are forthcoming in providing up-dated information. What is unknown is will the GOM be able/willing to take economic actions indicated by the analyses in view of the potential political/social effects of such actions. Whether GOM decision-makers do or do not accept avenues shown by the model is frankly outside the realm of the Project. From the viewpoint of sovereign decision-making and practical political reality, it is inappropriate to expect that GOM decision-makers would necessarily follow what might seem to be the optimal economic solution. The Project will, however, be responsible for generating economic options which would otherwise not have been considered. An improved command of the data base and the creation of a greater number of optional solutions are technically feasible and desired by the MEM.

ANNEX F

DETAILED FINANCIAL ANALYSIS

1. Technical Assistance for Investment/Pricing Advice:

Although the Energy Planning Assistance Project's subject matter is almost exclusively quantitative analysis of energy price and investments, the Project itself does not have an inherent monetary value. It is not a revenue producing investment but rather a "human infrastructure" program emphasizing training and advice to decision-makers who in turn are directly responsible for managing the GOM's energy investments and setting national pricing policies. Thus, the Project in its support of the MEM's Energy Planning and Information Service is thrice removed from true economic actors. Specifically, it advises the MEM's Energy Director and Minister who sit on numerous Executive Boards. The Executive Boards, in turn, set budgets and provide guidance to operating agency managers who directly make large financial commitments on a daily basis. Thus any assertion that the Project has a quantifiable financial value other than the nominal "face value" of its contracts is unfounded. The Project provides consulting services to a willing government department which believes in seeking outside opinions. As such, the Project does not lend itself to standard analyses of financial viability such as internal rates of return or net present values.

2. Demand for the Proposed Services:

Based on 3 1/2 years of Mission/MEM experience with predecessor projects, the MEM continues to voice strong support for econometric advice. During this time period, five developments have shown a growing commitment by MEM to rely on portfolio-style quantitative analyses.

(1) Emergence of a planning unit within MEM with clear responsibilities;
(2) "Official" adoption of and support for state-of-the-art planning systems, as evidence by Minister Moussa Saadi's decision to brief his colleagues in the Cabinet through a major computerized presentation;
(3) Acceptance of the system as a core approach by virtually all of the specialized energy agencies under the Ministry's tutelage, as evidenced by the level and intensity of participation in a series of workshops designed to update the MEM's data base;
(4) Most MEM operating agencies express a readiness to share their energy-related data, if in exchange they can also obtain some access to the improved analytical services, and
(5) MEM expressed an interest in using this advice in future budget exercises.

The MEM is aware that IBRD and its affiliates have expressed their support for technical assistance aimed at improving MEM's skills in financial and economic analysis. MEM has also requested increasing levels of assistance for pragmatic reasons. Its technical/financial dossiers are

greatly improved by this type of review. Consequently, the GOMs MOF and international donors are more likely to be attracted by the new analytical environment in which investments are compared not only for their technological feasibility but also for their relative financial worth.

3. Alternative Technical Assistance Approaches:

The technical analysis points out that traditionally the GOM has not contracted with private firms to advise it on national investments, rate structures, or policies, as is done in the United States by the Executive branch and Congress. For Morocco these advisory debates are conducted largely internally at four levels: parliament, ministries (especially the Finance Ministry), and the ad hoc National Energy Commission. Thus, to rely entirely on a Moroccan firm to analyze and review a wide range of politically charged options would be unacceptable to the MEM. Furthermore, Moroccan economic/management advisory firms are inexperienced in dispensing this type of advice. This is not to say that eventually this type of skill could not be developed in Morocco. Rather, the sensitive nature of the GOM energy policy process makes it impractical. Thus, full reliance on local advisory firms while cheaper would be untenable.

4. Choice of Best Technological Alternative:

The approach most likely to succeed in delivering the needed technical assistance is to rely on foreign resident advisors for conceptualization of the model and macro economic analysis while MEM counterparts receive training and internship experiences which build their professional skills. The data management and micro economic analyses which are not so laden with policy considerations could be handled by local firms or professionals. Relying on locally available skills serves several purposes: (1) it follows AID policy to encourage the use of local skills when available; (2) it reduces costs; (3) it introduces the GOM to the option of "contracting out" for its less sensitive analyses; and (4) it "buys time" while the MEM phases in its own staff in the event the MEM does not wish to contract for the Project's lower level skills.

5. "Least Cost" Analysis to Provide Services

By relying as much as possible on local firms for a computer programmer and data base manager, the project's costs are reduced about $100,000. The major cost reduction impacting the early US contribution to the project will be the phase out of computer programming and data base management services from AID funding and the provision of these necessary services by the MEM. The obligation of the MEM to find these locally available skills serves two purposes: (1) it provides for an early sign of increased commitment to the Project and (2) it helps the MEM to confront the recurrent cost implications of staffing its new Energy Planning and Evaluation Service. Thus, several programming features of the Project tend to support a least cost approach in meeting the Project's purposes.

6. Financial Tables:

Detailed financial tables showing all U.S. and GOM costs exclusive of those involving the U.S. consulting firm or its Moroccan subcontractor are shown in the following tables. Costs projected under the resident technical assistance and training contract are held by USAID/Morocco for inclusion in a PIO/T.

TABLE 11

USAID DIRECT TRAINING AND TECHNICAL ASSISTANCE COSTS INCURRED IN MOROCCO AND U.S.

	1984	1985	1986	1987	1988	1989	TOTAL
1. English Language Training (3 mo. x 4 regular)	2,000	—	—	—	—	—	2,000
2. Technical Training in Energy Economics/Mgt. ($5,100 course - $278 admin. fee for 6 week course) $5,378 x 1.06 = $5,701 in FY 85	—						
Participants by FY: (0, 2, 4, 2, 2, 0)	0	11,404	24,071	12,811	13,579	0	61,862
3. Masters Program for Three MEM Employees of SPD ($1,600/mo. for academic - $185/mo. admin. fee = $1,785/mo. x 1.06 = 1,820 mo x 12 mo = 22,705							
a) M.S. Energy Economics (24 mo.) 9/85-9.87	0	0	22,705	24,068	0		
b) M.S. Energy Technologies (24 mo.) 9/86-6/88	0	0		24,068	25,512		
c) M.B.A. Business Admin. (24 mo.) 9/87-9/89	0	0			25,512	27,042	
SUB-TOTAL 3	0	0	22,705	48,136	51,024	27,042	148,907
4. Energy Audit/Conservation Technical Assistance							
Transfer of 603-0180 funds for energy audit/conservation services provided under S-T/EY-managed contract with Hagler-Bailley, Office of Energy Project 936-5728 (two man TDY for 1 mo) about 20,000 per consultancy (0, 1, 1, 1, 0, 0)	—	20,000	21,200	22,472	—	—	63,672
5. Comprehensive Evaluations (3/86 and 3/88)	—	—	35,200	—	40,000	—	75,000
Estimated Total USAID Direct Cost	2,000	31,401	102,976	83,419	104,603	27,042	351,441
Contingency (10%)	200	3,140	10,298	8,342	10,460	2,704	35,144
TOTAL BUDGETED	2,200	34,541	113,274	91,761	115,063	29,746	386,585

6% p.a. inflation factored into estimates

TABLE 12

COM CONTRIBUTION TO TECHNICAL ASSISTANCE BUDGET OF PROJECT 608-0180

ESTIMATED EXPENDITURES

A. Professional Salaries Before/After Degree Training	6-9/84		10/84-5		10/85-6		10/86-7		10/87-8		10/88-9		TOTAL	
	DH	$	DH	$	DH	$	DH	$	DH	$	DH	$	DH	$
1. Deputy Energy Director (1/4 time) (12,000 DH/mo)	9,000		38,160		45,450		42,877		45,449		—			
2. Energy Economist (Head of SPD) (3, 12, 0, 0, 12, 12) 7,000; 9,000 DH	21,000		89,040		—		—		128,630		136,338			
3. Ass't Energy Economist 6,000 DH/mo	18,000		76,320		80,899		85,753		90,898		96,352			
4. Energy Technologist/Conservationist (0, 12, 12, 0, 0, 12) 6,500, 8,000 DH	—		82,680		87,641		—		—		104,332			
5. Ass't Energy Technologist/Conservationist (0, 3, 12, 12, 12, 12) 6,000 DH/mo	—		19,080		80,899		85,753		90,898		96,352			
6. ONE Advisor (0, 0, 12, 12, 12, 3) 8,000 DH/mo	—		—		107,866		114,338		121,198		32,117			
7. CDM Advisor (0, 0, 9, 12, 12, 6) 8,000 DH/mo	—		—		50,900		114,338		121,198		64,235			
8. ONAREP Advisor (0, 0, 6, 12, 12, 9) 8,000 DH/mo	—		—		53,933		114,338		121,198		96,352			
9. Business/Finance Analyst (0, 0, 9, 3, 0, 9) 7,000; 8,500 DH/mo	—		—		70,787		25,011		—		84,308			
10. Ass't Business/Finance Analyst (0, 0, 3, 12, 12, 12) 6,000 DH/mo	—		—		20,225		85,753		90,898		96,352			

	6-9/84		10/84-5		10/85-6		10/86-7		10/87-8		10/88-9		TOTAL	
	DH	$	DH	$	DH	$	DH	$	DH	$	DH	$	DH	$
11. Computer Programmer (0, 0, 12, 12, 12, 12) 5,000 DH/mo	—		—		67,416		71,461		75,749		80,294			
12. Data Base Manager (0, 0, 9, 12, 12, 12) 5,000 DH/mo	—		—		50,562		71,461		75,749		80,294			
A. Professional Salaries	48,000	6,154	305,280	39,138	741,578	95,074	811,083	103,985	961,865	123,316	967,386	124,024	3,835,192	491,691
Support Staff Salaries														
1. Secretary (3, 12, 12, 12, 12, 12) 2,500 DH/mo	7,500		31,800		33,708		35,730		38,874		40,147			
2. Typist (3, 12, 12, 12, 12, 12) 1,500 DH/mo	4,500		19,080		20,225		21,438		22,725		24,088			
A.2. Support Salaries	12,000	1,538	50,880	6,523	53,933	6,914	57,168	7,329	60,599	7,769	64,235	8,235	298,815	38,308
B. MEM Support for Inter-Ministerial Colloquia 2 per year a)158,000 DH/colloquium	--	—	334,960	42,944	355,058	45,520	376,361	48,251	398,943	51,147	422,879	54,215	1,888,261	242,077
C. Direct Costs - SPD Offices														
1. Rent for 8 MEM staff, 5 U.S. Contractors, 3 parastatal representatives - 8 offices x 2,500 DH/mo/each: 20,000 DH/mo	60,000		240,000		254,400		269,664		285,844		302,974			
2. Office Furniture/Equipment	188,800		—		20,000		—		20,000		—			
3. Two (2) Typewriters	32,000		—		—		—		—		—			
4. GOM Telex Service for SPD	9,000		38,160		40,450		42,877		45,449		48,176			
5. Telephone Service for SPD	6,000		25,440		26,966		28,584		30,299		32,117			

	6-9/84		10/84-5		10/85-6		10/86-7		10/87-8		10/88-9		TOTAL	
	DH	$	DH	$	DH	$	DH	$	DH	$	DH	$	DH	$
6. Utilities, maintenance/repairs	80,000		20,000		21,200		22,472		23,820		25,250			
7. Perishable office supplies	10,000		40,000		42,400		44,944		47,641		50,499			
C. Direct Office Costs	385,800	49,462	363,600	46,615	405,416	51,976	408,541	52,377	453,053	58,084	459,036	58,851	2,475,446	317,365
1. Operation/maintenance/repair cost for current 2 micro-computers (40,000 DH/year per set)	20,000		84,800		89,888		95,281		100,998		107,058			
2. Operation/maintenance/repair costs for 10 micro-computer networks (0, 0, 0, 0, 12, 12)	—		—		—		—		504,990		535,290			
D. Planning Network—OMR	20,000	2,564	84,800	10,892	89,888	11,254	95,281	12,216	605,988	77,691	642,348	82,352	1,538,305	197,219
E. Moroccan Industrial Conservation Counterparts: 4 x 40,000 DH/mo. x 1.5 mO. x 1 consultancy/yr. x 3 years	—	—	240,000	30,769	254,400	32,615	269,664	34,572	—	—	—	—	764,064	97,957
GOM Technical Assistance Contribution (A-E)	465,800	59,718	1,379,520	176,861	1,900,273	243,623	2,018,098	258,730	2,480,448	318,007	2,555,884	327,677	10,800,023	1,384,617

6% p.a. inflation factored into estimates

Note: GOM Technical assistance estimate does not include 70% local tax on computer hardware/software, which is to be purchased locally. GOM will be responsible for taxation per U.S./GOM bi-lateral agreement.

TABLE 13

GOM CONTRIBUTION TO TRAINING BUDGET OF PROJECT 608-0180

Estimated Expenditures

	6-9/84		10/84-5		10/85-6		10/86-7		10/87-8		10/88-9		TOTAL	
	DH	$	DH	$	DH	$	DH	$	DH	$	DH	$	DH	
PARTICIPANT SALARY MAINTENANCE														
SPD Academic Candidates														
1. Energy Economist (7,000/mo.) (0, 0, 12, 12, 0, 0)	0		0		94,382		100,045		0		0			
2. Energy Technologist/Conservat. (6,500/mo.) (0, 0, 0, 12, 12, 0)	0		0		0		92,899		98,473		0			
3. Business/Finance Analyst (7,000/mo.) (0, 0, 0, 9, 12, 3)	0		0		0		75,034		106,048		28,103			
A. Sub-Total	0	0	0	0	94,382	12,100	267,978	34,356	204,521	26,221	28,103	3,603	594,984	76,280
Travel Related to Academic Participants One-way: 3,500 DH														
1.	0	0	0		3,933		4,169		0		0			
2.	0	0	0		0		4,169		4,419		0			
3.	0	0	0		0		4,169		0		4,684			
A.1. Sub-Total	0	0	0		3,933	504	12,507	1,603	4,419	567	4,684	601	25,543	3,275
Salary Maintenance of SPD Participants at Energy Economics Technical Training: (7,000/mo.) (0, 2, 4, 2, 2, 0)														
B. Sub-Total	0	0	14,840	1,902	31,461	4,033	16,674	2,138	17,675	2,266	-	0	80,650	10,340
Travel Related to SPD Energy Economics Technical Training: (RT: 7.000 DH) (0. 2. 4. 2. 2. 0)														
B.1. Sub-Total	-	-	14.840	1.903	31.461	4,033	16,674	2,138	17,675	2,266	-		80,650	10,340
Travel Related to SPD Attendees at Seminars/Conferences Sponsored under Project (RT: 15,000 DH including domestic U.S. fare) (0, 10, 8, 10, 5, 0)														
C.1. Sub-Total	-	-	159,000	20,385	134,832	17,286	178,652	22,904	94,686	12,139	0	0	567,170	72,714
Total Salary Mainten. (A + B)	0	0	14,840	1,903	125,843	16,134	284,652	36,494	222,196	28,487	28,103	3,603	675,634	86,621

Total Travel Costs (A.1.+A.1.+C.1.	0	0	173,840	22,287	170,226	21,824	207,833	26,654	116,[illegible]80	14,972	4,684	601	673,363	86,329
CCM Total Contribution to Training	0	0	188,680	24,190	296,069	37,958	492,485	63,139	338,[illegible]76	43,452	32,787	4,204	1,348,997	172,950
	DH	$	DH	$	DH	$	DH	$	DH	$	DH	$	DH	$

6% inflation per annum factored into estimates.

ANNEX G

DETAILED ECONOMIC ANALYSIS

1. Current Pricing of Energy Resources:

For several years the GOM has encouraged energy conservation by maintaining prices of most fuels above their opportunity cost to the economy. Oil product prices are all at or above their comparators, with the lower margins applying (for income distribution purposes) to the household fuels, LPG and kerosene, and the highest to gasoline. Although imported steam coal is also above its comparator, the domestic coal price and the average price of electricity remain respectively at 76% and 69% of their comparable border prices. The Government has been reviewing the gas pricing issue, with the intention of setting an appropriate price for all 'new' domestic gas supplies. The uncertainty as to the volume of future supplies from Meskala complicates the determination of such a policy, as the utilization options and related opportunity costs for gas are partly a function of the volume of supply. Nevertheless, the Moroccan fuel oil market is large, and much of it could be switched to gas. A gas price linked to that of fuel oil (with enough of a discount to justify conversion and rapid market penetration) would seem appropriate.

Electricity tariffs vary by voltage level, geographic area and other criteria but appear to average only 50-60% of corresponding economic costs. They also fall considerably short of the level that would allow ONE to finance 20% of its investment program internally as had been agreed with the Government and IBRD. Electricity tariffs need to be generally increased and their structure rationalized, both to facilitate the financing of power investments, and to stimulate more efficient use of electrical energy. This is presently being discussed between the IBRD and the Government.

2. Limited Role of Project 608-0180:

Management by its very nature is largely an indirect process - energy pricing advice to key policy decision-makers is even more indirect. The financial benefits of nurturing the institutionalization of rational quantitative supply/demand analysis does not lend itself to easy quantification. Given that the project's intent is to provide advice - not make decisions - sound economic counsel may be modified or rejected in light of domestic political reality. Therefore, the project does not commit itself to effect change but rather to nurture it. The underlying assumption of sustained GOM receptivity and desire to organize and prioritize its energy-related investments in an objective fashion is the sine qua non for the project to proceed. AID recognizes this as a potential risk. However, there exists a three-year history of fruitful policy discussion with the GOM. Also, there is a high probability that the economy will continue to be adversely impacted regarding BOP, terms of trade, and devaluation. Given these strains, we expect the MEM to seek actively advice/counsel on prudent financial management.

3. Plausible Pricing Policy Effects:

The project will attempt to develop "shadow prices" for various energy resources available to Morocco as compared to the actual sales price of these resources as established by Government fiat. By employing shadow prices (or at least border prices) to assess the net economic benefits and costs of alternative energy investments, the project should have a beneficial effect on the decision-making process. It is presumed that if comparative analyses are performed on competing GOM investments, the GOM can make more realistic decisions which do not disturb the real market value of energy. It is expected that some of the Project's advisory comments will be incorporated into GOM pricing and investment plans.

The most important advice will be in the area of pricing. To foster equilibrium between effective supply and demand for energy products it is hoped that price incentives might be increased in several parts of the energy sector without either giving up Government control over critical points in the economy or allowing unregulated monopolies to develop. The potential benefits are an improvement in economic performance as price incentives and market forces replace administrative controls and a reduction in the use of scarce Government staff resources in the administration of regulations. Specifically, price incentives might be given a greater role in petroleum refining and product distribution, coal importation, and electricity generation.

It is not anticipated that the GOM will endorse full market place competition in the energy sector, since the GOM has a long history of controlling prices of energy products and food stuffs to meet social and income redistribution goals. Government intervention in the market place is common in the energy sector - though many countries prefer taxing to emphasize fiscal policy to end-users instead of controlling price per se.

In the new standby arrangement with the IMF, the GOM is committed to liberalize some of its prices and rely more on market forces to determine prices. This may or may not include some energy products, but it is most likely the GOM will attempt to retain its traditional role of guiding the economy through price setting. Furthermore, the GOM is expected to continue adjusting its energy prices to conform more with market clearing rates largely due to the impact of austerity and the GOM's recognition that it can not sustain the same level of subsidies as in the past. Whether or not the project should assist GOM decision-makers to be more conscious of the likely impact of price changes on resource use and economic efficiency.

Since Morocco has in fact increasingly reformed its price structure to reflect the international energy market, one might ask how essential it is to do better planning in energy investment. In fact, there remain a

large number of significant questions including (1) the effect of differential taxation between diesel-fuel and gasoline, (2) diesel price subsidies for farming and fishing, (3) the under-pricing of electricity and the pricing of domestic coal, oil and natural gas relative to international markets. The effect of these pricing determinations will also affect the ranking of public and operating agency investment priorities in their financial analyses as well as the final demand for different types of energy sources by all energy users.

4. Setting Investment Priorities:

Morocco has several alternate sources of commerical energy: hydroelectric power, coal, oil, natural gas, oil shale and uranium. It also has a variety of agricultural, industrial, commercial and domestic users who must choose between different energy sources for production and consumption. Consequently, Morocco has a complex resource use problem for which it must select alternate investments in energy production and alternate end-uses. The complexity of the problem increases in the case of hydroelectric power since the same water used for power generation can be used for irrigation, potable water, and flood control. Informal advice offered via predecessor projects has helped MEM eliminate certain dis-economic investments which represent cost savings which can be allocated to more productive investments. While these discrete financial impacts can be measured even now, the potential benefits to the society due to regulatory reform and market-clearing rate structures can not yet be estimated. (It is noteworthy that such an effort is a key component of the project description).

Many operating agencies realize the need for certain price revisions to reflect true economic costs without which they find it difficult to accumulate the necessary funds required for their share of investments. The project should assist them to make a better case for policy changes which in turn give them credibility in financial markets. Thus, pricing and investment decisions are interdependent components in the development of the GOM's portfolio of budget-funded investments.

To the planned investment in energy production, we should also add the important category of investments involving choice between energy sources for different production processes and conversion of existing plants to alternate sources. The IBRD estimates Moroccan industry could economize 5% of its current energy use with a very modest amount of investment with a payback period of less than three years. Similar considerations apply to new investment in production processes, modes of transportation and other final uses of energy for which there are no reliable figures on potential energy savings.

Computerized investment planning and training as proposed in Project 608-0180 serves an important function in quantifying the consequences of different investment and pricing decisions and has the potential for greatly improving the return to energy-related investment. Five characteristics of Morocco's energy sector make it vital to have experienced investment advisors and economists available: (1) the array

of alternative energy sources, (2) the risks common to oil and gas development, (3) the alternatives for importing oil, coal or gas, (4) the significance of planned investment streams for energy projects, and (5) the anomalies which remain in the energy pricing structure.

5. Indirect Economic Effects of the Project:

Another approach to ascertain the project's probable economic impact is that to the extent it fosters a rational energy environment, outside interests (donors or private capital) will be communicated with more effectively. Of course, GOM decision-makers must first believe in the project's intent before they could induce private and foreign investors to accept its analyses. In this light, USAID/Rabat was encouraged in the summer of 1983 when ONAREP relied on the MEM's planning unit to develop projections and financial sensitivity scenarios for a prospective natural gas pipeline.

Advice provided under predecessor projects is being listened to very closely. This receptivity lends credence to the project's underlying hypothesis that if some of the advice is taken then a number of aspects of Morocco's energy sector may be strengthened to be of even more benefit to the society as a whole and to GOM Treasury.

DETAILED ADMINISTRATIVE ANALYSIS

1. Presentation of the Institutional Setting
The Ministry of Energy and Mines (MEM)

Established in 1977, MEM formulates and carries out national policies in the areas of energy, mining, and geology. MEM is also charged with major budgetary matters since it manages the purchase and distribution of virtually all petroleum products used in Morocco. The national phosphate company controlled by MEM is responsible for most of the nation's hard currency earnings. MEM also supervises the major operating agency energy consumers and producers of Morocco such as the National Electricity Corporation.

The Minister of Energy and Mines is assisted at the senior level by his Secretary General and his cabinet. The MEM's Geology Directorate has branches ("Services") responsible for geologic analysis of indigenous solid fuels and uranium. The Mining Directorate has branches responsible for control and monitoring of Ministry operating agencies involved in mining of coal (Charbonnage du Maroc, CDM) in phosphate mining (Office Chérifien des Phosphate, OCP), in proposals to extract uranium ore from phosphate residus as well as in exploration for other commerciable mineral deposits.

Energy Directorate:

National energy planning policy analysis, policy making and execution in Morocco is the responsibility of the Ministry of Energy and Mines. The Energy Directorate's responsibilities span a wide range of functions:

- controlling and monitoring the energy operating agencies ("sous-tutelles") of the Ministry (publicly owned companies performing the technical functions of energy resource extraction and importing, conversion and distribution);

- preparing and advocating to the Ministries of Finance and Plan the Five-Year Energy Plans and annual budget proposals for energy;

- assisting the sous-tutelles in the energy field or arbitrating among them in questions of project finance and administration, or in legislative or regulatory problems;

- receiving and distributing annual budget allocations to the Ministry's energy sous-tutelles;

- initiating new regulatory, pricing, administrative or institutional actions and activities relevant to the energy sector.

The Directorate handles all legislative and regulatory initiatives pertaining to hydrocarbon research, exploration and production, to the distribution and commercialization of energy resources, and to the formulation of standards for energy products and equipment used in the energy sector.

Vis-à-vis the Ministry of Finance, the Energy Directorate is responsible for preparing energy budgets within the framework established in the Five-Year Energy Plan, and for providing the information relevant to energy price regulation and the implementation of the related tax/subsidy schemes.

The Energy Directorate employs some forty professional staff, organized into three divisions, each responsible for a number of sous-tutelles: (1) the Petroleum Products Division is concerned with smooth functioning of the nation's two refineries, adequate nation-wide supply and distribution of petroleum products, and with studies and statistics relevant to the supply of, demand for, and pricing of petroleum products in the Moroccan economy; (2) the Electricity Energy Division monitors the activities of the National Electricity Office (ONE), which is responsible for the production and distribution of electricity in thermal and hydroelectric power plants, as well as for research and development work in nuclear power generation; and (3) the Energy Resource Development Division promotes, assists, and monitors the development of Morocco's indigenous energy resources (with the exception of hydropower), including oil and gas exploration, research and development on oil shale, coal mining and importation, uranium extraction from phosphates, and renewable energy forms.

All three of these Divisions and their branches carry out the functions of daily liaison with the technical, operating agencies, reviewing, modifying, and arbitrating among energy projects which they propose; assisting the operating agencies in seeking approval by the Ministry of Finance and Parliament for projects already acceptable to the Energy Directorate. The Energy Directorate may initiate new energy programs, such as those on renewable energy, nuclear energy research, and energy conservation as well as assist the key operating agencies with regulatory, fiscal, administrative and legislative matters and monitor progress on projects financed with GOM funds. The Division staff members assist the Minister in cooperation with Parliament and other agencies of the Moroccan government, other visiting government and private energy company representatives, bilateral and multilateral development assistance and financing agencies, and international banks. They prepare the Minister's annual budget proposal and develop the MEM's Five-Year Energy Plan.

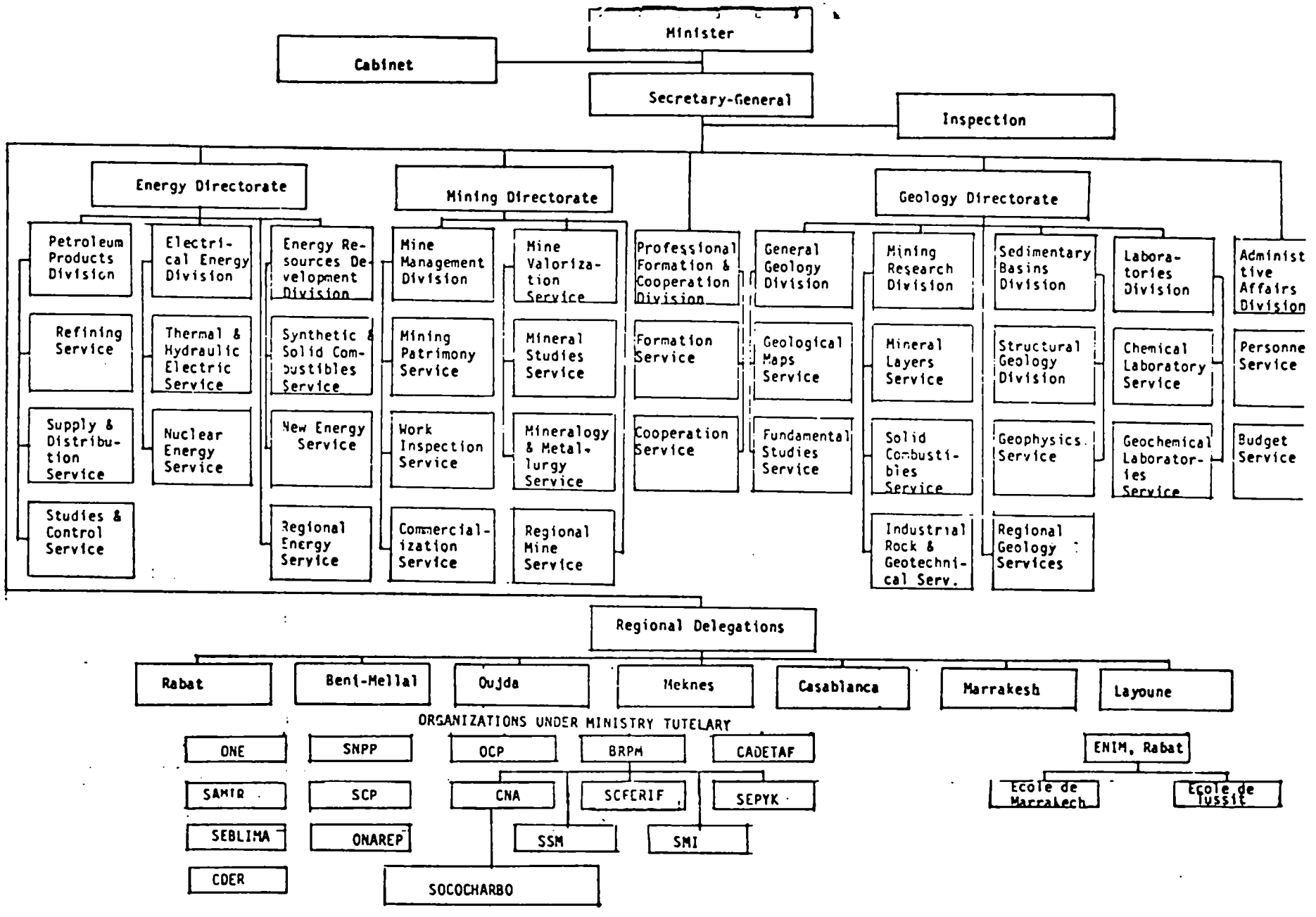
The Energy Directorate has regional energy services to assist the Ministry with local, regional energy distribution problems and similar functions, although for the time being, these services are limited to only a few major cities but are expected to be expanded significantly over the coming years.

Please see Figure 5 below showing organizational chart of the Ministry as of June, 1979. As you will note, MEM has regulatory responsibilities and budgetary control over seven energy-related operating agencies, nine mining operating agencies, and two mining schools.

FIGURE 3

Organizational Chart of the Ministry of Energy and Mines (MEM)

(Decree of June 27, 1979 defining the MEM's organization)



PROJECT 608-0180
PROJET 608-0180

ANNEX L
ANNEXE L

ENERGY PLANNING ASSISTANCE

ASSISTANCE TECHNIQUE DANS LE DOMAINE DE LA PLANIFICATION ENERGETIQUE

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ANNEX I

PROJECT GRANT AGREEMENT
(608-0180)
AMPLIFIED PROJECT DESCRIPTION

Except as specifically provided herein, and within the limits of the definition of the Project set forth in Section 2.1., elements of this Amplified Project Description may be changed by written agreement of the authorized representative of the Parties named in Section 8.2. without formal amendment of this Agreement.

ARTICLE I: GENERAL PROJECT DESCRIPTION

A. SUMMARY

The overall goal of the Energy Planning Assistance Project is to improve the functioning of Morocco's energy sector so that the nation may meet its long-term energy needs at a lower overall cost to the economy and the population.

The purpose of the Project is to strengthen the analysis available to GOM officials charged with making energy policy, investment and conservation decisions. Specifically the Project will strengthen the analytical and advisory capabilities of the Energy Directorate and its Energy Planning and Information Service (SPD) within the GOM's Ministry of Energy and Mines (MEM).

B. PROJECT ACTIVITIES:

The following activities will be carried out: (1) energy policy analysis including issues of energy pricing, (2) national energy investment planning , (3) review of

ANNEXE I

ACCORD DE DON POUR LE PROJET
(608-0180)
DESCRIPTION ELARGIE DU PROJET

Sauf en cas de dispositions spéciales de la présente annexe et dans les limites de la définition formulée à la Section 2.1., les éléments de cette Description Elargie du Projet pourront être changés par accord écrit des représentants autorisés des Parties nommées à la Section 8.2. sans avenant formel du présent Accord.

ARTICLE I : DESCRIPTION GENERALE DU PROJET

A. SOMMAIRE

Le but général du Projet d'Assistance Technique dans le Domaine de la Planification Energétique est d'améliorer le fonctionnement du secteur de l'énergie au Maroc afin que le pays puisse satisfaire ses besoins à long terme en énergie à un coût global moins élevé pour l'économie et la population.

L'objectif du Projet est de renforcer les capacités analytiques dont disposent les responsables du Gouvernement du Maroc chargés de prendre des décisions en matière de politique énergétique, d'investissement et de conservation de l'énergie. En particulier, le Projet consolidera les capacités analytiques et consultatives de la Direction de l'Energie du Ministère de l'Energie et des Mines (MEM) du Gouvernement du Maroc et de son Service de Planification et de Documentation (SPD).

B. LES ACTIVITES DU PROJET

Les activités suivantes seront réalisées : (1) analyses de politiques énergétiques comprenant les questions relatives à la tarification de l'énergie; (2)

The National Energy Commission:

The importance of energy issues in recent years has led to ad hoc arrangements superimposed on the division of responsibilities among ministries, including special studies of energy problems by the Prime Minister's office and an interministerial committee on energy.

During early 1982, the Prime Minister created the National Energy Commission, an inter-ministerial group to coordinate energy policy review at the highest level of Moroccan government. Under the guidance of the Ministry of Finance, twelve Ministers met almost weekly throughout 1982 (except July and August) to discuss current energy problems, bottlenecks, crises and new projects, pricing initiatives, etc. and their impacts. To prepare for these high level meetings, five sub-commissions were organized, each consisting of representatives of various ministries - the Ministry of Energy and Mines participated in all five of the following sub-commissions:

- Finance and Rate Structures - chaired by Ministry of Finance
- Energy Resources - chaired by Ministry of Energy and Mines
- Hydroelectric Dams - chaired by Ministry of Equipment
- Rural Electrification - chaired by Ministry of Interior
- Energy Economy - chaired by Ministry of Plan

Although the National Energy Commission and its sub-commissions are ad-hoc in nature and serve at the request of the Prime Minister, they have provided a new and useful mechanism for high-level energy policy review and recommendations, communication, and regular coordination between ministries. The Commission has very useful functions in crisis management and in new policy proposals on energy pricing and conservation. The Commission and its sub-commissions are expected to play a role in the Moroccan energy policy process.

2. Summary Budget Review of MEM

MEM's budgetary outlays in CY '83 were just under $100 million (6.0% of GOM's investment program) and projected to rise to $106 million during CY '84 (6.8% of the government's projected investments).

Almost half of the MEM outlays scheduled for CY '84 are to support ONAREP's exploration/appraisal program. A third goes to electrical generation, transmission, and rural electrification programs. This electricity subsidy supports ONE's capital investments. (Under a typical U.S. scenario a Public Utility Commission would negotiate with the company a rate structure to allow it to cover costs, have a controlled profit flow, and allow for investments. Thus, the $35.0 million subsidy to ONE could possibly be unnecessary if different financial practices were followed). The other subsidy or State shareholder programs seem

TABLE 14

Analysis of MEM Budgetary Obligations
for CY '84 pursuant to the "Loi Rectificative"

- Capital Budget -

(Millions)

Priority	ACTION	Nature	Amount DH	Amount $	%
1	Oil/gas exploration	ONAREP subsidy	400.0	49.4	46
2	Electrical generation/transmission	ONE subsidy	200.0	24.7	23
3	Minerals exploration	BRPM subsidy	95.0	11.7	11
4	Rural electrification	ONE subsidy	81.0	10.0	9
5	Oil shale development	ONAREP subsidy	25.0	3.1	3
6	CDER	Start-up costs	24.45	3.0	3
13	Mining Coops.	Subsidy	1.50	0.2	-
	Sub-Total Subsidies		826.95	102.1	96
7	Geological research	MEM	23.69	2.9	
8	Education	ENIM	9.0	1.1	
9	General Energy Studies	MEM	3.5	0.4	
10	Mining Studies	MEM	0.75	0.1	
11	Mining Library	MEM	0.65	0.1	
12	Casa Mining Lab	MEM	0.60	0.1	
	Sub-Total Research, Studies, Education		38.19	4.7	4
	TOTAL		865.14	106.8	100

Exchange rate of 8.10 DH/$

defensible in light of Morocco's weak financial markets and the experimental high-risk nature of the investments.

The Nuclear Energy Center and development program are listed in the budget "pour mémoire" which means "no funding commitment".

MEM has direct control over no more than 4% of its capital budget. Management responsibility over the balance of the funds requires strong auditing authorities. In fact, the Minister is Chairman of each operating agencies Executive Board and a State Inspector General's office is located within the MEM's General Secretariat. It is also noteworthy that OCP, SNPP, SCP and other MEM operating agencies are not subsidized meaning that by and large these operating agencies are generating a surplus for the GOM Treasury. (See Table 15.)

3. Operating Agencies

MEM controls over a dozen operating agencies of which seven are directly involved in energy exploration, production, or distribution.

These groups comprise almost a complete network of national and local public and semi-public enterprises. Also some private firms operate under the financial control and price regulation of the Ministry of Energy and Mines. The Ministry of Agriculture, the Ministry of Interior, and the Ministry of Industry, Commerce, and Tourism are also involved in the energy supply and demand debate, but the Ministry of Energy and Mines and its operating agencies dominate the production and sale of energy resources in Morocco.

The Project's administrative analysis will not focus on specific management or budgetary issues within each of these major state-controlled companies, rather it will emphasize the legal, regulatory, and pricing authorities of the Ministry proper. Still the sizeable budgets of operating agencies and their higher salary scales have often tended to overshadow the policy leadership authorities of the Ministry itself. This is especially true in the case of the mining company OCP and the Office National de l'Electricité (ONE), the national electricity company.

4. The Five-Year Plan Commission and Annual Budget Process

The preparation of the regular Five-Year Plan requires almost two years advance work, although in actual fact, the process is an ongoing activity of review, revision, etc. Once approved by Parliament, the Plan sets a ceiling on spending and specifies major project and budget items. The plan does not keep the private sector from behaving independently except where other laws specifically indicate otherwise.

To begin the Five-Year Plan process, the Prime Minister, Minister of Plan, and Minister of Finance meet to review key national issues, financing needs and problems, the employment situation, etc. Ad-Hoc Five-Year Plan Commissions are activated on a sectoral basis at the national level where each commission tends to be organized on a ministry-by-ministry basis, and on a regional basis for each province

organized by the governor where each commission includes representation of all ministries' local delegates and technical services, local town councils, etc. These vertical and horizontal commissions work respectively closely together, with the regional entities passing their needs and project plans up to the Sectoral Commissions for consideration along with already existant plans developed by the Sectoral Commissions based on their national perspectives. For the Ministry of Energy and Mines, an Ad-hoc Sub-Commission exists for each Directorate.

The Energy Sub-Commission includes representatives of the Energy Directorate, the energy operating agencies, and major energy consumers in industry, transport, etc. In the case of the Energy Sub-Commission, smaller ad-hoc working groups from the Ministry's agencies are activated to represent each of the major energy areas of Ministry responsibility (electricity generation, refining, etc.) to prepare reports for the Energy Sub-Commission review and synthesis into the Five-Year Energy Plan proposal, along with input from the Regional Commissions. When the Five-Year Energy Plan is submitted to the Ministry of Plan, an Arbitration Commission participates in the review and acceptance process by the Ministry of Plan, after which the Five Year Energy Plan is submitted for review and approved by the Energy Committees in the Ministry of Finance and in Parliament. If no accord is reached, the Five-Year Energy Plan is submitted for review and approval directly to the Prime Minister with participation by the Arbitration Commission. Finally, Parliament with Ministry of Finance assistance enacts the Finance Law, which establishes the legality of the overall Five-Year Plan, of which the Energy Plan is a part.

On the basis of the Finance Law for the Five-Year Plan and under the guidance of the Plan, annual budgets are constructed which Parliament reviews and approves, setting a payment account for the coming year and a payment engagement for the year after that, on which basis new projects can be committed and supplemented later. Each Ministry may adjust its internal budget line-items by up to 15%, as long as the total is not surpassed. During the annual budget process, Ministry of Energy and Mines projects are presented to the Ministry of Finance, usually one at a time, by each sous-tutelle for approval of project budgets. Once the overall budget is approved and the Finance Law is created by Parliament, the Ministry of Energy and Mines receives its budget allocation, which is, in turn, distributed accordingly among the operating agencies.

5. Administrative Genesis of the Energy Planning and Information Service

The Ministry of Energy and Mines perceives its central role quite rightly as that of a manager of a critical resource for the economic development process. The two most recent developments in the Energy Directorate auger very well in improved energy planning, investment programming, demand management and improved energy economy. In spring of 1982, an Energy Economy working group was formed to promote energy conservation activities, as well as energy-related environmental safeguards. At the same time, a working group for the Evaluation of Energy Perspectives was established. Equipped with an improved, computerized national energy data base of supply, demand and project cost information, the two working groups have been responsible for assisting in development of national energy plans, annual budgets, and national energy investment portfolios, as well as other related analysis on energy pricing, and other energy issues.

Thanks to the quick acceptance of advice under predecessor projects, MEM has transformed the ad-hoc working groups into a new branch ("Service") within the Energy Directorate.

6. Stability of the Energy Planning and Information Service

It is important, however, that the staff of the service be permanent civil servants, as opposed to two or eight year civilists who are paying back their state scholarships.

At present the Moroccan professionals assigned to SPD lack the identification with a permanent office and the status that such an association brings. This may cause them to view their job as temporary and insecure, increasing the likelihood that they leave. Thus, professional assignments to the Service would provide much continuity. Also, there appears to be budgetary constraints that make the acquisition of relatively inexpensive computer hardware or software components difficult.

The PP team discussed these concerns with the MEM Energy Director in January, 1984. He assured USAID that the Service was to be an official part of the 1984 MEM organizational chart and that MEM had set aside funds to provide for an acceptable working environment. However, salaries above the normally very low ministerial scale were unlikely to be authorized. The Energy Director suggested that during the first two years of the Project strong prospects for training would in the short term retain most of the talented Moroccan staff, while the hope of a permanent tenured position with the Government was likely to assure stability in the long term.

7. AID's Preference for Energy Planning Assistance to Remain Within the MEM

The Project's staff will have this new "Service" as home offices under the daily guidance of the Deputy Energy Director. This is appropriate since the Energy Directorate's principal responsibilities are the administration of laws and regulations pertaining to public and private energy supply institutions. The Project staff is expected to work closely with the National Energy Commission especially during the deliberations leading to the National Five-Year Plan. Though the National Energy Commission may well have greater political authority over pricing decisions, it meets on only a sporadic basis and therefore would not be an appropriate operational base for the Project. In fact, AID would prefer to continue its positive relationship with MEM based on predecessor projects which have been well received largely because advice has been developed in collaboration with technicians sufficiently removed

from domestic political processes to posit dispassionately numerous options to complex energy issues. By remaining within the MEM Energy Directorate, there exists a unique opportunity to introduce a new method of policy analysis and new analytical tools to a very receptive audience.

The Project would serve to inform the Director of Energy, and through him the Minister, about the different effects of GOM policies and investments in the energy sector prior to their solicitation of financial and political support from other ministries and the government. It is only through these offices and the people in them that the project can be effective since it would be inappropriate for Project staff members to endorse publicly a specific policy path for the Moroccan Government. The Project assumes that GOM decision-makers will be able to make better informed pricing and investment choices thanks to the new analytical tools developed by the Energy Planning and Evaluation Service.

8. Limitations to the Project's Effectiveness

Morocco's commercial energy sector is characterized institutionally by a large number of public and semi-public enterprises and a smaller number of private firms operating under detailed regulation of prices, operations and investments, mostly by the Ministry of Energy and Mines. Other Ministries are also involved, however. The Ministry of Interior, through its oversight of local governments, plays a key role in electricity distribution. The Ministry of Industry, Commerce and Tourism (MCIT) among others, regulates enterprises which consume much energy. Thus, effective inter-ministerial coordination will impact project success since administrative coordination perhaps via the National Energy Commission will be required for the advice developed by MEM to be applied outside its immediate mandated sphere of influence focused on the energy and mining operating agencies.

Key examples of administrative limits of the Project would be commercial energy conservation and biomass. Energy planning within the MEM is not likely to be so effective in dealing with issues such as energy conservation or reforestation that depend primarily on the actions of institutions in other sectors for whom energy is only a secondary concern. MEM can play an important role in these fields, but it is difficult, for example, to see how an industrial energy conservation program could be effectively planned and executed without being based largely on MCIT's knowledge of problems, opportunities and constraints in specific industries and making use of MCIT's administrative mechanisms.

When the climate is conducive for a balanced inter-ministerial exchange, the MEM Minister will make an essentially political judgement that the time is ripe for such a dialogue. Such was the case in April, 1983 when other ministries were introduced to the MEM's computerized energy portfolio process for the first time. A similar case occured in February, 1984 when MEM and ONAREP invited numerous economists and advisors to examine how to price domestic natural gas.

ANNEX I

PARTICIPANT PROCEDURES

1. English Language

An average ALIGU score of 70 will be the minimum for participants receiving short-term technical training. However, higher scroes may be required by specific training programs. Prior to placement at a U.S. university most long-term participants will be required to take the Test of English as a Foreign Language (TOEFL). If a U.S. university requires a TOEFL score, a participant may only proceed to that university after a satisfactory TOEFL score is achieved. Most U.S. universities require a minimum TOEFL of 500, and some require higher scores.

2. Required Tests for Academic Training

The Graduate Record Examination (GRE), given four times a year in Rabat or the Graduate Management Admission Test (GMAT), given once a year only in Rabat may be required by certain universities. If the tests are given in time for admission to a U.S. university, these tests will be taken in Rabat; otherwise, the T.A. contractor will fund invitational travel for participants to take these tests in neighboring countries, such as Tunisia, Spain or Portugal.

3. Program Selection and Participant Placement

AID requires 20-150 days processing for academic training and 90 days for short-term technical training. A training request (PIO/P) with attached Biographical Data will be written on each participant. The MEM Energy Directorate, the participant, and USAID will agree on the training requested for the participant. AID, upon receipt of the PIO/P, will apply to the appropriate universities, which can provide the requested training program. MEM, the participant, and USAID will approve the Training Implementation Plan developed by AID before the participant leaves for the U.S.

4. Travel Arrangements

a. In-Country Travel

Travel arrangements for any in-country training will be the responsibility of the participant's Ministry or operating agency.

b. International Travel

The USAID contribution to the Project will normally not be used to fund international travel. In accordance with AID HB-10 (Participant Training) regulations, international travel costs will be paid for by the Grantee. Domestic U.S. travel to the training site will be funded via the T.A. contractors. Any Moroccan T.A. sub-contractor will also be expected to pay the international travel of its short-term participants. (Please see Section 8. for an exception to this general rule).

c. U.S. Domestic Travel for Technical and Academic Participants

As a matter of administrative convenience the GOM will typically provide an international air ticket which includes a short domestic flight from New York to the point of training. When departure preparations must adhere to a tight schedule, this approach is advised. However, when time permits the U.S. contribution to the Project will via the U.S. contractor provide participants with RT domestic tickets (New York-point of training in the U.S. - New York). This approach will be particularly preferable when training sites are not in the Boston-Washington corridor. U.S. domestic travel reservations/ticketing/per diem will be exclusively handled by the Home Office of the U.S. T.A. and Training contractor in coordination with his field office, S+T/EY, and USAID/Morocco.

5. Processing of Participants

Once the participant has been selected, all the required documents have been submitted, and he has achieved the English language requirements, the USAID Training Officer with the administrative assistance of the U.S. contractor resident in Rabat, will prepare him/her for departure to U.S. This includes a visa request and maintenance advance. Finally, an arrival cable or telex will be sent to the administrative offices of the training site so that the participant may be met on arrival.

All proposed participants must include the following documents in their dossiers:

(1) A signed letter of nomination from the MEM Energy Directorate approving the candidate's release for the training period, describing generally the responsibilities the participant will assume upon returning, and assuring payment of the participant's salary during the training period.

(2) A detailed description of the desired training.

(3) A curriculum vitae (résumé) and 7 photographs.

(4) Certified true copies of Diploma (mandatory for Academic candidates).

(5) Certified true copies of Grade reports (mandatory for Academic candidates).

(6) Three Letters of Recommendation (mandatory for Academic candidates).

(7) A certificate stating that the candidate's English or third country language proficiency is sufficient for the proposed training in the particular country selected.

(8) An agreement (engagement) signed by the candidate that he/she will serve his/her organization when he/she returns home for a certain period of time in accordance with current GOM regulations.

(9) A medical certificate, attesting the physical health of the proposed participant. (From the "Santé Publique")

6. Pre-Departure Orientation for U.S. Participants

For trainees traveling to the U.S. for the first time, a joint GOM/USAID pre-departure orientation will be given to each participant which will include discussions on the culture and life in the U.S. and what a Moroccan participant could expect when he/she first arrives in the U.S.

7. Contractor-Sponsored Summer Internships

The U.S. T.A. and Training contractor will coordinate closely with S&T/EY, IIE, and USAID to arrange for one-month internships for the four academic candidates during their two summer breaks. These internship costs covered by the contractor will be domestic U.S. travel, intern per diem and any internship training fees. At the end of each summer internship, the U.S. contractor will provide airfare to New York to coordinate with RT transatlantic flights provided by the GOM to permit the student to rejoin the Energy Planning and Evaluation Service for up to two months of work and research associated with energy investment planning in Morocco.

8. Contractor-Sponsored Attendance at U.S. Conferences/Seminars on Energy Economics, Finance, and Investment Analyses

The staff of the Energy Planning and Evaluation Service (including U.S. resident contractors, Moroccan sub-contractors, members of the operating agency and inter-ministerial computerized energy information network) will attend conferences/seminars in the U.S. Associated costs including entry fees, per diem, and RT airfare on U.S. carriers, will be reimburseable under the T.A. contract. RT air travel has been deemed reimburseable on an exceptional basis, since an active exchange of technical, financial, analytical approaches is critical to project success.

Moroccan staff participation and exposure to a wide range of energy policies in international fora will strengthen their professional competence. Each attendee must demonstrate that he or she will be an active contributor to the objectives of the conference. Submission/defense of a technical report or designation as a workshop leader/rapporteur would be typical obligations justifying AID funding of international air travel.

The U.S. contractor will be fully responsible for all logistical support associated with attendance at such conferences/seminars including submission of PIO/P's and English language test results to USAID's Training Office. The U.S. contractor responsible for arranging/funding such travel will follow AID regulations concerning per diem rates and U.S. air carrier preference.

9. Monitoring of Participants

S&T/EY and the Home Office of the T.A. contractor will monitor the participants' program and will send periodic reports to the USAID who will discuss the training reports with the MEM. On the other hand, the Mission and MEM should also evaluate the participants' progress while in training, through reporting mechanisms.

10. Return of Participants to Morocco after Completion of Training

At least one month before the participant's departure from the U.S., S&T/EY or the Home Office of the T.A. contractor will send a cable to the USAID advising them of the participant's ETD. In turn, MEM will assure that the participant did in fact return and will have a suitable job waiting for him/her in his/her field of training on arrival in Morocco.

ANNEX J

memorandum

DATE: January 27, 1984

REPLY TO ATTN OF: NE/PD/ENV, Stephen F. Lintner, SFL
Bureau Environmental Coordinator

SUBJECT: Morocco - Energy Planning Assistance (608-0180)
Environmental Clearance

TO: NE/TECH/HRST, James A. Bever,
Project Chairperson

I have reviewed the subject proposed project and find that it is subject to a "Categorical Exclusion" under the provisions of 22 CFR 216.2(c)(2)(i) and (iii) "A.I.D. Environmental Procedures."

It should be noted for Mission reporting purposes that the project supports the objectives of Section 118 of the Foreign Assistance Act, "Environment and Natural Resources," in that it will provide for improved management and development of conventional energy resources through institution building, special analysis and training.

cc: GC/NE: G. Davidson
AID/Rabat: G. Bricker, Mission Project Chairperson
AID/Rabat: J. Dorman, Mission Environmental Officer
AID/Rabat: A. Williams, Regional Legal Advisor

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

OPTIONAL FORM NO. 10
(REV. 7-76)
GSA FPMR (41 CFR) 101-11.6
5010-112

DRAFT SOW FOR ENERGY PLANNING CONTRACT **ANNEX K**

1. Objective of Contract

(a) Over a 60-month period in Morocco, the contractor will provide technical assistance and training services to help Morocco's Ministry of Energy and Mines (MEM) to strengthen the analytical and advisory capabilities of its Energy Directorate and especially its Energy Planning and Information Service (SPD) thereby improving the quantitive economic and financial analysis available to Moroccan Government officials charged with making national energy policy, investment and conservation decisions.

(b) In order to achieve the objective of the contract, the contractor, with the guidance of MEM senior management and in collaboration with Moroccan counterparts in the Ministry's Energy Directorate, will undertake technical assistance activities in the following broad areas: (1) policy analysis, (2) national energy investment planning, (3) review of specific energy investment proposals received or generated by the GOM for funding consideration, (4) promotion of improved energy efficiency in key economic sectors, (5) conduct of critical energy studies, (6) training and professional support, and (7) intra- and inter-ministerial policy dialogue on energy issues.

(c) In addition to these seven technical assistance activities, the contractor will collaborate with another resident contractor to be selected by AID that will have primary responsibility for strengthening MEM's information systems.

(d) The technical assistance activities and training program are expected to develop within the MEM an internal capability to continue these services to Government of Morocco (GOM) decision-makers independently beyond the contract completion date.

2. Scope of Work

The contractor's resident advisors will conduct the following seven (7) key activities:

a) Energy Pricing Analysis

(1) Analyze and advise on pricing systems for oil products, gas, coal, electricity and renewable energy using such techniques as shadow pricing, evaluation of alternative price structures and the opportunity costs of alternative investments under such structures, and estimation of the fiscal impacts of current and alternative pricing systems.

(2) Review the traditional fuel sector (wood and charcoal), its pricing structures and production/marketing bottlenecks.

(3) Identify other policy issues of concern to the GOM and carry out appropriate analysis through both the ongoing work of the Project team and the component devoted specifically to "Critical Energy Studies." (See (e) below).

b) National Energy Investment Planning

(1) Develop investment portfolios in concert with MEM operating agencies which will serve to support MEM's ongoing planning process for future energy supply wit associated investment requirements;

(2) Simulate energy supply and demand scenarios for the consideration of the Energy Director, the Minister of Energy and Mines and other government officials concerned with budget and policy setting;

(3) Advise how to balance domestic energy production, consumption and imports with optimal benefits to Morocco, consonant with the application of market conditions which are condusive to development of adequate and affordable energy supplies to meet economic development goals.

c) Review of Specific Energy Investment Proposals

(1) Review a wide variety of energy investment proposals coming from operating agencies, other ministries, foreign governments, multilateral agencies, and private sources;

(2) Apply financial evaluation criteria such as: internal rates of return, net present value, risk analysis, payback time estimation, benefit/cost analysis, and life-cycle costing;

(3) Review the energy implications of new projects in other sectors, as appropriate.

d) Promotion of Energy Efficiency and Conservation

(1) Undertake technical assistance so that the MEM can more effectively develop and promote an energy conservation program: a) within the public agencies of the energy and mining sectors, b) within other GOM agencies representing sectors in which energy consumption is a significant cost or concern, and c) in the private sector.

(2) Review existing legislation, regulations, codes, fiscal policies, and commercial financial arrangements for conservation measures to identify existing barriers and incentives to such measures, as well as means for better encouraging energy efficiency and productivity without sacrificing level of service or production.

(3) Identify specific needs for assistance in developing/implementating conservation measures in industry, electric power, transportation and/or commercial/institutional buildings.

e) Critical Energy Studies

(1) Conduct a series of energy-related studies judged by MEM to be critical for improved management of Morocco's energy sector. Illustrative topics might include:

(i) Petroleum products emergency acquisition and distribution plan,
(ii) Projection of fuelwood demand over medium- and long-term planning horizons, and analysis of potential for inter-fuel substitution, supply augmentation and improvements in conversion efficiencies as contributions to a rural energy supply plan for isolated zones,
(iii) Costs and benefits of rural electrification.

(2) Actual choice of topics will be made jointly by MEM and AID in collaboration with the contractor.

f) Intra-Ministerial and Inter-Ministerial Energy Policy Dialogue

(1) Support mechanisms for improved collaboration between MEM and its operating agencies and between MEM and other GOM ministries.

(2) Strengthen cooperation between MEM and other ministries and Morocco's private sector by allowing access to (a) the analytical capabilities of the EPIS and (b) energy audit and conservation advisory services.

(3) Strengthen the ability of MEM to prepare energy analyses for inter-ministerial policy formulation in the National Energy Commission and its affiliated Sub-Commissions.

(4) Organize and support MEM in conducting inter-ministerial colloquia on Moroccan energy issues.

g) Training Program

(1) The contractor will contribute to training by offering short-term practical training in specific areas, management support through on-site management training and consulting services and through exposure to other energy professionals at conferences, seminars, workshops and international associations. As an adjunct to ensure effectiveness of other training activities, English language training will also be provided by the contractor.

(2) The contractor's responsibility for training is divided as follows:

(i) Contractor Training Program in Morocco Conducted largely by Resident Staff

- Seminars and short-term technical training on subjects to be agreed to by GOM and AID,

- Regular English language classes for up to 11 Moroccan members of SPD or MEM counterparts in cooperating

agencies and ministries for up to 24 months,

- Intensive English language for up to 3 MEM staff members as required by Project to meet needs of Masters level training program.

(ii) Contractor Training Program in U.S.

- Attendance at Workshops/Seminars/Conferences in the United States (est. 17 participant-months).

  Participation by Moroccan staff at seminars/conferences in the U.S. where they will be encouraged to deliver technical papers on energy planning or act as workshop leaders.

  The contractor will handle all attendance fees, per diem and administrative arrangements for about 33 conference/seminar participants in accordance with current AID per diem schedules. The GOM will provide round-trip airfare from Morocco to the training site.

- Specialized Summer Internships (est. 12 participant-months)

  Three Masters candidates will receive two two-month practical internships in their respective fields (one during each summer). The contractor will arrange for these internships in private industry, national laboratories, or other appropriate institutions in the United States. Per diem and travel within the United States will be included in this technical training package.

3. Staffing Requirements

The contractor will provide 2 resident professional advisors: an energy economist/policy analyst (Chief-of-Party) and an energy efficiency/conservation specialist. The first advisor must begin work at MEM within 6 weeks of contract signature. The second advisor would begin work within 8 to 12 weeks after arrival of the Chief-of-Party. Both advisors will be integrated into SPD and will work with fulltime counterparts in an "on-the-job" training mode.

a) Energy Economist/Policy Analyst (Chief-of-Party)

This person will directly advise the Energy Director and Deputy Energy Director on policy and investment analyses to be undertaken, and act as colleague and counterpart to the chief of the Energy Planning and Information Service. He will be charged with developing and implementing the technical assistance contractor's work plan pursuant to MEM and AID guidance with personal attention to policy issues, investment requirements as well as regulatory and pricing structures affecting energy supply/demand. He will advise the MEM on appropriate training programs for MEM staff members. The energy economist will have a doctorate in economics and at least 5 years of professional experience.

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This advisor will work within MEM for an estimated 57 months from about October, 1984 to June, 1989.

b) Energy Efficiency/Conservation Specialist

This person will advise MEM on matters relating to its ongoing efforts to promote energy efficiency and conservation, especially in the modern sectors that depend heavily on fossil fuels and electricity. He will bring engineering skills combined with extenisve practical experience in designing and implementing energy conservation programs. The energy efficiency/conservation specialist will have an advanced teaching degree and at least three years of conservation experience. Desirably, he will also have a degree in business or finance.

This advisor will work within MEM for an estimated 24 months from about January, 1985 to January, 1987.

c) Contractor's Home Office Personnel and Additional Field Personnel

To be proposed by offerors and negotiated with USAID.

Short-Term Advisors (est. 31 work-months)

(1) The work of the resident advisors in each of the seven areas described above, will be strengthened by the provision of short-term specialists. These specialists will be available for approximately 6 person-months per year during the contract.

(2) They are expected to assist in legislative and regulatory review, critical energy studies, ongoing policy analysis, investment planning, project evaluation, energy conservation, training, and presentations at inter-ministerial colloquia. Specific needs and tasks will be identified and agreed to by the GOM and AID in annual work plans and in the semi-annual Steering Committee meetings.

The short-term services would be available after the Chief-of-Party has settled in through September, 1989 - three months after his projected departure. It is desirable to maintain flexibility in this component of the project in order to provide a quick-response capability attuned to changing needs. Short-term advisors, particularly those involved in inter-ministerial colloquia shall have S-3, R-3 French skills at a minimum or be accompanied by a local interpreter.

4. Reports

a) Semi-Annual Reports

(1) The contractor will submit to AID semi-annual reports in 10 French copies and 4 English copies describing progress in attaining goals/benchmarks set by the annual work plan. The first such report will be due at the end of December, 1984.

(2) The reports will be drafted, edited, and copied in Morocco and distributed simulataneously in French and English from the contractor's Moroccan headquarters.

Every such report will adhere in substance to the following format:

(a) Issues and Proposed Resolutions for Reviews;

(b) Work Plan Calendar;

(c) Comparison of Actual vs. Expected Contract Achievement;

(d) In-Country "On-The-Job" Training;

(e) Training in the U.S.

(f) A 10 - 15-page narrative discussing the resident contractor's progress in conducting the seven (7) key activities described in Section C.2. above;

(g) Activities of Short-Term Advisors;

(h) Comparison of Actual vs. Expected Level-of-Effort under the Contract;

(i) Comparison of Actual vs. Expected Disbursements under the Contract;

(j) Description of Tasks to Perform in the Following 6 months and Associated Budget;

(k) Administrative Matters.

b) Annual Work Plan

(1) No later than three weeks after executing this contract, the contractor will send its resident chief-of-party and home office project director to Morocco to prepare for mobilization of resident staff, to hire local secretaries and administrative assistants, and to finalize to USAID's satisfaction a contact work plan detailing in particular activities projected thru 9/30/85. The work plan will address how and when the Contractor will undertake the activities described in the Scope of Work.

(2) After completion of the contract through 9/30/85, the Contractor will complete annual work plans thereafter.

(3) Subsequent work plans by the Contractor may reflect the advice and guidance of an independent AID evaluation or monitoring visit and the contractor's submission of a work plan and budget responsive to that guidance. At the conclusion of each evaluation/monitoring visit the Contractor's Project Director may be asked by AID to travel to Rabat to revise the work plan and budget.

c) Monitoring Procedures

(1) Within 3 weeks of raceipt of the semi-annual report USAID and MEM will convene a Steering Committee meeting chaired by the AID Director and the Energy Director or their respective designees. Teh contractor's Chief-of-Party will also attend.

(2) In addition to review progress and issues, the Steering Committee will be used as a forum to approve or modify discrete elements of the work plan which the contractor is to undertake. In that spirit, the contractor will submit in its Report for AID and MEM approval of descriptions of task orders and sub-budgets for special tasks to be undertaken during the following 6 months.

(3) On a monthly basis the Chief-of-Party, the Deputy Energy Director and a representative from USAID's Office for Technical Projects (OTP) will meet informally to review progress.

specific energy project proposals received or generated by the MEM for funding consideration, (4) promotion of energy efficiency in key economic sectors, (5) conduct of energy studies on critical issues of special concern to MEM, (6) strengthening of MEM's information systems, including maintenance of an energy data base, (7) management development, training and institutional strengthening through academic study, practical training in energy-related skills and disciplines, attendance at energy seminars and workshops and other professional support activities, and (8) inter-ministerial energy policy dialogue.

planification nationale des investissements dans l'énergie; (3) examen des propositions de projets relatifs à l'énergie reçues par le MEM ou émanant de celui-ci pour en étudier le financement; (4) promotion de la rentabilité de l'énergie dans les secteurs clés de l'économie; (5) conduite d'études énergétiques portant sur des questions décisives auxquelles le MEM attachent un intérêt particulier; (6) renforcement des systèmes informatiques du MEM, comprenant l'entretien d'une base de données sur l'énergie; (7) développement de la gestion, formation et renforcement institutionnel par le biais d'études universitaires, de stages de formation pratique dans des techniques et disciplines relatives à l'énergie, la participation à des séminaires et ateliers de travail sur l'énergie et autres activités professionnelles de soutien, et (8) dialogue interministériel sur la politique énergétique.

The project activities/outputs as described below are expected over the life of the project to develop within the Ministry of Energy and Mines' Energy Directorate, and especially its Energy Planning and Information Service, an internal capability to continue these services to GOM decision-makers after Project completion.

Il est prévu que, pendant la durée du projet, les activités du projet et leurs résultats, tels que décrits ci-dessous, permettent le développement au sein de la Direction de l'Energie du MEM, et en particulier de son Service de Planification et de Documentation, d'un dispositif interne apte à poursuivre la fourniture de ces services aux responsables du gouvernement marocain une fois que le Projet aura pris fin.

The staff members and cooperating agency participants within MEM, along with contract counterparts provided via AID's contribution to the Project, will collaborate on the following key activities and carry out the subactivities described below plus others required to achieve the project's purpose.

Les membres du personnel et les participants des offices sous tutelle du MEM de concert avec les homologues sous contrat fournis par le biais de la contribution A.I.D. au Projet collaboreront aux huit activités clef et activités secondaires décrites ci-dessous ainsi qu'à certaines autres activités requises pour réaliser l'objectif du Project.

1.0. Energy Policy Analysis:

1.1. Analyze and advise on pricing systems for oil products, gas, coal, electricity and renewable energy using such techniques as shadow pricing, evaluation of alternative price structures and the opportunity costs of alternative investments under such structures, and estimation of the fiscal impacts of current and alternative pricing systems.

1.2. Review the traditional fuel sector (wood and charcoal), its pricing structures and production/marketing bottlenecks.

1.3. Identify other policy issues of concern to the GOM and carry out appropriate analysis through both the ongoing work of the Project team and the component devoted specifically to "Critical Energy Studies." (See 5.0. below)

2.0. National Energy Investment Planning:

2.1. Develop investment portfolios in concert with MEM operating agencies which will serve to support MEM's ongoing planning process for future energy supply with associated investment requirements;

2.2. Simulate energy supply and demand scenarios for the consideration of the Energy Director, the Minister of Energy and Mines and other government officials concerned with budget and policy setting;

1.0. Analyses en Politique de l'Energie

1.1. Réaliser des analyses et fournir des conseils sur les sytèmes de tarification des produits pétroliers, du gaz, de l'électricité et de l'énergie renouvelable en utilisant des techniques telles que l'établissement de prix de vérité, l'évaluation de structures de tarification de rechange et les coûts d'opportunité des différents investissements possibles dans le cadre de telles structures, ainsi que l'estimation des conséquences fiscales des systèmes de tarification en vigueur et des systèmes de remplacement.

1.2. Fournir des conseils sur des sytèmes de tarification appropriés pour les produits pétroliers, le gaz, le charbon, l'électricité et les énergies renouvelables;

1.3. Identifier d'autres questions de politique qui intéressent le MEM et réaliser les analyses appropriées à la fois dans le cadre des travaux suivis de l'équipe du Projet et de la composante consacrée spécifiquement aux "Etudes Décisives sur l'Energie" (Voir section 5.0. ci-dessous).

2.0. Planification Nationale des Investissements dans l'Energie:

2.1. Développer des programmes d'investissement en concertation avec les offices sous-tutelle du MEM qui serviront à soutenir le processus actuel de planification du MEM en vue des futurs approvisionnements d'énergie et des investissements correspondants qu'ils nécessitent;

2.2. Simuler des scénarios d'offre et de demande d'énergie qui seront soumis à l'examen du Directeur de l'Energie, du Ministre de l'Energie et des Mines, et des autres membres du gouvernement responsables de l'établissement des budgets et des politiques;

2.3. Advise how to balance domestic energy production, consumption and imports with optimal benefits to Morocco, consonant with the application of market conditions which are conducive to development of adequate and affordable energy supplies to meet economic development goals.

3.0. Review of Specific Energy Project Proposals:

3.1. Review a wide variety of energy project proposals coming from operating agencies, other ministries, foreign governments, multilateral agencies, and private sources;

3.2. Apply financial evaluation criteria such as: internal rates of return, net present value, risk analysis, payback time estimation, benefit/cost analysis, and life-cycle costing;

3.3. Review the energy implications of new projects in other sectors, as appropriate.

4.0. Promotion of Energy Efficiency and Conservation:

4.1. Undertake technical assistance so that the MEM can more effectively develop and promote an energy conservation program: a) within the public agencies of the energy and mining sectors, b) within other GOM agencies representing sectors in which energy consumption is a significant cost or concern, and c) in the private sector.

2.3. Fournir des conseils sur la manière d'équilibrer la production nationale d'énergie, la consommation et les importations avec des bénéfices optima pour le Maroc, en accord avec l'application de conditions commerciales conduisant au développement d'offres d'énergie adéquates et abordables pour répondre aux objectifs de développement économique.

3.0. Examen des Propositions Spécifiques de Projets Relatifs à l'Energie :

3.1. Examiner un large éventail de propositions de projets dans le domaine de l'energie émanant des offices sous-tutelles, d'autres ministères, de gouvernements étrangers, d'agences multilatérales et de sources privées;

3.2. Appliquer des critères d'évaluation financière tels que: taux de rentabilité interne, valeur nette actualisée, analyse des risques, estimation de la période d'amortissement, analyse coût/rendement et établissement du prix de revient d'un projet par rapport à sa longévité rentable.

3.3. Examiner les implications énergétiques des nouveaux projets sur les autres secteurs, comme il sera jugé à propos.

4.0. Promotion de la Rentabilité et de la Conservation de l'Energie:

4.1. Fournir une assistance technique qui permettra au MEM de développer et promouvoir avec une efficacité accrue un programme de conservation énergétique (a) au sein des organismes publics du secteur de l'énergie et des mines; (b) au sein des autres organismes du gouvernement marocain représentant des secteurs dans lesquels la consommation d'énergie constitue une dépense importante ou un sujet de préoccupation et (c) dans le secteur privé.

4.2. Review existing legislation, regulations, codes, fiscal policies, and commercial financial arrangements for conservation measures to identify existing barriers and incentives to such measures, as well as means for better encouraging energy efficiency and productivity without sacrificing level of service or production.

4.2. Examiner la législation, les règlements, les codes, les politiques fiscales, et les dispositions financières et commerciales en vigueur concernant les mesures de conservation afin d'identifier les obstacles existants et les incitations à l'application de telles mesures, ainsi que les moyens à mettre en oeuvre pour mieux encourager le rendement et la productivité de l'énergie sans agir au détriment du volume des services fournis ou de la production.

4.3. Identify specific needs for assistance in developing/implementing conservation measures in industry, electric power, transportation and/or commercial/institutional buildings.

4.3. Identifier les besoins specifiques d'assistance en matière d'élaboration/application de mesures de conservation dans l'industrie, l'électricité, les transports et/ou les bâtiments à usage commercial ou public.

5.0. Critical Energy Studies:

Conduct a series of energy-related studies judged by MEM to be critical for improved management of Morocco's energy sector. Illustrative topics might include: a) Petroleum products emergency acquisition and distribution plan; b) Projection of fuelwood demand over medium- and long-term planning horizons, and analysis of potential for inter-fuel substitution, supply augmentation and improvements in conversion efficiencies as contributions to a rural energy supply plan for isolated zones, c) Costs and benefits of rural electrification. Actual choice of topics will be made jointly by MEM and AID in collaboration with a technical assistance contractor.

5.0. Etudes Décisives sur l'Energie:

Mener une série d'études relatives à l'énergie jugées décisives par le MEM pour améliorer la gestion du secteur de l'énergie au Maroc. A titre d'exemple, les sujets traités pourraient comprendre: a) Plan d'urgence pour l'acquisition et la distribution de produits pétroliers; b) projection de la demande en bois combustible à moyen et long terme et analyse des potentialités de substituer des carburants à d'autres, de l'augmentation de l'offre, et d'améliorations des rendements de conversion en tant que contributions au plan rural d'approvisionnement en énergie des zones isolées; c) coûts et bénéfices de l'électrification rurale. Le choix réel des sujets sera effectué conjointement par le MEM et l'A.I.D. en collaboration avec le contractant fournissant l'assistance technique.

6.0. Information Systems Support:

6.1. Improve the quantity and quality of available energy data as needed for effective energy planning

6.0. Soutien aux Systèmes Informatiques :

6.1. Accroitre la quantité et améliorer la qualité des données disponibles sur l'énergie

through ongoing efforts to collect, organize, analyze, and update the economic and technical data comprising a current, useful national energy data base.

nécessaires pour réaliser une planification efficace de l'énergie par la mise en oeuvre d'efforts suivis de collecte, organisation, analyse, et mise à jour des données économiques et techniques comprenant une base de données nationales sur l'énergie qui soit à jour et utile.

6.2. Evaluate the feasibility of developing a small micro-computer network linking MEM and the major energy suppliers and energy advisory bodies in Morocco, to serve the needs of analysts in these entities, and design and implement the network if the results of the study are positive.

6.2. Evaluer la faisabilité du développement d'un petit réseau micro-informatique reliant le MEM avec les principaux fournisseurs d'énergie et les organes consultatifs en matière d'énergie au Maroc, pour servir les besoins des analystes de ces entités, et dans le cas où les résultats de cette étude seraient positifs, concevoir et mettre en place ce réseau.

Any resultant network design proposal should include two separate budgets phased to fit over the remaining Life of the Project: one to USAID/Morocco in U.S. fiscal years covering the costs of hardware, spareparts, commercial software installation and training without tax and a second budget to the MEM Energy Directorate in calendar years showing all associated costs of operation, maintenance, repair, perishable supplies, any additional commercial software, and local taxes. The Ministry of Energy and Mines will have financial responsibility for the costs shown in Article V, Table 3, below.

Toute proposition du réseau dessiné qui en résultera devra comprendre deux budgets séparés et echelonnés sur la période restante de la durée du Projet : le premier à l'intention de l'USAID/Maroc présenté par année fiscale américaine identifiera les frais d'achat d'équipements, de pièces détachées, et de logiciels commerciaux, d'installation, et de formation hors taxes, le deuxième budget à l'intention de la Direction de l'Energie présenté par année civile identifiera tous les frais de fonctionnement, d'entretien, de réparation, de fournitures associées, d'autres logiciels commerciaux majorés de taxes. Le Ministère de l'Energie et des Mines se chargera du financement des coûts qui figurent au Tableau 3 de l'Article V ci-dessous.

6.3. Maintain the analytical system developed under the predecessor projects. Ensure the ongoing usefulness of the analytical system through further development of its elements or of complementary components, and/or develop substitute approaches and systems as the needs and capabilities of MEM evolve.

6.3. Entretenir le dispositif analytique développé sous les projets précédents. Assurer une utilité continue du dispositif analytique en développant davantage les éléments qui le composent ou en y ajoutant des composantes supplémentaires, et/ou élaborer des approches et des systèmes de remplacement au fur et à mesure de l'évolution des besoins et capacités du MEM.

7.0. Training, Institutional Development and Professional Support:

7.1. Train MEM staff through study toward academic degrees in U.S. universities in economics, management, energy resource analysis, energy engineering and technology and other appropriate fields, as well as in short-term technical training in both the U.S. and Morocco in specific relevant skills and subjects, and periodic exposure for MEM professionals to state-of-the-art information and methodologies through attendance at conferences, workshops and seminars, as well as through association and exchanges with counterparts in other countries.

7.2. Assist MEM in organizing its staff and functions, especially within SPD , to carry out its mandate;

7.3. Provide management advice and consulting support as needed to assist with specific problems or opportunities that arise as the Project evolves.

(Further detail on the training activities will be found under "C. Project Components: Inputs").

8.0. Intra-Ministerial and Inter-Ministerial Energy Policy Dialogue:

8.1. Support mechanisms for improved collaboration between MEM and its operating agencies and between MEM and other GOM ministries.

7.0. Formation, Développement Institutionnel et Soutien Professionel:

7.1. Former le personnel du MEM par le biais d'études préparatoires à des diplômes académiques dans des universités américaines dans le domaine de l'économie, la gestion, l'analyse des ressources énergétiques, l'ingénierie et la technologie de l'énergie et dans d'autres domaines appropriés, ainsi qu'une formation technique de courte durée aux Etats-Unis et au Maroc dans des techniques et disciplines spécifiques relevant de l'énergie, et permettre au professionnels du MEM d'être périodiquement exposés aux informations et méthodologies les plus récentes en les faisant participer à des conférences, des ateliers et des séminaires, ainsi que grâce à des associations et des échanges avec leurs homologues des autres pays.

7.2. Aider le MEM à organiser son personnel et ses fonctions, principalement au sein du SPD pour qu'il mène à bien les tâches qui lui sont assignées.

7.3. Fournir un soutien sous forme de conseils et de consultations en gestion jugés nécessaires pour aider à résoudre des problèmes ou des situations spécifiques qui se présenteront à mesure que le Projet évoluera.

(On trouvera des détails supplémentaires concernant le programme de formation du Projet à la Section "C. Volets du Projet: Intrants").

8.0. Dialogue Intra et Inter-Ministériel sur les Politiques Energétiques :

8.1. Améliorer le fonctionnement de la collaboration entre le MEM et ses offices sous-tutelle, ainsi qu'entre le MEM

8.2. Strengthen cooperation between MEM and other ministries and Morocco's private sector by allowing access to (a) the analytical capabilities of the SPD and (b) energy audit and conservation advisory services.

8.3. Strengthen the ability of MEM to prepare energy analyses for inter-ministerial policy formulation in the National Energy Commission and its affiliated Sub-Commissions.

8.4. Organize and support MEM in conducting inter-ministerial colloquia on Moroccan energy issues.

The Project will be implemented over a five year period (1984-1989) at an estimated total cost of $5.4 million. Subject to the conditions in Section 2.2. of the Agreement, A.I.D. will provide an estimated $4.00 million. The financial contribution of the Government of Morocco (the Grantee) will total an estimated dirham equivalent of $1.40 million.

C. PROJECT COMPONENTS (INPUTS):

1.0. Resident Advisors (est. 150 work-months):

A.I.D. will provide five resident advisors who will be integrated into MEM and will work with full-time counterparts.

1.1. Energy Economist/Policy Analyst (Chief-of-Party):

This person will directly advise the Energy Director and Deputy Energy Director on policy and investment analyses to be

et les autres Ministères.

8.2. Renforcer la coopération entre le MEM, les autres Ministères et le secteur privé en leur donnant accès : a) aux services analytiques du SPD et b) aux services consultatifs d'audit énergétique et de conservation de l'énergie.

8.3. Renforcer l'aptitude du SPD à préparer des analyses sur l'énergie pour permettre à la Commission Nationale de l'Energie et aux Sous-Commissions qui lui sont affiliées, de formuler des politiques énergétiques inter-ministérielles.

8.4. Aider le MEM à organiser des colloques inter-ministériels sur les questions énergétiques.

La mise en oeuvre du Projet se fera sur une période de cinq années (1984-1989) à un coût estimé au total à 5,4 millions de dollars des Etats-Unis. Sous réserve des conditions stipulées à la Section 2.2. de l'Accord, l'AID fournira un montant estimé à 4,00 millions de dollars. La contribution financière du Gouvernement du Maroc (le Bénéficiaire) totalisera un montant en dirhams estimé à l'équivalent de 1,4 million de dollars.

C. LES VOLETS DU PROJET (INTRANTS):

1.0. Conseillers Résidents (pour une durée estimée à 150 mois de travail) :

L'AID fournira les services de cinq conseillers résidents qui seront intégrés au SPD et travailleront avec des homologues employés à plein temps.

1.1. Analyste en Politique/Economie de l'Energie (Chef d'Equipe) :

Il fournira directement ses conseils au Directeur de l'Energie et à son Adjoint sur les analyses à entreprendre en matière de

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undertaken, and act as colleague and counterpart to the chief of the Energy Planning and Information Service. He will be charged with developing and implementing the technical assistance contractor's work plan pursuant to MEM and A.I.D. guidance with personal attention to policy issues, investment requirements as well as regulatory and pricing structures affecting energy supply/demand. He will advise the MEM on appropriate training programs for MEM staff members.

This advisor will work within MEM for an estimated 57 months.

1.2. Energy Efficiency and Conservation Specialist

This person will advise MEM on matters relating to its ongoing efforts to promote energy efficiency and conservation, especially in the modern sectors that depend heavily on fossil fuels and electricity. He will bring engineering skills combined with extensive practical experience in designing and implementing energy conservation programs.

This advisor will work within MEM for an estimated 24 months.

1.3. Energy Engineer

This person will analyze and advise the MEM on the relative technical and financial viability of a variety of technologies to supply energy to end-users in Morocco. Working closely with operating agency counterparts, he will compare technical efficiencies, capital and

politiques et d'investissements et il agira en qualité de collaborateur et homologue du Chef du Service de Planification et de Documentation. Il sera chargé d'élaborer et d'exécuter le plan de travail d'assistance technique du contractant conformément à l'orientation donnée par le MEM et l'AID en accordant une attention particulière aux questions de politiques, aux conditions d'investissement ainsi qu'aux structures de contrôle et de tarification affectant l'offre et la demande d'énergie. Il conseillera le MEM sur les programmes de formation appropriés pour les membres du personnel du MEM.

Ce conseiller travaillera au sein du MEM pendant une durée estimée à 57 mois.

1.2. Spécialiste en Rentabilité et Conservation de l'Energie

Il fournira ses conseils au MEM sur les points concernant les efforts continus à mettre en oeuvre pour promouvoir la rentabilité et la conservation de l'énergie dans les secteurs modernes qui dépendent fortement des carburants fossiles et de l'électricité. Il s'agira d'un ingénieur qualifié disposant également d'une vaste expérience pratique dans le domaine de la conception et de la réalisation de programmes de conservation de l'énergie.

Ce conseiller travaillera au sein du MEM pendant une durée estimée à 24 mois.

1.3. Ingénieur en Energie

Il fournira des analyses et des conseils au MEM sur la viabilité relative technique et financière de diverses techniques de fourniture d'énergie aux utilisateurs marocains. Travaillant en étroite collaboration avec ses homologues de l'organisme sous tutelle, il fera

operating costs, reliability and longevity of the entire range of technical options available to meet demand. He will lead the efforts to evaluate specific energy project portfolios.

This advisor will work within MEM for an estimated 33 months.

1.4. Computer Specialist

The computer specialist will train the technical staff of SPD and their counterparts in cooperating agencies during the critical period during the establishment of the planning network.

This advisor will work within MEM for an estimated 18 months.

1.5. Data Base Manager

The data base manager will build on the predecessor project experience to sustain contact with major energy consumers and suppliers in Morocco and assure a flow of constantly updated information. As such, the data base manager will have frequent exchanges with economists and administrative officials from a wide range of ministries and a broad spectrum of cooperating agencies.

This advisor will work within MEM for an estimated 18 months.

2.0. Short-Term Advisors (est. 49 work-months):

The work of the Project team in each of the eight areas described above, along with the contribution of the five full-time advisors will be strengthened by the provision of short-term specialists assigned

des comparaisons de l'efficacité technique, des coûts d'investissement et de fonctionnement, de la fiabilité et de la longévité d'une gamme complète d'options techniques disponibles pour faire face à la demande. Il dirigera les efforts d'évaluation de programmes spécifiques.

Ce conseiller travaillera au sein du MEM pendant une durée estimée à 33 mois.

1.4. Le Spécialiste en Informatique

Le spécialiste en Informatique formera le personnel technique du SPD et les homologues des organismes sous-tutelle pendant la période décisive du démarrage du réseau informatique.

Ce conseiller travaillera au sein du MEM pendant environ 18 mois.

1.5. Le Gestionnaire de Base de Données

Le gestionnaire de base de données s'appuiera sur l'expérience acquise dans le cadre des projets précédents pour entretenir les contacts entre les principaux consommateurs et fournisseurs d'énergie au Maroc et pour assurer la circulation d'informations constamment remises à jour. En tant que tel, il aura de fréquents échanges avec des économistes et des cadres administratifs d'un large éventail de ministères et d'offices.

Ce conseiller travaillera au sein du MEM pendant environ 18 mois.

2.0. Conseillers en Mission de Courte Durée (durée estimée à 49 mois de travail) :

Les travaux de l'équipe du Projet dans chacun des huit domaines décrits ci-dessus, en même temps que la contribution des cinq conseillers à plein temps, seront consolidés par des services de conseillers en

intermittently to the Project. These specialists will be available for approximately 10 person-months equivalent in each year of the Project.

They are expected to assist in legislative and regulatory review, critical energy studies, ongoing policy analysis, investment planning, project evaluation, energy conservation, training, and presentations at interministerial colloquia. Specific needs and tasks will be identified and agreed to by the GOM and AID in annual work plans, in the semi-annual Steering Committee meetings, and in Project Implementation Letters as needed.

3.0. Commodities:

The Project will provide information systems support to coordinate and carry out a feasibility study which, if it yields positive findings and recommendations, will lead to procurement, installation and operation of a network employing micro-computers to link data bases and analytical programs shared by MEM and other GOM energy agencies. Software needed by members of the resulting energy planning network will be provided. The Project will fund local training on these items as needed. Operation, maintenance, and repair of this computer equipment will be the responsibility of GOM, which will assume these responsibilities and costs after initial installation and training.

mission de courte durée affectés de manière intermittente au Projet. Ces spécialistes seront disponibles à raison d'environ 10 mois-personnes pour chaque année du Projet.

Il est prévu qu'ils fournissent leur concours à l'examen des lois et règlements énergétiques, aux études décisives sur l'énergie et aux analyses des politiques en cours, à la planification des investissements, l'évaluation de projets, la conservation de l'énergie ainsi qu'à la formation et aux présentations effectuées dans le cadre des colloques interministériels. Les besoins en la matière et les tâches spécifiques qu'ils devront remplir seront identifiés et convenus par le Gouvernement du Maroc et l'A.I.D. dans les plans de travail annuels, dans les réunions semestrielles du Comité Directeur et dans les Lettres d'Exécution du Projet suivant les besoins.

3.0. Fournitures :

Le Projet fournira le soutien requis en systèmes informatiques pour coordonner et réaliser une étude de faisabilité qui, si elle produit des résultats et des recommandations positives, mènera à l'acquisition, l'installation et la mise en fonctionnement d'un réseau utilisant des micro-ordinateurs pour relier les bases de données et les programmes analytiques partagés par le MEM et les autres organismes du gouvernement marocain concernés par l'énergie. Le Projet fournira également les logiciels requis par les membres du réseau de planification énergétique ainsi créé. Le Projet s'occupera également de la formation sur place pour l'utilisation de ces articles si nécessaire. Le fonctionnement, l'entretien et les réparations de cet équipement informatique passeront sous la responsabilité du gouvernement marocain qui en assumera la charge et les coûts après l'installation initiale et la formation.

4.0. Training Program:

The training program provided under the Project is a key element designed to strengthen the skills, information base and broad capabilities of the MEM Energy Directorate, and especially of the personnel assigned to the Energy Planning and Information Service. The program represents a mix of graduate level study leading to degrees from U.S. universities, short-term practical training in specific areas, management support through on-site management training and consulting services and through exposure to other energy professionals at conferences, seminars, workshops and international associations. As an adjunct to ensure effectiveness of other training activities, English language training will also be provided.

Responsibility for training will be divided as follows:

4.1. A.I.D. Direct Training under the Project:

- Regular English language classes in Morocco for up to 11 Project staff members;

- As necessary, intensive English language classes in Morocco for training up to 4 candidates;

- Short-term technical training in the U.S. for about 15 participant-months for MEM staff members and counterparts from cooperating agencies and other ministries;

- Masters level degree training at U.S. universities for up to four MEM employees selected to be the main cadres of SPD. Degrees may be earned in inter-disciplinary programs (energy planning and

4.0. Programme de Formation :

Le programme de formation dispensé au titre du présent Projet en est une composante clef visant à renforcer les qualifications, la base d'informations et les vastes capacités de la Direction de l'Energie du MEM et en particulier du personnel affecté au Service de Planification et de Documentation. Le programme se composera d'études supérieures préparant à des diplômes universitaires américains, de stages pratiques de courte durée dans des branches spécifiques, d'un soutien en matière de gestion par le biais d'une formation en gestion dispensée sur place et de services consultatifs ainsi que des contacts avec des hommes de métier lors de conférences, séminaires, ateliers de travail et dans le cadre d'associations internationales. Une formation en langue anglaise sera également fournie en complément afin d'assurer l'efficacité des autres activités de formation.

La prise en charge de la formation sera répartie comme suit :

4.1. Formation directement fournie par l'A.I.D. au titre du Projet :

- Cours réguliers d'anglais au Maroc pour un maximum de 11 membres du personnel affectés au Projet;

- Suivant les besoins, cours d'anglais intensifs au Maroc pour un maximum de quatre candidats;

- Formation technique de courte durée aux Etats-Unis pour environ 15 mois/participants pour les membres du personnel du MEM et leurs homologues d'organismes sous-tutelle et d'autres ministères;

- Préparation au diplôme de Master dans des universités américaines pour un maximum de quatre employés du MEM sélectionnés pour devenir les principaux cadres du SPD. Ces diplômes seront obtenus

management; energy resource management; applied energy technology) or in traditional disciplines (economics, public administration, management, or business) combined with specific energy research for thesis preparation or energy-related practical internships.

4.2. Training Arranged via a Technical Assistance Contract:

- Seminars and short-term technical training in Morocco on subjects to be agreed to by GOM and AID;

- Attendance at Workshops/Seminars/Conferences in the United States (est. 17 participant-months).

Project staff members will participate in seminars/conferences in the U.S. where they will be encouraged to deliver technical papers on energy planning or act as workshop leaders. The resident technical assistance contractor will handle all attendance fees, per diem and administrative arrangements for conference/seminar participants in accordance with current AID per diem schedules. The GOM will provide round-trip airfare from Morocco to the training site.

- Specialized Summer Internships (est. 12 participant-months)

Each Masters candidate will receive two two-month practical internships in his respective

en suivant des programmes interdisciplinaires (planification et gestion de l'énergie; gestion des ressources en énergie; technologie appliquée en énergie) ou des disciplines traditionnelles (économie, administration publique, gestion, commerce) combinés avec des travaux de recherche spécifiques pour la préparation de thèses ou des stages pratiques relatifs à l'énergie.

4.2. Formation Dispensée au titre d'un Contrat d'Assistance Technique

- Séminaires et stages de formation technique de courte durée au Maroc dans des domaines convenus par le Gouvernement du Maroc et l'A.I.D.

- Participation à des ateliers de travail et des séminaires/conférences aux Etats-Unis (estimé à 17 mois/participant).

Des membres du personnel du Projet participeront à des séminaires/conférences aux Etats-Unis, où ils seront encouragés à présenter des rapports techniques sur la planification de l'énergie ou à diriger des ateliers de travail. Le contractant résident chargé de l'assistance technique prendra toutes les dispositions financières et administratives concernant les frais d'inscription et l'indemnité journalière des participants aux conférences/séminaires conformément aux barêmes A.I.D. en vigueur. Le gouvernement marocain s'occupera du billet d'avion aller-retour jusqu'au lieu de la conférence. (Voir Section III E.3 pour les conditions des voyages sur invitation).

- Stages Spécialisés d'Eté (estimés à 12 mois/participant)

Chaque candidat au Master bénéficiera de deux stages pratiques de deux mois dans son domaine

fields. The home office of the technical assistance contractor will arrange for these internships in private industry, national laboratories, or other appropriate institutions in the United States. Per diem and travel within the United States will be included in this technical training package.

d'études respectif. Le siège du contractant chargé de l'assistance technique s'occupera de l'organisation de ces stages dans l'industrie privée, les laboratoires nationaux, ou dans d'autres institutions appropriées aux Etats-Unis. Les indemnités journalières et les frais de déplacement à l'intérieur des Etats-Unis seront inclus dans ce programme de formation technique.

ARTICLE II: CONTRIBUTION OF THE PARTIES

In order to achieve the purpose and objectives of the Project, as described in Article I, the Parties will make inputs to the Project as described below.

A. GOVERNMENT OF THE UNITED STATES ($4,000,000)

This section describes A.I.D.'s anticipated inputs to the Project. Funding levels indicated are the anticipated life-of-project funding. Funding indicated in excess of that actually obligated under this Agreement will be provided under future increments, subject to the conditions set forth in Section 2.2. of this Agreement.

The A.I.D. contribution will be provided via four components: (1) Energy Planning Technical Assistance (est. $2,665,000); (2) Information Systems Implementation (est. $636,000); (3) Training managed by A.I.D.'s Office of Energy in Washington (est. $274,000); (4) Evaluations, contingencies, and English Training via USAID/Morocco (est. $425,000). Funding for the four components will be as follows:

ARTICLE II : CONTRIBUTION DES PARTIES

Pour réaliser le but et les objectifs du Projet, décrits à l'Article I, les Parties fourniront leurs contributions suivantes au Projet.

A. GOUVERNEMENT AMERICAIN ($4.000.000)

Cette section décrit la contribution escomptée de l'AID pour le Projet. Les niveaux de financement indiqués représentent le financement prévu pour la durée du Projet et là où ils dépassent les niveaux des engagements au titre de cet accord, des fonds supplémentaires seront engagés dans les tranches suivantes par Avenant à l'Accord de Projet sous réserve des conditions stipulées à la Section 2.2. de l'Accord.

La contribution de l'AID sera fournie sous quatre composantes : (1) services d'assistance technique dans le domaine de la planification énergétique (pour un montant estimé à $2.665.000); (2) réalisation d'un réseau informatique (pour un montant estimé à $636.000); (3) formation gérée par le Bureau de l'Energie de l'AID/Washington (pour un montant estimé à $274.000); (4) évaluations, imprévus et formation en langue anglaise par le biais de l'USAID/Maroc (pour un montant estimé à $425.000). Voici les fonds prévus pour les quatre composantes :

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(1) TECHNICAL ASSISTANCE IN ENERGY PLANNING (est. $2,665,000):

a. Long-Term Technical Assistance ($2,058,000):

Three Resident Advisors at about 114 work-months as described in Article 1 of this Annex. Estimate includes salaries, travel, rent, allowances, benefits/overhead, contract management and fee.

b. Short-Term Economic Advisors ($415,000):

About 31 work-months as described in Article 1 of this Annex. Estimate includes salaries, benefits/overhead, travel, per diem and fee.

c. Training ($131,000): As described in Article 1 of this Annex and c.1. through c.3 below.

c.1. U.S. Workshop/Seminar Attendance ($96,000):

About 17 participant-months for up to 33 attendees.

c.2 U.S. Summer Internships for Masters Candidates ($35,000):

About 12 participant-months for up to 3 trainees.

d. Information Systems Needs Assessement ($61,000):

8 work-months of technical assistance.

(2) INFORMATION SYSTEMS IMPLEMENTATION (est. $636,000):

a. Long-Term Technical Assistance ($556,000):

Two Resident Advisors at about 36 work-months as described in Article 1 of this Annex. Estimate includes salaries, travel, rent,

(1) ASSISTANCE TECHNIQUE DANS LE DOMAINE DE LA PLANIFICATION ENERGETIQUE (estimé à $2.665.000)

a. Assistance Technique de longue durée (Trois Conseillers Résidents) ($2.058.000):

Environ 114 mois de travail comme décrit à l'Article I de la présente Annexe. L'estimation comprend les salaires, frais de voyage, location, indemnités, avantages/frais généraux, frais de gestion du contrat et honoraires.

b. Conseillers Economiques de Courte Durée ($415.000):

Environ 31 mois de travail comme décrit à l'Article I de la présente Annexe. L'estimation comprend les salaires, avantages/frais généraux, frais de déplacement, indemnités journalières et honoraires.

c. Formation ($131.000): Comme décrit à l'Article I de la présente Annexe et aux paragraphes c.1. à c.3. ci-dessous.

c.1. Participation à des Stages/Séminaires aux Etats-Unis ($96.000)

Environ 33 participants pour environ 17 mois/participant.

c.2. Stages d'Eté aux E.U. pour les Candidats au Master ($35.000)

Environ 12 mois/participant pour au maximum 3 stagiaires.

d. Evaluation des Besoins pour le Système Informatique ($61.000)

8 mois de travail d'assistance technique.

(2) INSTALLATION DU SYSTEME INFORMATIQUE (est. à $636.000)

a. Assistance Technique de Longue Durée ($556.000)

Deux Conseillers Résidents à environ 36 mois de travail comme décrit à l'Article I de la présente Annexe. L'estimation comprend les

allowances, benefits/overhead, contract management, and fee.

b. Commodities ($80,000): About 10 micro-computers operating as a planning network.

(3) TRAINING VIA A.I.D./WASHINGTON'S OFFFICE OF ENERGY (est. $274,000):

a. Short-Term Technical Assistance in Morocco on Energy Audits/Industrial Conservation ($63,000): About 6 work-months.

b. Academic Training ($149,000): Three Masters at about 72 participant-months.

c. Short-Term Training ($62,000): Energy Management, Planning, and Finance at about 15 participant-months.

(4) EVALUATIONS, CONTINGENCIES, AND ENGLISH TRAINING VIA USAID/MOROCCO (est. $425,000):

a. Contingency ($333,000)

b. Evaluations ($75,000): Two major evaluations.

c. English Language Training in Morocco ($17,000): About three months until primary contractor arrives.

B. GOVERNMENT OF MOROCCO (GRANTEE) (est. DH 12,160,000 equivalent to approximately ($1,400,000):

In addition to its general obligation under Section 3.2. of this Agreement to provide funds and resources needed for the Project, the Grantee will make the following inputs to the Project:

(1) TRAINING (est. 1,353,000 DH):

salaires, frais de voyage, location, indemnités, avantages/frais généraux, frais de gestion du contrat et honoraires.

b. Fournitures ($80.000): Environ 10 micro-ordinateurs fonctionnant comme réseau de planification.

(3) FORMATION PAR LE BIAIS DU BUREAU DE L'ENERGIE DE L'AID/WASHINGTON (est. à $274.000)

a. Assistance Technique de Courte Durée au Maroc en Matière d'Audits Energétiques/Conservation Industrielle ($63.000): Environ 6 mois de travail.

b. Formation Académique ($149.000): Trois Masters à environ 72 mois/participant.

c. Formation de Courte Durée ($62.000): Gestion, Planification et Finances de l'Energie à environ 15 mois/participant.

(4) EVALUATIONS, IMPREVUS ET FORMATION EN LANGUE ANGLAISE PAR LE BIAIS DE L'USAID/MAROC (est. à $425.000):

a. Imprévus ($333.000)

b. Evaluations ($75.000): Deux évaluations principales.

c. Formation en langue anglaise au Maroc ($17.000): Environ trois mois jusqu'à l'arrivée du premier contractant.

B. GOUVERNEMENT DU MAROC (BENEFICIAIRE) (est. à 12.160.000 DH équivalent à environ $1.400.000

Outre l'engagement général mentionné à la Section 3.2. du présent Accord consistant à fournir les crédits et ressources requis pour le Projet, le Bénéficiaire fournira les contributions suivantes au Projet :

(1) FORMATION (est. à 1.353.000 DH)

a. Short-Term Technical Training in U.S. (80,000 DH): Salary of participants during training period.

b. Academic Training in U.S. (592,000 DH): Salaries for three Masters candidates, including summer internships.

c. Travel (681,000 DH): Three round-trip tickets for Masters, 10 for short-term trainees, 33 for workshop attendees.

(2) STAFF AND RELATED EXPENSES FOR ENERGY PLANNING AND DOCUMENTATION SERVICE (est. 10,035,000 DH):

a. Counterparts to Resident and Short-Term Advisors (6,332,000 DH): Salaries, benefits/overhead, office rent, utilities, maintenance.

b. Commodities (266,000 DH): Perishable supplies, furniture, typewriters, office equipment for SPD.

c. Computerized Energy Planning Network (1,549,000 DH): Operation, maintenance, and repairs.

d. Inter-Ministerial Colloquia (est. ten) on Energy Issues in Morocco (1,888,000 DH): Guest speakers, publicity, salary of colloquia attendants, rental.

(3) TECHNICAL ASSISTANCE ON ENERGY AUDITS/INDUSTRIAL CONSERVATION (est. 772,000DH):

This represents salaries of industrial executives and factory engineers serving as counterparts to short-term advisors.

a. Formation Technique de Courte Durée aux Etats-Unis (80.000 DH): Salaire des participants pendant la durée des cours.

b. Formation Académique aux Etats-Unis (592.000 DH): Salaires des trois candidats au Master, y compris les stages d'été.

c. Voyages (681.000 DH): Trois billets d'avion aller-retour pour les Masters, dix pour les participants à la formation de courte durée, 33 pour les stagiaires.

(2) PERSONNEL ET FRAIS AFFERENTS POUR LE SERVICE DE PLANIFICATION ET DE DOCUMENTATION (est. à 10.035.000 DH):

a. Homologues des Conseillers Résidents et Conseillers de Courte Durée (6.332.000 DH): Salaires, avantages sociaux/frais généraux, location de bureau, électricité, téléphone, entretien.

b. Fournitures (266.000 DH): Fournitures périssables, meubles de bureau, machines à écrire, équipement de bureau pour le SPD.

c. Réseau Informatique pour la Planification de l'Energie ($1.549.000): Fonctionnement, entretien et réparations.

d. Colloques Interministériels (estimés à dix) sur les Questions d'Energie au Maroc (1.888.000 DH): Orateurs invités, publicité, salaires des participants aux colloques, frais de location de la salle de conférences.

(3) ASSISTANCE TECHNIQUE EN MATIERE D'AUDIT DE L'ENERGIE/CONSERVATION INDUSTRIELLE (est. à 772.000 DH):

Cela représente les salaires des cadres de sociétés industrielles et d'ingénieurs d'usines qui seront les homologues des conseillers de courte durée.

ARTICLE III: IMPLEMENTATION

A. GENERAL ADMINISTRATION

The Energy Directorate of the Ministry of Energy and Mines (MEM) is the implementing agency for the Project. The head of SPD and the U.S. contractor Chief-of-Party will report to the Energy Directorate.

USAID/Morocco will assist in Project implementation with short-term training, academic training, evaluations, and selection and management of the Technical Assistance and training contract. USAID/Morocco will play a monitoring and advisory role during the life of the Project.

The Grantee's Ministry of Finance will assure timely provision of GOM budgetary allocations to the Project.

The Grantee agrees that MEM will provide the following logistic support for the SPD: customs clearance of project commodities, access to MEM phone and telex systems, SPD staff recruitment, salaries, participant salary maintenance, professional offices equipped and furnished, rooms suitable for housing micro-computers, a furnished library/archive/conference room, typewriters, utilities, maintenance, repair, perishable office material, and organization/funding of about 10 inter-ministerial colloquia on energy policy and planning.

ARTICLE III ; REALISATION DU PROJET

A. ADMINISTRATION GENERALE

La Direction de l'Energie du Ministère de l'Energie et des Mines (MEM) est l'organisme chargé d'exécuter le Projet. Le Chef du SPD et le Chef d'Equipe américain rendront compte de leurs activités à la Direction de l'Energie.

L'USAID/Maroc contribuera à la réalisation du Projet par des programmes de formation de courte durée, formation académique, et sélection et gestion du contrat d'assistance technique et de formation. L'USAID/Maroc jouera un rôle de contrôle et de conseil pendant la durée du Projet.

Le Ministère des Finances du Bénéficiaire assurera la fourniture en temps opportun des crédits budgétaires affectés au Projet par le Gouvernement du Maroc.

Le Bénéficiaire convient que le MEM fournira au SPD le soutien logistique suivant : le dédouanement des matériels destinés au Projet, l'accès au téléphone et télex du MEM, le recrutement du personnel du SPD, les salaires, le maintien du salaire des boursiers, les bureaux équipés et meublés pour les professionnels, un local adapté à abriter les micro-ordinateurs, une salle de conférence/bibliothèque/archives équipée, des machines à écrire, l'eau, l'électricité et le téléphone, les services d'entretien et de réparation, les fournitures de bureau et l'organisation/le financement d'environ 10 colloques interministériels sur la politique et la planification de l'énergie.

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B. PROJECT STEERING COMMITTEE

A.I.D. and the Grantee will establish a Project Steering Committee which will normally meet semi-annually and be chaired by the Energy Director and the USAID/Morocco Director or their respective designees.
The resident technical assistance contractor will present to the Steering Committee an annual work plan which will detail the technical assistance, training and procurement activities for the year at hand. This plan must be approved by the Steering Committee before the contractor proceeds. The contractor will submit for the approval of the USAID/MEM Steering Committee descriptions of task orders and sub-budgets for special tasks proposed to be undertaken during the 6 months following the meeting. The Steering Committee will be composed of the Director, Deputy Director, SPD Chief, and Division Chiefs within the Energy Directorate, as well as the OTP Division Chief, and the contractor's Chief-of-Party. Representatives from other MEM Directorates, cooperating agencies, other ministries, or other resident advisors may attend these meetings with the approval of the Energy Director.

In addition to reviewing Project progress and issues, the Steering Committee will be used as a forum to approve or modify discrete elements of the work plan which the contractor is to undertake.

The first Steering Committee meeting will take place 30 days after the signing of this Agreement. Minutes of the Steering

B. COMITE DIRECTEUR DU PROJET

L'AID et le Bénéficiaire constitueront un Comité Directeur du Projet qui se réunira normalement tous les six mois, et sera présidé par le Directeur de l'Energie et le Directeur de l'USAID/Maroc ou par leurs représentants respectifs. Le contractant résident chargé de l'assistance technique présentera au Comité Directeur un plan annuel de travail fournissant des détails sur les activités d'assistance technique, de formation et d'achat de matériel pour l'année. Ce plan devra être approuvé par le Comité Directeur avant que le contractant puisse appliquer le plan proposé. Le Contractant soumettra à l'approbation du Comité Directeur USAID/MEM des descriptions des ordres d'exécution de tâches particulières à entreprendre dans les 6 mois suivant la réunion ainsi que les sous-budgets se rapportant à ces tâches. Le Comité Directeur sera composé du Directeur, du Directeur Adjoint, du Chef du SPD, des chefs de Divisions à la Direction de l'Energie ainsi que le Chef de la Division pour les Projets Techniques à l'AID/Rabat et du Chef de l'Equipe du Contractant. Des représentants des autres directions du MEM, des offices sous tutelle, d'autres ministères ou d'autres contractants résidents pourront assister à ces réunions avec l'approbation du Directeur de l'Energie.

En plus de l'examen de l'état d'avancement du Projet et des questions s'y rapportant, le Comité Directeur fournira l'occasion d'approuver ou de modifier les éléments mineurs du plan de travail que le contractant propose d'entreprendre.

La première réunion du Comité Directeur aura lieu 30 jours après la signature du présent Accord. Le Chef du SPD établira des

Committee meetings will be kept by the SPD Chief and distributed to all attendees including the contractor's Project Director in the U.S.

procès-verbaux des réunions du Comité Directeur et les distribuera à tous les participants y compris au Directeur de Projet du Contractant aux Etats-Unis.

C. PROCUREMENT OF GOODS AND SERVICES

C.1. AID Direct Training

Upon execution of this Project Agreement and satisfaction of the necessary conditions precedent, USAID and the MEM Energy Directorate will proceed with technical participant training in those areas where AID's Office of Energy has already negotiated training contracts.

C.2. AID Direct Technical Assistance

In addition to training provided directly by USAID, USAID will also fund services to assist Moroccan industries to conduct energy audits and to advise energy conservation measures. These services will be furnished by a U.S.-owned firm already under contract to AID's Office of Energy in Washington.

C.3. Technical Assistance and Training Contracts

All other technical assistance, all other training and all commodities will be provided under contracts between AID and U.S. companies. The contracts will be awarded following AID procurement regulations.

In addition to providing the technical assistance and training discussed above, contractors will

C. ACQUISITION DE BIENS ET SERVICES

C.1. Formation Directement Fournie par l'AID

Dès que le présent Accord de Projet aura été signé et que les Conditions Préalables nécessaires auront été remplies, l'USAID et la Direction de l'Energie du MEM entameront les procédures nécessaires pour la formation technique dans des domaines pour lesquels le Bureau de l'Energie, l'AID/Washington a déjà négocié des contrats de formation.

C.2. Assistance Technique Directement Fournie par l'AID

Outre la formation fournie directement par l'USAID, l'USAID financera également des services d'assistance technique pour aider les industriels marocains à mener des audits énergétiques et leur fournir des conseils en matière de mesures de conservation de l'énergie. Ces services seront fournis par une firme américaine déjà sous contrat avec le Bureau de l'Energie de l'AID/Washington.

C.3. Assistance Technique et Formation Fournies au Titre du Contrat

Tous les autres services d'assistance technique, de formation et d'achat de matériels seront fournis sous des contrats passés entre l'AID et des compagnies américaines. Les contrats seront octroyés conformément aux règlements de l'AID en matière d'acquisition de biens et services.

Outre la fourniture des services d'assistance technique et de formation mentionnés ci-dessus, les contractants procéderont à la

select/purchase/deliver commodities which will be purchased in the U.S. or Morocco.

D. MONITORING

The Project will be monitored by representatives of the USAID Technical Projects Office and those from MEM's Energy Directorate who will meet monthly to review Project progress with the contractor's of MEM's Energy Directorate Chief-of-Party. Technical and academic trainees directly funded by AID will be monitored by energy training contractors who will report to USAID and MEM via AID's Office of Energy.

The major monitoring device will be submission by the contractors of semi-annual reports describing progress in attaining goals or targets set by the annual work plan. Issues, proposed resolutions, and budget status will also be discussed.

E. PARTICIPANT TRAINING

E.1. English Language Proficiency

An ALIGU average score of 70 will be the minimum for participants receiving short-term technical training. However, higher scores may be required by specific training programs. Prior to placement at a U.S. university most long-term participants will be required to take the Test of English as a Foreign Language (TOEFL). If a U.S. university requires a TOEFL score, a participant may only proceed to that university after a satisfactory TOEFL score is achieved. Most U.S. universities require a minimum TOEFL of 500, and some require higher scores.

sélection, l'acquisition et la livraison des matériels qui seront achetés aux Etats-Unis ou au Maroc.

D. SUIVI DU PROJET

Le Projet sera suivi par des représentants du Bureau des Projets Techniques de l'USAID et par ceux de la Direction de l'Energie du MEM qui se réuniront chaque mois pour examiner l'état d'avancement du Projet avec le Chef d'Equipe du contractant. Les candidats à la formation technique et académique financés directement par l'AID seront suivis par les contractants en formation en matière d'énergie qui rendront compte de leurs progrès à l'USAID et au MEM par l'intermédiaire du Bureau de l'Energie de l'AID/Washington.

Le principal instrument qui servira à suivre le Projet sera constitué par les rapports sémestriels soumis par les contractants, qui exposeront les progrès réalisés en vue d'atteindre les buts et objectifs fixés dans le plan de travail annuel. Les problèmes, les solutions envisagées et la situation budgétaire y seront également examinés.

E. FORMATION DES PARTICIPANTS

E.1. Connaissances en Anglais

La moyenne des points de qualification à l'ALIGU sera de 70 au minimum pour les candidats à des programmes de formation technique de courte durée. Cependant un nombre plus élevé de points pourra être demandé pour certains programmes de formation spécifiques. Avant d'être admis dans une université américaine, la plupart des boursiers se destinant à des études de longue durée devront se présenter à l'épreuve dite TOEFL (Test of English as a Foreign Language). Si une université venait à exiger un score TOEFL, un boursier ne pourrait s'y présenter qu'après avoir obtenu le nombre de points satisfaisants au

E.2. Required Tests for Academic Training

The Graduate Record Examination (GRE), given four times a year in Rabat or the Graduate Management Admission Test (GMAT), given once a year only in Rabat may be required by certain universities. If the tests are given in time for admission to a U.S. university, these tests will be taken in Rabat; otherwise, USAID will fund invitational travel for participants to take these tests in neighboring countries unless the 1.A. contractor is already in residence in which case the T.A. contractor will handle the matter.

E.3. Training Regulations

The Parties of this Agreement and all training contractors will follow AID's Training Procedures and Regulations as outlined in AID Handbook 10 with several modifications for invitational travel to U.S. conferences, seminars, and workshops on energy planning and economics.

As discussed in Section I.C.4.2.2. of this Annex, about 33 participants will attend workshops, seminars, and conferences in the U.S. lasting about two weeks on the average. The dossier of each candidate proposed to participate in such proceedings will include a recent English language score of the candidate, a description of his administrative relationship to the Project, an abstract in English of

TOEFL. La plupart des universités américaines exigent un minimum de 500 points, mais certaines exigent un nombre de points plus élevé.

E.2. Tests requis pour la formation académique

Le GRE (Graduate Record Examination), qui a lieu quatre fois par an à Rabat, et le GMAT (Graduate Management Admission Test), qui a lieu une fois par an à Rabat, peuvent être exigés par certains universités. Si les examens ont lieu en temps opportun pour l'admission dans une université américaine, ils seront passés à Rabat; sinon l'USAID prendra en charge le déplacement du participant dans un pays voisin où ces tests auront lieu à moins que le contractant chargé de l'Assistance technique ne soit déjà en résidence au Maroc, auquel cas, ce dernier se chargerait de cette procédure.

E.3. Règlements de l'Administration de la Formation

Les Parties signataires du présent Accord ainsi que tous les contractants pour la formation respecteront les procédures et règlements de l'AID en matière de formation prévus par le Manuel No. 10 de l'AID avec quelques modifications en ce qui concerne les voyages sur invitation aux Etats-Unis pour assister à des conférences, séminaires et ateliers de travail en matière de planification et économie de l'énergie.

Comme mentionné à la Section I.C.4.2.2. de la présente Annexe, 33 participants environ assisteront à des ateliers de travail, séminaires et conférences aux Etats-Unis durant deux semaines en moyenne. Le dossier de chaque candidat proposé pour participer à de telles activités se composera d'un test de langue anglaise récent, une description de sa situation administrative par rapport au

paper he will deliver or specific role he will play at the conference, his immediate supervisor's approval letter, and if other than a SPD staff member, approval from the MEM project representative that MEM wishes to sponsor the attendee. Before departure for the conference, USAID and MEM must receive a typed English copy of the technical paper to be delivered by the participant, if he is to make such a presentation.

Projet, un extrait en anglais de la présentation qu'il fera ou une description du rôle spécifique qu'il jouera dans la conférence, une lettre d'approbation de son chef immédiat, et s'il s'agit d'un candidat qui n'appartient pas au personnel du SPD, l'approbation du représentant du Projet au MEM certifiant que le MEM souhaite parrainer ce candidat. Avant la départ à la conférence, l'USAID et le MEM devront recevoir un exemplaire dactylographié en anglais du document technique que le participant propose le cas échéant d'y présenter.

F. IMPLEMENTATION SCHEDULE

The five-year Energy Planning Assistance Project will be conducted pursuant to annual work plans approved by USAID/Morocco and MEM. These work plans developed by the technical assistance and training contractors in collaboration with the Energy Directorate will include a time-phased and budgeted plan to address the project activities mentioned in Article I. above. USAID/Morocco and MEM will provide an annual supplement to the work plan on those topics immediately their responsibility: selected short-term training, academic training, energy audit/industrial conservation services, and evaluations.

A Summary Project Implementation Schedule follows:

F. CALENDRIER DE REALISATION DU PROJET

Le Project d'Assistance Technique dans le Domaine de la Planification Energétique, d'une durée de cinq ans, sera dirigé conformément à des plans de travail annuels approuvés par l'USAID/Maroc et le MEM. Ces plans de travail élaborés par les contractants chargés de l'assistance technique et de la formation en collaboration avec la Direction de l'Energie, comprendront le calendrier des tâches et le budget y afférent correspondant aux activités du projet mentionnées à l'Article I ci-dessus. L'USAID/Maroc et le MEM fourniront un supplément annuel au plan de travail concernant les points placés immédiatement sous leur responsabilité : programmes sélectionnés de formation de courte durée, formation académique, services d'audit énergétique/conservation industrielle, et évaluations.

Ci-dessous un Résumé du Calendrier de Réalisation du Projet:

PROJECT 608-0180 SUMMARY IMPLEMENTATION CALENDAR

DATE	RESPONSIBLE PARTY	ACTION
8/84	MEM, MOF, AID	Sign ProAg
8/84	AID	Issues Request for Technical Proposals for energy planning
9/84	Steering Committee	First meets
9/84	MEM	Nominates first two staff members to future SPD
10/84	MEM	Submits documentation to meet conditions precedent to first disbursement under the Grant
11/84	MEM	Nominates Energy Conservationist member of SPD
10/84	AID and Contractor	Sign energy planning contract
11/84	Contractor's Chief-of-Party (Energy Economist/ Policy Analyst)	Arrives
Fall 84	MEM	Sponsors 1st Inter-ministerial colloquia
12/84	Planning Contractor	Issues first semi-annual progress report
1985		
1/85	U.S. Energy Efficiency and Conservation Specialist	Arrives
3/85	GOM/MEM	Establish SPD
3/85	MEM	Submits complete dossier for SPD Energy Economist to receive academic training
Spring 85	MEM	Sponsors 2nd Inter-ministerial colloquia
5/85	AID, MEM, Planning Contractor	Initiate information systems design

9/85	ONE advisor	Joins SPD
9/85	SPD Energy Economist	Departs for academic training
10/85	MEM	Nominates computer Programmer to SPD
10/85	AID, MEM, Planning Contractor	Agree on information systems design
1986		
1/86	MEM	Nominates Business/Finance Analyst to SPD
1/86	U.S. Computer Specialist	Arrives
1/86	MEM	Nominates Data Base Manager to SPD
1/86	CDM Advisor	Joins SPD
1/86	AID and MEM	Evaluate Project's Performance
3/86	ONAREP Advisor	Joins SPD
3/86	MEM	Submits complete dossiers for SPD Energy Technologist/ Conservationist to receive academic training
6/86	U.S. Data Base Manager	Arrives
6/86	MEM	Submits complete dossier for SPD Business/Finance Analyst to receive academic training
6/86	U.S. Energy Engineer	Arrives
9/86	SPD Energy Technologist/ Conservationist	Departs for academic training
10/86	Planning Advisors	Submit to MEM and AID formal assessment for information systems needed and options for commodity procurement
11/86	MEM	Submits documentation describing logistic support program for an energy planning network
12/86	Information Systems Contractor	Begins to procure/install planning network
12/86	SPD Business/Finance Analyst	Departs for academic training

1987		
1/87	U.S. Energy Efficiency and Conservation Specialist	Departs
6/87	U.S. Computer Specialist	Departs
9/87	SPD Energy Economist	Returns from academic training
9/87	U.S. Data Base Manager	Departs
1988		
9/88	AID and MEM	Evaluate Project's performance
9/88	SPD Energy Technologist/Conservationist	Returns from Academic Training
12/88	SPD Business/Finance Analyst	Returns from academic training
1989		
1/89	ONE Advisor	Departs SPD
3/89	CDM Advisor	Departs SPD
3/89	U.S. Energy Engineer	Departs
6/89	ONAREP Advisor	Departs SPD
6/89	Energy Planning Contractor	Issues twelfth and final semi-annual report
6/89	Energy Planning Chief-of-Party (Energy Economist/ Policy Analyst)	Departs
9/30		Project Assistance Completion Date.

PROJET 608-0180

RESUME DU CALENDRIER DE REALISATION

Date	Partie Responsable	Opération
8/84	MEM, MF, AID	Signature de l'Accord de Projet
8/84	AID	Emission de l'Appel d'Offres Techniques pour la planification énergétiqu
9/84	Comité Directeur	Première Réunion
9/84	MEM	Nomination des deux premiers membres du personnel du futur SPD
10/84	MEM	Soumission des documents satisfaisant aux conditions préalables au premier déboursement au titre du Don
11/84	MEM	Nomination du Spécialiste en Economie de l'Energie comme membre du SPD
10/84	AID et Contractant	Signature du contrat pour la Planification Energétique
11/84	Le Chef de l'Equipe (Economiste/Analyste en Politique Energétique) du Contractant	Arrive
Automne 84	MEM	Organisation du premier colloque interministériel
12/84	Contractant pour la Planification	Emission du premier rapport semestriel sur l'état d'avancement des activités
1985		
1/85	Spécialiste Américain en Economie de l'Energie	Arrive
3/85	GM/MEM	Création du SPD
3/85	MEM	Soumission d'un dossier complet pour la formation académique de l'Economiste en Energie du SPD

Printemps 85	MEM	Organisation du deuxième colloque interministériel
5/85	AID, MEM, Contractant en Planification	Démarrent le dessein du système informatique
9/85	Conseiller de l'ONE	Rejoint le SPD
9/85	Economiste en Energie du SPD	Départ pour formation académique
10/85	MEM	Nomination du Programmeur en informatique au SPD
10/85	AID et Contractant	S'accordent sur le dessein des systèmes informatiques
<u>1986</u>		
1/86	MEM	Nomination de l'Analyste en Gestion commerciale et financière au SPD
1/86	Programmeur américain en informatique	Arrive
1/86	MEM	Nomination du Gestionnaire de Base de Données au SPD
1/86	Conseiller CDM	Rejoint SPD
1/86	AID et MEM	Evaluation de l'état d'avancement du Projet
3/86	Conseiller ONAREP	Rejoint SPD
3/86	MEM	Soumission d'un dossier complet pour la formation académique du Spécialiste en Economie de l'Energie au SPD
6/86	Gestionnaire Américain de Base de Données	Arrive
6/86	MEM	Soumission d'un dossier complet pour la formation académique de l'Analyste en Gestion commerciale et financière
6/86	Ingénieur Américain en Energie	Arrive
9/86	Spécialiste en Economie de l'Energie	Départ pour formation académique

10/86	Conseillers en Planification	Soumission formelle au MEM et à l'AID d'une évaluation du système informatique nécessaire et d'options pour l'acquisition de l'équipement
11/86	MEM	Soumission de documents décrivant un programme de support logistique pour un réseau de planification énergétique
12/86	Contractant en système informatique	Commence l'acquisition/installation du réseau de planification
12/86	Analyste en Gestion commerciale et financière	Départ pour formation académique
1987		
1/87	Spécialiste Américain en Economie de l'Energie	Départ
6/87	Programmeur américain en informatique	Départ
9/87	Economiste en Energie du SPD	Retour de la formation académique
9/87	Gestionnaire Américain de de Base de Données	Départ
1988		
9/88	AID and MEM	Evaluation de l'état d'avancement du Projet
9/88	Spécialiste en Economie de de l'Energie au SPD	Retour de la formation académique
12/88	Analyste en Gestion commerciale et financière	Retour de la formation académique
1989		
1/89	Conseiller de l'ONE	Départ du SPD
3/89	Conseiller CDM	Départ du SPD
3/89	Ingénieur Américain en Energie	Départ du SPD
6/89	Conseiller de l'ONAREP	Départ du SPD
6/89	Contractant pour la Planification Energétique	Emission du douzième et dernier compte-rendu semestriel

6/89	Chef de l'équipe de la planification énergétique (Economiste/Analyste en Politique Energétique)	Départ
30/9/89		Date d'Achèvement de l'Assistance au Projet

ARTICLE IV: EVALUATION

The Energy Planning Assistance Project will undergo comprehensive evaluation twice: a mid-project evaluation held approximately 18 months after the resident contractor begins work in Morocco and a final evaluation to be scheduled approximately 12 months prior to the Project Assistance Completion Date. These evaluations will focus on progress in establishing a stable group of Moroccan professionals to manage the MEM's Energy Planning and Evaluation Service. The second key aspect of each evaluation will be a qualitative assessment of the economic advice being provided by the Service. A third point of inquiry will cover the technical assistance contractor's performance and the value of the training received. Each evaluation will provide recommendations to MEM, USAID/Morocco and the contractors on how to assure that Project purposes will be met before the Projection Assistance Completion Date.

In each case a multi-disciplinary French-speaking team including internationally experienced advisors will be selected to conduct the evaluation. The teams should include members of the following types:

1. Energy Policy and Pricing Advisor (Chief-of-Party) experienced in macro-economic computer applications (Ph.D. in Economics);

2. Public Utility Management Advisor experienced in financial operation and State regulation of

ARTICLE IV : EVALUATION

Le Projet d'Assistance Technique dans le Domaine de la Planification Energétique sera soumis à deux évaluations complètes. Une première évaluation aura lieu environ 18 mois après que le Contractant résident chargé de l'assistance technique aura commencé ses travaux au Maroc suivie d'une évaluation finale environ 12 mois avant la Date d'Achèvement de l'Assistance au Projet. Ces évaluations mettront l'accent principalement sur les progrès réalisés en vue d'établir un groupe stable de spécialistes marocains aptes à gérer le Service de Planification et de Documentation du MEM. Le second point clef de chaque évaluation consistera en un évaluation qualitative des capacités du SPD en matière de conseils économiques. Le troisième point qui sera étudié concerne les performances réalisées par le contractant chargé de l'assistance technique et la valeur de la formation reçue. Chaque évaluation fournira des recommandations au MEM, à l'USAID/Maroc, et au Contractant afin de s'assurer que les objectifs du Projet seront réalisés avant la Date d'Achèvement de l'Assistance au Projet.

Dans chaque cas une équipe francophone multidisciplinaire comprenant des conseillers disposant d'une expérience de niveau international sera sélectionnée pour mener ces évaluations. L'équipe devra comprendre des membres du type suivant

1. Un conseiller en matière de politique et de tarification énergétique (chef d'équipe), expérimenté en applications informatiques macro-économiques (doctorat en économie);

2. Un conseiller en gestion des offices semi-public expérimenté en opérations financières et

public-owned utilities and of private corporations in the energy sector (Law degree/Public Administration);

3. Energy Investment Advisor experienced in advising private and public clients on investments in energy generating/conserving opportunities (Finance/Management/Business degree).

A detailed scope of work will be prepared for each comprehensive evaluation at the appropriate time; however, the following illustrative topics will be addressed: 1) the caliber of contract advisors, 2) the appropriateness of computer hardware/software selected; 3) the appropriateness of the allocation of advisory time (and its relation to Project Paper/Project Agreement estimates); 4) quality of training being provided; 5) impact of policy dialogue initiated by colloquia, and 6) review of actual EPES work products provided to advise GOM decision-makers.

ARTICLE V: ILLUSTRATIVE FINANCIAL PLAN

The Illustrative Financial Plan and Tables 1, 2, and 3 of this Annex, set 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 Government's contribution to be less than the amount set forth under Section 3.2.

réglementaires des offices publics et des sociétés anonymes du secteur énergétique (diplômé en droit/administration publique);

3. Un conseiller en matière d'investissement dans l'énergie expérimenté en services-conseils aux clients des secteurs privés et publics en matière d'investissements dans la production/conservation de l'énergie (diplômé en finance/gestion/commerce).

Une description détaillée des tâches des évaluateurs sera préparée pour chaque évaluation en temps opportun; cependant, à titre indicatif, les sujets suivants seront traités : 1) le calibre des conseillers sous contra 2) le caractère approprié du matériel logiciel sélectionné; 3) le caractère approprié du temps consacré par le contratant par rapport aux estimations du Rapport de Projet et de cet Accord de Projet; 4) la qualité de la formation fournie au titre du Projet; 5) les effet du dialogue en matière de politiques énergétiques instauré par les colloques; 6) l'examen des documents techniques créés par le SPD fournis en tant que conseils aux responsables du G.M.

ARTICLE V : PLAN FINANCIER INDICATIF

Le Plan Financier Indicatif et les tableaux 1, 2 et 3 de la présente Annexe présentent les contributions prévues des Parties. Des modifications peuvent être apportées à ce Plan par accord écrit des représentants des parties identifiées à la Section 8.2. sans avenant officiel au présent accord, sous réserve que ces modifications n'entraînent pas 1) un dépassement de la contribution AID par rapport au montant spécifié à la Section 3.1. ou 2) une contribution du Gouvernement Marocain inférieure au montant spécifié à la Section 3.2.

TABLE 1 TO ANNEX 1

PROJECT AGREEMENT

SUMMARY OF AID CONTRIBUTION

($000)

PROJECT 608-0180
USAID/MEM

	Categories	Obligations prior to this Agreement	Funds Obligated by this Agreement	Funds Obligated to Date	Balance of Project to be obligated subject to availability of funds	Life of Project Funding
1.	Technical Assistance (Long-Term) Under Energy Planning Component	-	600	600	1,458	2,058
2.	Technical Assistance (Short-Term) Under Energy Planning Component	-	100	100	315	415
3.	Training Under Energy Planning Component	-	25	25	106	131
4.	Information Systems Needs Assessment Under Energy Planning Component	-	-	-	61	61
5.	Technical Assistance Under Information Systems Implementation Component	-	200	200	356	556
6.	Commodities Under Information Systems Implementation Component	-	30	30	50	80
7.	Energy Audits/Industrial Conservation Assistance Under AID/W Office of Energy Component	-	20	20	43	63
8.	Academic Training Under AID/W Office of Energy Component	-	50	50	99	149
9.	Short-Term Training Under AID/W Office of Energy Component	-	15	15	47	62
10.	Contingency Under USAID/Morocco Component	-	80	80	253	333
11.	Evaluations Under USAID/Morocco Component	-	-	-	75	75
12.	English Language Training Under USAID/Morocco Component	-	10	10	7	17
	T O T A L	-	1,130	1,130	2,870	4,000

a) 6% per annum inflation factored into estimates

AID obligations are for FY 84

TABLEAU 1 A L'ANNEXE 1

ACCORD DE PROJET

SOMMAIRE DE LA CONTRIBUTION DE L'AID

($000)

PROJET 608-0180
AID/MEM

	Catégories	Engagements antérieurs au présent Accord	Fonds engagés au titre du présent Accord	Fonds engagés à ce jour	Reliquat à engager au titre du projet sous réserve de la disponibilité des fonds	Financement pendant le Projet
1.	Assistance Technique (Longue Durée) dans le cadre de l'Elément "Planification Energétique"	-	600	600	1.458	2.058
2.	Assistance Technique (Courte Durée) dans le cadre de l'Elément "Planification Energétique"	-	100	100	315	415
3.	Formation dans le cadre de l'Elément "Planification Energétique"	-	25	25	106	131
4.	Evaluation des besoins pour le Système Informatique dans le cadre de l'Elément "Planification Energétique	-	-	-	61	61
5.	Assistance Technique dans le cadre de l'Elément "Installation du Système Informatique"	-	200	200	356	556
6.	Fournitures dans le cadre de l'Elément "Installation du Système Informatique"	-	30	30	50	80
7.	Assistance en Audit Energétique/Conservation Indust.par le biais du Bureau de l'Energie AID/W	-	20	20	43	63
8.	Formation Universitaire par le biais du Bureau de l'Energie AID/Washington	-	50	50	99	149
9.	Formation de Courte Durée par le biais du Bureau de l'Energie AID/Washington	-	15	15	47	62
10.	Imprévus sous l'Elément "USAID/Maroc"	-	80	80	253	333
11.	Evaluations sous l'Elément "USAID/Maroc"	-	-	-	75	75
12.	Formation en Langue Anglaise sous l'Elément "USAID/Maroc"	-	10	10	7	17
	T O T A L a)	-	1.130	1.130	2.870	4.000

a) Il a été tenu compte dans les estimatifs d'un taux d'inflation de 6% par an.

Les engagements de l'AID sont effectués en année fiscale 84.

TABLE 2 TO ANNEX 1

ESTIMATED EXPENDITURES BY U.S.A.I.D.

(U.S. Fiscal Year - (1 October through 30 September)

($000)

PROJECT 608-0180
USAID/MEM

Categories	1984	1985	1986	1987	1988	1989	TOTAL
1. Technical Assistance (Long-Term) Under Energy Planning Component	-	420	420	420	420	378	2,058
2. Technical Assistance (Short-Term) Under Energy Planning Component	-	90	90	90	90	55	415
3. Training Under Energy Planning Component	-	20	30	50	31	-	131
4. Information Systems Needs Assessment Under Energy Planning Component	-	30	31	-	-	-	61
5. Technical Assistance Under Information Systems Implementation Component	-	-	225	331	-	-	556
6. Commodities Under Information Systems Implementation Component	-	-	-	80	-	-	80
7. Energy Audits/Industrial Conservation Assistance Under AID/W Office of Energy Component	-	20	21	22	-	-	63
8. Academic Training Under AID/W Office of Energy Component	-	-	23	48	51	27	149
9. Short-Term Training Under AID/W Office of Energy Component	-	11	24	13	14	-	62
10. Contingency Under USAID/Morocco Component	-	75	75	75	75	33	333
11. Evaluations Under USAID/Morocco Component	-	-	35	-	40	-	75
12. English Language Training Under USAID/Morocco Component	2	4	4	4	3	-	17
TOTAL	2	670	978	1,133	724	493	4,000

6% per annum inflation factured into estimates

PROJET 608-0180
AID/MEM

TABLEAU 2 A L'ANNEXE 1

DEPENSES PREVUES PAR L'USAID

(Année fiscale américaine) - (1 Octobre au 30 Septembre de l'année)

($000)

Catégories	1984	1985	1986	1987	1988	1989	TOTAL
1. Assistance Technique (Longue Durée) dans le cadre de l'Elément "Planification Energétique"	-	420	420	420	420	378	2,058
2. Assistance Technique (Courte Durée) dans le cadre de l'Elément "Planification Energétique"	-	90	90	90	90	55	415
3. Formation dans le cadre de l'Elément "Planification Energétique"	-	20	30	50	31	-	131
4. Evaluation des besoins pour le Système Informatique dans le cadre de l'Elément "Planification Energétique	-	30	31	-	-	-	61
5. Assistance Technique dans le cadre de l'Elément "Installation du Système Informatique"	-	-	225	331	-	-	556
6. Fournitures dans le cadre de l'Elément "Installation du Système Informatique	-	-	-	80	-	-	80
7. Assistance en Audit Energétique/Conservation Indust. par le biais du Bureau de l'Energie AID/W	-	20	21	22	-	-	63
8. Formation Universitaire par le biais du Bureau de l'Energie AID/Washington	-	-	23	48	51	27	149
9. Formation de Courte Durée par le biais du Bureau de l'Energie AID/Washington	-	11	24	13	14	-	62
10. Imprévus sous l'Elément "USAID/Maroc"	-	75	75	75	75	33	333
11. Evaluations sous l'Elément "USAID/Maroc"	-	-	35	-	40	-	75
12. Formation en Langue Anglaise sous l'Elément "USAID/Maroc"	2	4	4	4	3	-	17
T O T A L	2	670	978	1.133	724	493	4.000

Il a été tenu compte dans les estimatifs d'un taux de 6% par an

TABLE 3 TO ANNEX 1

ESTIMATED EXPENDITURES BY THE MOROCCAN GOVERNMENT

(Moroccan Fiscal Year - (1st January - 31 December)

(DH 000)

PROJECT 608-0180
USAID/MEM

CATEGORIES	1984	1985	1986	1987	1988	1989	TOTAL
I. INVESTMENT BUDGET							
Furniture and Equipments for SPD and Secretaries' Offices	218	8	16	8	16	0	266
Sub-Total I	(218)	(8)	(16)	(8)	(16)	(0)	(266)
II. Operating Budget							
Expenses related to:							
1. Professional and administrative SPD personnel	156	467	812	904	1,014	772	4,125
2. SPD operating: rent, communications, commodities	335	367	390	413	437	265	2,207
3. Operating, maintenance and repairs of information system	47	88	94	226	518	476	1,549
4. Semi-annual inter-ministerial energy plannification and conservation colloquia	86	343	359	382	406	312	1,888
5. Factory counterparts to carry out inspections/audits on energy conservation	62	242	265	203	0	0	772
6. Academic training a)	0	23	140	250	156	23	592
7. Short-term training b)	8	16	32	16	8	0	80
8. International travels for participants and trainees c)	47	164	188	188	86	8	681
Sub-Total II	(741)	(1,710)	(2,280)	(2,582)	(2,725)	(1,856)	(11,894)
TOTAL OF MOROCCAN CONTRIBUTION d)	959	1,718	2,296	2,590	2,741	1,856	12,160

a) For SPD professionals

b) Summer internships for 3 Master candidates and Moroccan contribution to seminars/conferences

c) 3 return tickets Morocco/United States for 3 Master Candidates; 10 return tickets Morocco/United States for short-term training candidates; 33 return tickets for Moroccan workshop and seminar participants.

d) Exchange rate: 8.60 DH/$

TABLEAU 3 A L'ANNEXE 1

PROJET 608-0180
AID/MEM

ENGAGEMENTS PREVUS PAR L'ETAT MAROCAIN

(Année Fiscale Marocaine) - (1er janvier - 31 décembre)
(En Milliers de DH)

CATEGORIES	1984	1985	1986	1987	1988	1989	TOTAL
I. BUDGET D'EQUIPEMENT							
Meubles et Equipements pour les bureaux du SPD et Secrét.	218	8	16	8	16	0	266
Sous-Total I.	(218)	(8)	(16)	(8)	(16)	(0)	(266)
II. BUDGET DE FONCTIONNEMENT							
Frais Relatifs :							
1. Au personnel professionnel et administratif du SPD	156	467	812	904	1.014	772	4.125
2. Aux opérations du SPD : location, communications, fournitures	335	367	390	413	437	265	2.207
3. A l'exploitation, l'entretien et aux réparations d'un réseau informatique	47	88	94	226	618	476	1.549
4. Aux colloques sémestriels interministeriels sur la Planification/Economie Energétiques	86	343	359	382	406	312	1.888
5. Aux homologues dans les usines pour mener des inspections/vérifications pour économiser de l'énergie	62	242	265	203	0	0	772
6. A la formation universitaire[a)]	0	23	140	250	156	23	592
7. A la formation de courte durée[b)]	8	16	32	16	8	0	80

8. Aux voyages internationaux pour les boursiers et les stagiaires c)	47	164	188	188	86	8	681
Sous-Total II.	(741)	(1.710)	(2.280)	(2.582)	(2.725)	(1.856)	(11.894)
T O T A L de la Contribution Marocaine d)	959	1.718	2.296	2.590	2.741	1.856	12.160

a) Réservé aux professionnels du Service de Planification et de Documentation du MEM

b) Les stages d'été des trois candidats à la maîtrise et la participation marocaine aux séminaires/conférences

c) Trois vols A/R Maroc/Etats-Unis pour les trois candidats au Master; dix vols A/R Maroc/Etats-Unis pour les candidats à la formation de courte durée; 33 vols aller-retour pour les participants marocains aux ateliers de travail et séminaires.

d) Taux de Change : 8.60 DH/$

ANNEX M

Results of Mission Review Committee Meeting to Examine Draft Project Paper 608-0180

UNITED STATES GOVERNMENT

memorandum

DATE:
June 12, 1984

REPLY TO ATTN OF:
William Stacy Rhodes, Program Officer WSR

SUBJECT:
Issues Paper: Energy Planning Assistance Project (Annex I), 608-0180

TO:
USAID/Morocco Mission Review Committee

A Mission Review of the subject Project's Pro Ag with Annex I will be held at 3:00 pm Tuesday, June 12, 1984, in the Mission Director's office. The Project Paper had previously been reviewed on May 14, 1984. At that time, the MRC decided that there were several outstanding issues to be resolved and addressed in the final version of the PP and that in-depth discussions on these issues and negotiations with the GOM should be undertaken immediately. Subject to the satisfactory resolution of these issues, the PP would be approved. Subsequent to that meeting, a representative of ST/EY reviewed the PP and expressed several other concerns, similar to those raised in the MRC, which needed to to be addressed in the project design. As a result, it was decided that a further review of the Project would be necessary subsequent to further discussion of all issues with the GOM.

The purpose of the proposed project is to strengthen the analytical and advisory capabilities of the Energy Directorate and its yet to be established Service de Planification et Documentation (SPD) within the GOM's Ministry of Energy and Mines.

The U.S. contribution over the life-of-project is $4.0 million (vs. $4.443 million in the original budget submission) in Development Assistance grant (SDA Account) to the GOM to be allocated for: 1) the primary technical assistance and training contract in energy planning ($2,599,000); 2) a secondary technical assistance contract in information systems ($697,000), which includes commodities at $80,000; 3) training contracts managed by AID/W's Office of Energy ($274,000); and 4) USAID/Morocco managed training and evaluations ($430,000). The GOM's contribution of $1.599 million (vs. $1.255 million in the original project submission) is 28% of total project cost and consists principally of salaries for counterparts, expenses related to training, and other support costs. Further, the contribution by the private sector of $196,000 (or 3% of the total life-of-project cost in the original budget submission) has been eliminated from the project altogether and from the calculation for the Moroccan contribution since the private sector was viewed by the MRC as a beneficiary of, rather than a contributor to, the project. The inputs described above are expected to result in MEM's capability to carry out the eight activities explained in detail in Article I, Part B, of Annex I.

OPTIONAL FORM NO. 10
(REV. 1-80)
GSA FPMR (41 CFR) 101-11.6
5010-114

☆ GPO : 1982 O - 361-526 (7465)

Mission and S&T/EY representatives have discussed with officials at the Ministry of Energy and Mines the several outstanding issues and have taken steps to treat them adequately in the Pro Ag and Annex I currently under MRC review.

1. GOM Contribution: The GOM contribution in the original budget was $1.255 million (or 21% of total project cost of $5.9 million) along with an additional $196,000 (or 3% of LOP costs) attributed to the private sector. The MRC felt that 1) GOM's contribution should be at least 25% and 2) the nature of the private sector's role was such that its financial component should not be considered as part of the Moroccan contribution.

Resolution: The GOM contribution is now increased to the desired level by absorbing 1) round-trip air fares, 2) operating expenses of the planning network, and 3) salaries of a counterpart programmer and data base manager working with the resident advisors. Increases in GOM contribution are to be phased in over a five-year, three-month LOP period rather than the originally planned period of four years to accommodate GOM's need for smaller annual outlays. On the other hand, the decrease in the U.S. contribution is possible by reductions in total number of person months in the primary contract and in profit margins in both contracts, downward reassessment of commodity procurement, decrease in number of energy audits to be conducted, shifting responsibility of operation, maintenance, and repair to the GOM, and by a reduction in long-term training. This decrease in U.S. contribution will not have a negative impact as long as the GOM sustains its corresponding contributions as scheduled.

Salaries of private sector personnel have been eliminated from the calculation of the Moroccan contribution and are not to be figured into total project cost.

Further, in the original project submission, the GOM was to provide two vehicles to the contract advisor team. The MRC questioned whether it would be wise to rely on this contribution given the existing austerity measures. The revised budget has eliminated vehicle procurement by the GOM. The contract personnel will have to rely on POVs and/or on the Ministry's motor pool.

2. Status of the SPD: In January 1984 and for the May 14, 1984 MRC review, USAID had been led to believe that the Service de Planification et Documentation (the Energy Planning and Evaluation Service, EPES, in the original submission) had already been legally established. Subsequent discussions between MEM and OTP indicated that in fact only a draft plan for a planning and information service had been submitted by the Energy Directorate to the Minister. It is clear that the establishment of such a service is required for this project to be effectively implemented. Therefore, Conditions Precedent and/or covenants must be written into the Pro Ag to assure that the GOM follows through with the establishment of the SPD on a timely basis. Are the CPs outlined in Sections 4.1. (b) and 4.2. (a) and (c) of the Pro Ag adequate for this purpose?

Resolution: While the Minister approves of the plan to establish such a service, he is waiting for other sections of MEM to propose other potential reorganization plans so that he may submit all changes in a single package to the Prime Minister who is authorized to make such modifications in ministerial structure. MEM's senior staff have expressed confidence to USAID that once the full package

is tendered, Prime Ministerial approval would be forthcoming in 2-3 months. It is expected that the process for the formal establishment of the SPD would be completed by March 31, 1985, the date by which the CP in Section 4.2.(c) is to be met.

3. SPD Staffing and Related Concerns: A major issue at the previous MRC meeting was the staffing of the new service (SPD) and the means by which adequately qualified personnel could be attracted and recruited given the current hiring limitations and modest GOM salary levels. Does MEM have positions? Are counterparts in place? Are there adequate incentives for counterparts to stay within SPD? What CPs and/or covenants would assure that GOM do the maximum possible in this regard?

Resolution: Since SPD is not yet a part of the formal MEM structure, SPD positions per se do not exist. Three MEM staff currently working on the predecessor project are expected to continue under the new project. Of these three, Mr. Amenou, an Economist, is likely to be nominated SPD Chief. Other staff will be made available by recruiting among MEM schools such as ENIM and other schools in Morocco. Starting about 9/84 unencumbered positions within MEM will be filled to support the Project while awaiting submission/approval of the Minister's reorganization plans.

SPD salaries alone will not provide adequate incentive to attract/keep qualified staff. Rather, the prestige and professional experience of counseling the Minister on policy matters, combined with better-than-average logistic support and work conditions as well as the opportunity for training in the U.S, will provide the incentive. These "pluses" are thought by the MEM and the current TA contractor to be the best alternatives given current constraints on salary increases.

Counterparts in addition to the three mentioned above will be hired gradually in accordance with the schedule attached to Bricker Memo of June 6, 1984.

To underscore AID's commitment to the personnel issue, appropriate CPs -- Sections 4.1.(c) and 4.2.(b) and 4.2.(d) -- and a Covenant -- Section 5.3 -- are recommended by OTP to be included in the Pro Ag. OTP has discussed and negotiated these with the MEM.

Section 4.1.(c): Gives AID approval rights over the professional credentials of SPD staff. (A covenant provides continuing protection in this regard.)

Section 4.2.(b): Requires MEM to appoint at least two professional counterparts for the resident contractors.

Section 4.2.(c): Requires MEM to designate two staff members as counterparts to the "Information Systems" TA contract team.

4. Issue: How will MEM operating agencies field qualified staff? ONE (electricity), CDM (coal), and ONAREP (petroleum) are to provide 39 consecutive pm each of staff time to SPD. What CPs and/or covenants would be appropriate in this regard?

Resolution: MEM senior management indicates that because these agencies are subject to MEM oversight, they will provide staff merely by an exchange of letters - somewhat like PASAs. Their arrival is projected a year from now; thus, there's time to choose good staff.

In fact, MEM will impress upon the operating agencies that it will be very much in their interest to appoint highly qualified staff in order to best represent the interests of their home agency regarding MEM budgetary planning. Pursuant to Section 4.1.(c) and the covenant mentioned above (Section 5.3), AID has approval rights over the operating agency staff and can control the end result somewhat by relying on the additional covenant in Section 5.2.

Lack of GOM compliance with this covenant will, of course, substantially disrupt the Project and conflict with AID's contractual commitments. At the same time, the arrival of the Energy Engineer approximately one and one-half years after Project start-up does give AID some flexibility to be sure that the Project is viable before provding further long-term TA. The delay of the Energy Engineer is predicated on GOM's inability to provide a counterpart at project start-up. This delay is technically tolerable, however, because the training and professional experience of the Energy Conservationist who will arrive immediately, as well as utilization of short-term TA, can fill the gap in the interim.

5. Information Systems Network - Several concerns have been raised in this area.

- - Pamela Baldwin (ST/EY) believes a full-time resident Computer Engineer, as originally planned, was not necessary in view of the refinement that the Envest software package has undergone since the July 1983 evaluation.

- - Pam also expressed her preference to see Envest, the current analytical program, used as it is for 12 - 15 months so that the new contractor could gain a full working appreciation of Envest's capabilities before replacing or modifying it prematurely.

- - Continuity and compatibility of the analytical approach developed under the predecessor projects with activities under the new project.

Resolution: Original project design had included a Computer Engineer. USAID believes that the Envest software package is adequate for GOM's current needs and should be continued at least for the short-term to permit a smooth transition in starting up the new project. In place of the Computer Engineer, USAID recommended the Energy Conservationist slot as being more responsive to current developments in GOM's decreased investment budget. MEM is in agreement and believes that sudden reductions in their capital budget dictated that conservation (cost-savings) projects should have priority over straight investment projects.

The technical assistance contract for the possible redesign and expansion of the information system will come into effect only after the primary contractor is in a position to make defensible arguments for modifications and to collaborate with the secondary contractor in making appropriate changes.

MEM has voiced concern over how to assure continuity in hardware/software. Consensus was that USAID and GOM could control the situation by 1) dividing economic planning efforts (primary contractor) from information management chores (secondary contractor) and 2) phasing in the computer network over a more lengthy period, thereby compelling the primary energy planning contractor to become fully familiar with Envest.

Concern was raised in the previous MRC over the transferability of Envest software to other languages and hardware. The July 1983 evaluation points out that the UCSD p-code for developing Envest can "be transferred to many other hardware machines without changing the source code. Therefore, a wide variety of hardware choices are possible for future Envest development."

Several other concerns arise with respect to the "information systems" component of the project, including the availability of GOM personnel as counterparts, taxes on local procurement, and the coordination and management of the computer network system. Therefore, OTP recommends the inclusion of the CPs outlined in Section 4.2.(d) and (e) of the Pro Ag. These have been developed in cooperation with MEM to provide further assurances of Project success.

6. Financial Plan: Should the expenditure plan contained in Annex 1 be consistent with the obligation plan? From a management perspective, are the project specific inputs in the tables of sufficient detail to provide sound project oversight? Should the GOM contribution in the tables be expressed in dirhams or dollars?

7. Other Concerns Raised in Issues Paper of May 14, 1984:

- - Local Contracting: The Issues Paper recommended that the U.S. contractor procure locally data base management and computer programming services. The new contracting strategy to have a secondary 8-a contract for the information systems will probably preclude this possibility. Instead, GOM will have to provide counterparts at the start of the secondary contract.

- - Competition vs. 8-a Set Aside: An 8-a Set Aside for the sole contract was being considered at the time of the last MRC review. NE Bureau's review of 8-a capability statements does not give the RCO firm assurance that any of the 8-a firms could perform the entire range of the TA services previously envisioned. In order to remain responsive to the Gray Amendment, however, those portions of TA where such assurances are evident have been broken out into a secondary contract for an 8-a Set Aside.

- - Training at Ph.D. Level: Not yet resolved.

- - Workshops/Seminars: Decreased by 40% and GOM will pick up air fares.