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**EVALUATION OF THE USAID
CONVENTIONAL ENERGY TECHNICAL
ASSISTANCE (CETA) PROJECT**

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International Development and Energy Associates (IDEA), Inc.
1111 14th Street, N.W., Suite 802
Washington, D.C. 20005
and
K & M Engineers and Consultants
370 L'Enfant Promenade, S.W., Suite 701
Washington, D.C. 20024-2518

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I. EXECUTIVE SUMMARY:

This report documents an evaluation of the Conventional Energy Technical Assistance Project (CETA) of the United States Agency for International Development's (USAID) Office of Energy, Bureau for Science and Technology (S&T/EY) covering those project activities carried out since 1985. The tone of the evaluation was set by CETA's goal of providing developing nations world wide with broad technical assistance in the development of their conventional energy resources in order to reduce dependence on energy imports. Since September 1985, this project has involved the regional bureaus, country missions and Bechtel, National, Inc. as the contractor.

The evaluation was undertaken by reviewing project outputs, by surveying overseas USAID missions in which project activities have taken place for their judgement of the quality and relevance of project activities, and by interviewing USAID officials associated with the management and implementation of the project. This was done in order to assess the performance of the contractor and overall project accomplishments, needs and priorities.

The evaluation team concluded that CETA project implementation by the contractor and the Office of Energy has overall been of high technical and managerial quality. The project has by and large remained within the parameters laid forth in the project statement of work. However, the overall success of this program has been inhibited by two major factors. These are:

- 1) Difficulty in overcoming lack of interest and understanding of CETA on the part of the missions, other AID bureaus, and host countries.
- 2) Changing economic realities in the world energy situation, such as reduced oil prices, have shifted the priorities of developing countries and thereby require a reorientation of conventional energy projects that this program was designed to promote.

In order to correct these factors, the Office of Energy has initiated an aggressive promotional effort in close coordination between the contractor and the Office of Energy staff. The promotional effort emphasizes the utilization of CETA in the following areas:

- Private power development
- Advanced, innovative and environmentally sound

technologies and power systems related to conventional resources

- Institutional development
- Indigenous fuel resource assessment

The CETA Project is without a doubt providing a valuable, relevant, and desired service. In spite of the glut in world oil markets, the continuing interest in conventional energy resources in the developing world is a positive indication that CETA's services are needed and should be provided. By responding to the lessons learned in the last two and one half years, the project can increase its value and effectiveness and be an effective tool in helping to resolve the power shortage crisis in developing countries.

II. INTRODUCTION

The Conventional Energy Technical Assistance (CETA) project of the Office of Energy, Bureau for Science and Technology, (S&T/EY), United States Agency for International Development (USAID) is approximately half-way through its current contract period. International Development and Energy Associates (IDEA), Inc. and K & M Engineering and Consulting (K&M) were contracted by S&T/EY to carry out a mid-term evaluation of the second phase of the CETA Project. This report details the results of this evaluation based on the efforts of IDEA and K&M.

A. Project Background

The main purpose of CETA is to provide developing countries world-wide, through the Office of Energy and host country Mission sponsorship, a range of technical assistance including identification, evaluation, and the development of conventional energy resources, and the utilization of these resources to reduce dependence on oil imports. The types of assistance to be provided were to conduct resource assessments and surveys, to facilitate access to the technologies, services, and investment needed to exploit indigenous resources, and to provide in-country technical training required to manage the development of these resources. The term, conventional energy, included all fossil fuel energy forms, as well as geothermal energy resources.

CETA was started in June 1980 with a schedule for completion by September 1990. The level of funding was \$20.45 million: \$15.2 million SDA and \$5.25 million in ESF. During the first five years of the project, separate field activities were carried out by means of an Indefinite Quantity Contract (IQC) and open bid contracts. Towards the end of this five year period, the Office of Energy decided that a single contractor should be selected to provide on-going technical support and to conduct the majority of field activities. Ideally, this contractor would be selected from U.S. based engineering firms with extensive experience in all aspects of conventional energy development and utilization.

In September 1985, a contract was awarded to Bechtel, National Inc. in an open competition. Bechtel was selected to provide technical support and to conduct field activities on a cost reimbursement plus fixed fee basis, for the remaining five years of the project. Separate field activities under the

contract were developed and carried out on a "task order" basis which required a contract amendment. This contract is at present, approximately one half completed. A total of \$10,986,665.00 has been obligated to this contract since 1980. As of June 1988, \$3,243,592.00 has been invoiced during Phase II.

Under the terms of their contract, Bechtel National, Inc., is to provide technical assistance on request to S&T/EY. In the past, these requests have originated as requests for technical assistance from a host country, the Missions, the Regional Bureaus or have been the result of S&T/EY's own initiatives. Such requests to the contractor have normally taken the form of technical service orders (TSO) to support separate field activities related to the CETA scope of work. Additionally, the contractor provides on-going technical support to S&T/EY on a day-to-day basis, including the provision of the state-of-the-art technology information, program/project planning assistance, dissemination of technical or project promotional information, and responses to technical requests from the public. The contractor has also conducted seminars and workshops related to conventional energy at S&T/EY's request. Full details of the contractors activities in this regard are provided in Appendix D of this report.

B. Objectives and Scope of the Evaluation

The objective of this evaluation was to review the conceptual and implementation aspects of CETA since 1985 in order to provide recommendations for improving the effectiveness of USAID assistance in the development and utilization of indigenous conventional energy resources worldwide.

Specifically, this required an examination of the performance of activities carried out under the project and to formulate recommendations for directing future CETA program planning based on the changing energy situations and priorities of developing countries, and the goals and priorities of the Office of Energy and USAID Missions.

In order to arrive at an objective determination of the implementation of the project and to provide targeted recommendations for future program planning, the evaluation team defined the scope of the evaluation according to the following areas of project implementation and questions for investigation.

1. Description of Evaluation Criteria for the Contractor:

Has the contractor performed adequately in terms of responding to the needs and requests of the Office of Energy and the Missions of host countries for which work was performed under individual TSOs? Contractor performance is measured by the quality of work and capabilities in:

- a. **Project Management and Staffing:**
Has the contractor staffed the project with individuals of the highest caliber and in quantity necessary for the efficient and cost effective management of the project?
- b. **Responsiveness to USAID Requests:**
Has the contractor responded adequately and professionally to requests for technical assistance and on matters related to the technical service orders from the Missions, Regional Bureaus and the Office of Energy?
- c. **Task Order Management and Staffing:**
Has the contractor staffed the technical service orders with individuals of the highest caliber and in quantity necessary for the efficient and cost effective management of the task order?
- d. **Technical Performance:**
What is the overall and specific quality of the work and activities undertaken under the TSOs? Has the contractor, as represented by the individuals assigned to individual task orders and technical requests, delivered high quality work and met the objectives and requirements of the statements of work of separate TSOs and of unscheduled requests?
- e. **Task Order Follow Up:**
To what extent has the contractor performed follow up activities for each TSO that may have been directly called for, or that may have been instrumental in moving projects forward?
- f. **Project Promotion and Information Dissemination:**
Has the contractor taken the initiative and been aggressive in promoting the program and its services available under it to the Missions and host countries, and what actions have they taken in this regard?

2. Overall Project Accomplishments, Needs and Priorities:

How has the project been managed, implemented and promoted on the part of the Office of Energy? Have the activities undertaken met and continue to meet the original project objectives? How do any changes in the priorities and objectives of the Office of Energy affect the performance of the implementation of the project as determined by an assessment of the following:

- a. S&T/EY Project Management and Administration:
Has the project been managed effectively by the Office of Energy? Has management of the project followed defined program plans and has the contractor received clear direction for the general performance of the terms of its contract?
- b. Appropriateness of Activities to Project Scope:
Have the activities undertaken during the course of the contract met the definition of those that are stipulated in the contractor's Statement of Work?
- c. Project and Task Order Impacts on Developing Country Energy Situations:
How has the project and associated task orders impacted the energy situations in developing countries, specifically the extent to which dependence on imported fossil fuels have been lessened, institutional capacity to manage indigenous resources has been developed, and the development of indigenous resources in an economically, technically and environmentally sound manner has been promoted?
- d. Regional Bureau and Mission Energy Needs and Priorities:
How has the project met the energy needs and priorities of the Missions and Regional Bureaus, and to what extent have these factors affected the project? To what extent have these factors been taken into account in project operational planning?
- e. Project Promotion and Information Dissemination:
How and to what extent has the project been promoted on the part of the Office of Energy?

C. Evaluation Methodology and Procedures

The evaluations team established a basic methodology to meet the above objectives within the scope defined. This entailed the following steps:

- o The activities undertaken since 1985 when Bechtel National was awarded the contract were thoroughly reviewed.
- o A survey of the attitudes of the Missions and regional Bureaus regarding how the project was implemented and their responses to specific subprojects or task orders was conducted. Additionally in the survey, the Missions were requested to prioritize the energy related technical assistance activities relevant to the host country and the missions programming goals. Interviews with personnel of the regional Bureaus were conducted to provide an understanding of the Bureaus' energy activities and plans and their response to CETA.
- o A review of the project management and administration procedures and project promotional activities of the Office of Energy and the contractor was carried out.
- o Lastly, utilizing the results of the above steps, a concrete set of recommendations are proposed by which the Office of Energy and Bechtel could strengthen and enhance the potential of this project to meet their stated goals and those of the Office.

The procedure undertaken to implement this methodology is listed below in the chronological order they were undertaken:

1. Review project related reports and supporting documents;
2. Conduct personal interviews of USAID staff and personnel in Washington DC, including those in S&T/EY and the regional Bureaus who have had direct involvement with project or field activities;
3. Conduct personal interviews with the management and support staff of the Contractor, Bechtel National;
4. Review the Contractor's project support documentation and accounting/invoicing procedures;

5. Survey USAID Missions in which field activities took place via telexed or couriered questionnaires and follow up with telephone conversations;
6. Conduct follow-up interviews as needed;
7. Prepare and submit draft report for S&T/EY review and comment;
8. USAID/S&T/EY reviews and comments;
9. Revision of the draft and final draft preparations for review and comment;
10. Final report to S&T/EY.

The survey questionnaire (see Appendix A) was oriented towards assessing the physical management of the project by the contractor, the quality of work performed under the individual TSOs, the impact that the individual TSOs had on the energy situations in the host countries, the likely hood of follow-up activities taking place, and determining the priorities of the Missions and host countries in terms of conventional energy assistance they may require.

III. PROJECT IMPLEMENTATION AND STATUS

A. Staffing and Management

1. USAID - Office of Energy

S&T/EY and the contractor share responsibility for the management and direction of CETA. Overall project direction and supervision lies with the Office of Energy. Ultimate project supervision rests with the Office Director, who delegates the direct management and administration of the project to the Project Officer. Thus the Project Officer directly supervises the activities of the contractor. In addition, another member of Office of Energy staff is also assigned to handle the day-to-day project administration and to act as liaison between the contractor and USAID. This person reviews the contractor's invoices.

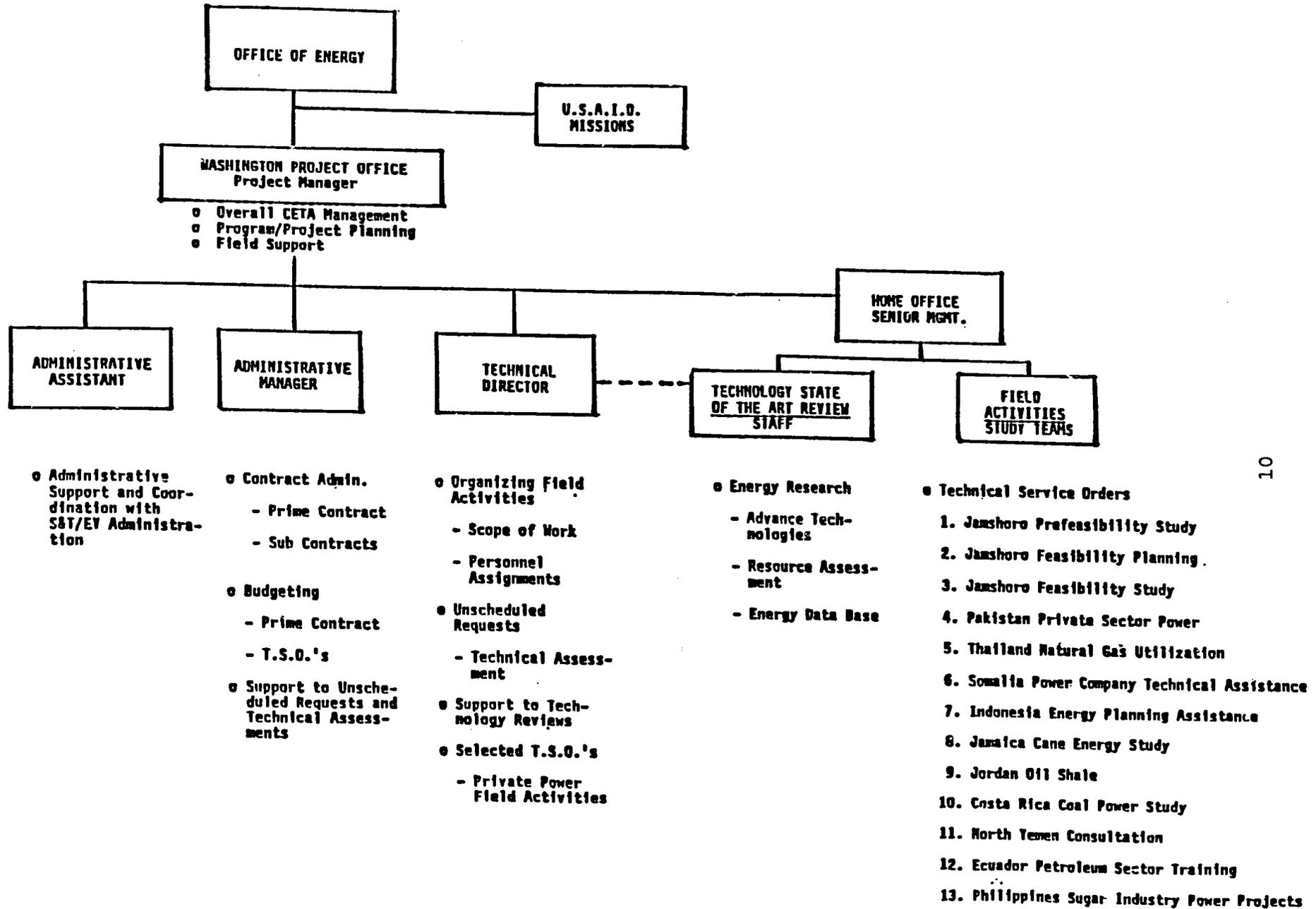
All of the Office of Energy staff currently managing the CETA have joined the project since 1985 when the current contract for Phase II was negotiated. The Office Director has been assigned for the last one and half years. The Project Officer has lengthiest involvement, having started approximately six months after the contract was awarded. The Project Officer's assistant joined S&T/EY approximately one year ago.

2. Bechtel, National

The contractor maintains a Washington Project Office (WPO) as project headquarters supported by Bechtel National's home office in San Francisco. The WPO coordinates all field activities under task order and all on-going technical support activities. The San Francisco office provides technical support in a variety of energy related disciplines on a case-by-case basis under the direction of the WPO.

The WPO is staffed by a Project Manager, an Administrative Manager, a Technical Director and an Administrative Assistant. The Project Manager is responsible for overall contract management and liaison with S&T/EY. The Administrative Manager provides project back-stopping and budget support. The Technical Director is principally responsible for addressing technical issues and queries originating from S&T/EY and the Missions. The Administrative Assistant performs general office administrative and secretarial support functions.

Figure III - 1



B. Management, Administration and Implementation Procedures

All CETA activities are carried out within the management structure described in Figure III-1. The S&T/EY and the Bechtel personnel assigned to CETA have established close working relationships. As a result, the day-to-day administration and management of the CETA project is both open and informal.

The project is often the recipient of unscheduled technical requests from the Office of Energy. Due to the unforeseen nature of these requests, they are handled on a case-by-case basis by the contractor. The required information or services are supplied by the contractor according to the depth and scope of the request.

Field activities under the contract take place on a "technical service order" (TSO) basis. These are developed and implemented through a multi-stage process. This process is initiated by a request from a host country, an AID Mission, or the Office of Energy. All major field activities require an amendment to the original contract. This requires a lengthy proposal, review and authorization process before the TSO is fulfilled.

The contractor invoices the Office of Energy on a monthly basis. Invoices cover costs incurred for ongoing field activities, home office functions and general technical support and back-stopping activities. These invoices are generated and prepared by the Finance Department of Bechtel Eastern Power Company at their headquarters in Gaithersburg, Maryland. Bechtel Power provides this service to the CETA contractor, Bechtel National, since it has the facilities in close proximity to the CETA/Bechtel home office in Rosslyn.

Accounting records are also being kept in Gaithersburg, Maryland. All direct costs are tracked through Bechtel's standard cost and accounting computer program (CIFUS). By using this program charges originating outside of the Gaithersburg office are identified and entered in relatively short time. Those charges are made against internally established job and activity codes. G&A charges for all activities, including field/TSO projects, are grouped into separate cost items.

C. Operational Planning

CETA project operational planning occurs on three levels: strategic, or long range CETA program planning; annual planning; and activity specific planning. The long range, "strategic" planning, maintains the direction of CETA and establishes overall priorities for the program. The long range plan has been affected by both changes in Office of Energy personnel assigned to the project and external factors such as changes in the international energy situation and the resulting change in energy priorities by the Missions and host countries. Annual project plans are developed for each fiscal year as guidelines for project activities. These plans are developed on the basis of opportunities that have been identified or requests for assistance received. The planning for specific activities is open ended in order to provide the flexibility necessary to meet the specific needs of each field activity and the unscheduled requests that originate from the Office of Energy and the Missions. The development of formal strategic plans for CETA can be characterized as being evolutionary but flexible enough to adjust to changing internal and external factors.

D. Project Promotion

The promotion of CETA to the Missions and Regional Bureaus has been undertaken by both the staff of S&T/EY and of Bechtel. These efforts have met with varying degrees of success. Budgetary limitations and constraints have limited the ability of the Project Officer to travel to the Missions to oversee the implementation of field activities, develop and plan for follow up activities, and to promote general awareness of the CETA program. Often, promotional and information dissemination activities for CETA are carried out as a part of a total "package" of assistance that S&T/EY is able to offer the Missions in order to make the most use of Mission visits by any S&T/EY staff.

Bechtel project personnel have often been called upon to travel and represent the Office of Energy in the course of field activities and in response to specific Mission requests.

Bechtel has been responsible for producing both general and country specific project promotional materials on behalf of S&T/EY. Recently, a CETA brochure was produced which details the services covered by CETA.

Bechtel and the Office of Energy have produced a long-range promotional plan

to react to the needs of the energy sectors of developing countries. This plan will more actively promote CETA to the Missions and host country governments through a six point strategy for the use of its available services to LDC governments, AID Missions, and other U.S. government agencies such as the DOE and DOC. These points are to prioritize services provided, collect information on potential opportunities for project assistance, identify key players in these opportunities, develop and utilize of promotional tools and materials, create a guiding promotional strategy, and finally, implement an action plan.

Three broad areas have been selected for emphasis in which CETA technical services will be offered: Private Power Development, Indigenous Fuel Development, and Advanced Energy Technology Applications. These areas are to be CETA's future energy priority themes.

After identification of potential opportunities for CETA assistance, the project will direct general and specific promotional materials and information to key decision makers. High priority will be placed on making country visits in order to capitalize on specific opportunities in a timely and direct manner.

An Action Plan for the promotional effort has been developed around three multi-country trips to the ASEAN region, to countries in the LAC region and to the Middle East. The ASEAN trip will be coordinated with the Private Power Workshop to be held in Indonesia with visits to the Philippines, Thailand, India and Pakistan planned. The LAC trip will be coordinated with the Electric Utility Workshop to be held in Costa Rica, with additional trips to the Dominican Republic, Jamaica and Guatemala. When the Jordan Oil Shale Assessment Project is completed and meetings with Jordanian officials have taken place to define follow up actions for the project, CETA personnel will also travel to Morocco and Egypt to investigate opportunities for CETA assistance.

E. Activities To Date

All project technical activities fall within two broad categories; day-to-day project activities, and project field activities. The former includes the fulfillment of unscheduled requests and the provision of technical support to the Office of Energy that Bechtel performs in response to specific requests from S&T/EY. The latter encompasses project field activities, or Technical

Service Orders (TSOs). Field activities are separate TSOs that have been developed by the project, and that have required individual contract amendments to implement. TSOs are basically subprojects within the contract.

Examples of technical support project activities include the provision of reviews of state-of-the-art technologies, input into private power issue papers, conducting of seminars and workshops on conventional energy issues and technologies, and the development of scopes of work for possible CETA field activities. The scope of these requests and Bechtel's responses range from simple to complex. Appendix D of this report provides full details of the activities the contractor's WPO has undertaken in the course of its contract.

Another important role filled by the Washington Project Office is proving continuity in personnel, field contacts and corporate memory, and serving to distill and record the complete field experience. This is important to S&T/EY since the field activity teams are normally composed of highly specialized personnel whose participation usually ends with completion of an activity.

Thirteen field activities have been initiated, and eleven have been completed. Follow up on these activities continues and additional actions to be taken are in various stages of development. The titles and status of these activities are indicated in Figure III-2. The nature of the field activities has ranged from very detailed and extensive projects, such as the succession of Jamshoro studies, to concise, short term consultant missions, such as the assessment of natural gas for transport fuel in Thailand. Figure III-2 also provides a relative scale as to the level of effort of these projects based on their individual budgets. Appendix C of this report provides an outline of the TSOs.

F. Budget Status

The Bechtel, National contract has a total obligation cap of \$10,986,665.00, with a completion date of September 30, 1990. Figure III-2 indicates the status of the contract in terms of budget obligations to the major cost items and the amounts invoiced based on information provided by Bechtel's project headquarters.

Figure III-2
 CETA (Bechtel Contract) Budget Status
 By Major Cost Items

As of June 12, 1988

Major Cost Items	USAID TSO No	Obligated Amount	Invoiced to Date	Amount Unspent	% Of Total Invoiced To Date	% Of Total Field Activities
Washington Project Office, G&A and Support	NA	\$1,800,000	\$1,588,833	\$211,167	44.88%	NA
- - - Field Activity TSOs- - -						
Jamshoro Prefeasibility Study	1	\$174,996	\$166,654	\$8,342	4.71%	8.54%
Jamshoro Feasibility Planning	7	\$18,658	\$16,627	\$2,031	0.47%	0.85%
Jamshoro Feasibility Study	5	\$991,400	\$991,400	\$0	28.01%	50.81%
Pakistan Private Sector Power	11	\$94,038	\$92,488	\$1,550	2.61%	4.74%
Thailand Natural Gas Utilization	2	\$67,044	\$63,866	\$3,178	1.80%	3.27%
Somalia Power Company Tech. Asst.	3	\$74,119	\$74,112	\$7	2.09%	3.80%
Indonesia En. Planning Assistance	4	\$121,975	\$121,773	\$202	3.44%	6.24%
Jamaica Cane Energy Study	6	\$91,737	\$91,608	\$129	2.59%	4.70%
Jordan Oil Shale	8	\$258,978	\$153,993	\$104,985	4.35%	7.89%
Costa Rica Coal Power Study	9	\$86,346	\$85,510	\$836	2.42%	4.38%
North Yemen Consultation	10	\$8,604	\$8,102	\$502	0.23%	0.42%
Ecuador Petrol. Sector Training	12	\$85,000	\$85,000	\$0	2.40%	4.36%
Philippines Sugar Indust. Power	Pending	\$74,968	\$0	\$74,968	0.00%	0.00%
Total		\$3,947,863	\$3,539,964	\$407,899	100.00%	100.00%
Sub Total For Field Activities			\$1,951,131			
Total Contract Obligation		\$10,986,665				
Amount Unspent		\$7,446,701				

As of June 12, 1988, a total of \$3,947,863.00 had been obligated to the contract of which \$3,539,964.00 had been invoiced. Of the invoiced amount, \$1,588,832.32, or 45%, had been expensed by Bechtel's WPO and San Francisco office, and for G&A and support costs. All G&A costs associated with each TSO/contract amendment for field activities are broken out and put into this expense item.

The remainder of the invoiced charges of \$1,951,131.20, or 55% of the total allocations to date, are attributed to the TSO/contract amendments or field projects. The largest single TSO budget allocation was for the Jamshoro Feasibility study of \$991,400.00, or 51% of the total amount spent for field activities. Adding the amounts spent for the two previous studies associated with the Jamshoro project; \$166,653.71 (Prefeasibility Study) and \$16,626.67

(Feasibility Planning), a total of \$1,174,680.40 was spent on the Jamshoro "project", or 60% of the total amount spent to date on field activities. An additional \$92,487.85 has been invoiced for the Pakistan Private Sector Power and Distribution project. Therefore, a total of \$1,267,168.00 has been expensed for projects in Pakistan, or 65% of the share of the budget spent on field projects.

The next largest budget allocation has been for the Jordan Oil Shale Project, of which \$153,992.60 had been spent as of June 12, 1988, followed by the Indonesia Energy Planning Assistance project with \$121,772.74. The remaining 7 field projects have all been under \$100,000.00 each.

Mission buy-ins, or budgetary contributions to these projects, has amounted to some \$ 1.5 million

IV. EVALUATION FINDINGS

The findings of this evaluation are described from the interviews conducted and from the questionnaire responses provided by the Energy Officers in the Missions where field activities were performed. Thus, the discussion below reflects the evaluation team's judgement on the implementation of the project. On the part of the contractor and the personnel of the Office of Energy, the conceptual issues involved set the direction of the project and its success in developing indigenous energy resources of the developing countries.

A. PERFORMANCE OF THE CONTRACTOR

This analysis on the performance of the contractor is based on the following:

- Interviews with AID personnel at the Office of Energy and at the Regional Bureaus.
- Questionnaires sent out to the AID Field Missions for which specific work orders were performed. In some cases those questionnaires were supplemented by telephone calls to applicable mission personnel.
- Reviews by the evaluation team of the material produced under the task orders.

The results of the analysis and some of the key issues and findings are as follows:

1. Project Management and Staffing

The evaluation team's interviews with staff of the office of energy and the regional bureaus indicated some concern about the long term implications of maintaining the current Washington office contractor staff, in view of the relatively low level of field activities. Although this staff is intended for managing and supporting the field activities, it is also engaged in providing support to the office of energy in many other activities which are part of the contractor's obligations such as program planning and promotion, and technology reviews. In addition, the contractor is engaged in several other support activities to the Office of Energy which are not covered by

specific task orders. These activities consisted of presentations or participation in technical conferences, guest lectures at learning institutions on energy related topics, preparation of case studies and briefing papers, and a proposal for utilizing municipal power waste for power generation. Furthermore, Washington office personnel participate directly in performing field activities where appropriate. Examples of this participation include Jamaica cane energy, Jordan shale oil, Costa Rica coal, Pakistan private power, and Philippines cane energy.

Thus, although field activities have decreased, the contractor's staff has remained active by supporting other office of energy activities. However, this is a short term solution and the long term solution must be an aggressive promotional effort to restore field activities to past levels which would, in turn, justify the original intent of having a Washington office staff to effectively coordinate and support those field activities.

Both the contractor and the office of energy staff are aware of this problem and are currently addressing the need for an aggressive promotional effort for the program.

2. Responsiveness to AID Requests

In general, those interviewed or who responded to the questionnaires indicated that the contractor has been responsive in meeting AID requests, particularly at the task specific level (i.e. once a work order has been identified). The contractor has consistently mobilized the necessary resources to execute the work within the specified schedule and budget constraints. Some negative comments on contractor responsiveness while executing work orders were received from the Jamaica mission regarding some specific cost information that was held back from the Cane to Energy Project which was considered proprietary by the contractor. However, it should be pointed out that the information in question was prepared under a separate scope of work funded by a "cost sharing" arrangement between the contractor and TDP which gave the contractor proprietary rights to it. Therefore, that information was not part of the scope of work funded by AID. Also, there were few negative comments on the responsiveness of the contractor from the Thailand mission. Apparently, the complaints were based on the timing of the visit by the contractor's team (it came during the middle of a holiday).

Based upon review of available documentation, there is strong evidence that the contractor has been responsive to addressing unscheduled requests for technical support from the Office of Energy on a day to day basis. This responsiveness was confirmed by the staff personnel who were interviewed.

Regarding the contractor's responsiveness to long term program objectives, some concerns were expressed by the staff of the Office of Energy regarding the relative lack of flexibility by the contractor in supporting variations to the objectives and applications of the program. However, it appears that this situation is being resolved and that both the staff of the Office of Energy and the contractor are currently working actively in identifying and developing future strategies and applications for the program.

In summary, contractor's responsiveness to AID requests does not appear to be a major issue in this contract.

3. Task Order Management and Staffing

The performance by the contractor has generally been good in this area. The contractor has stayed under budget allocations on all contract amendments except of the Jamshoro feasibility study and Ecuador Petroleum sector training. In those two cases, adequate justifications (i.e. increases in scope and changes in schedule) have been submitted by the contractor and recognized by the applicable Mission.

4. Technical Performance - Quality of Services

The technical performance and the quality of the services consistently received high marks from all AID parties that were interviewed (Office of Energy staff, the Missions, Regional Bureaus). These were further confirmed by the reviews made by the evaluating team of the project outputs. A summary of the ratings given by the various missions which were contacted is shown in Table IV-1.

TABLE IV-1

SUMMARY OF RESPONSES FROM MISSIONS
REGARDING CONTRACTOR PERFORMANCE

	<u>Jamaica</u>	<u>Pakistan</u>	<u>Somalia</u>	<u>Costa Rica</u>	<u>Thailand</u>	<u>Jordan</u>
A - Technical Expertise	4	4	5	4	2	5
B - Management and Administration						
1 - Mechanisms and Procedures USAID	N/A	4	5	4	2	3
2 - Meeting Deadlines and Schedules	3	5	5	4	2	5
C - Quality of Documentation	3	5	5	4	2	5
D - Responsiveness to Mission Requests	2	3	5	N/A	1	2
E - Quality of Staff/Consultants Provided	4	4	5	N/A	2	4
F - Quality and Appropriateness of Conclusions and Recommendations Made	4	4	4	5	1	N/A
G - Promotion of CETA Program Objectives	N/A	4	N/A	3	1	N/A

Scale: 1 = poor
2 = acceptable
3 = good
4 = excellent
5 = outstanding

N/A = Not applicable or no rating given

In summary, the major issues which were identified regarding contractor's performance were:

1. Utilization of the contractor's resources to formulate and implement an effective promotional plan for the program.
2. Control of the activities of the contractor in his Washington field office, including staff size.

5. Task Order Project Follow-Up

In general, there has been very little direct follow-up implementation work resulting from the task orders. It appears that in most cases this lack of follow-up was the result of the nature of the projects which were identified or in factors beyond the control of the contractor. Also, many of these projects had relatively short range objectives. This situation is being corrected through a current emphasis on projects which support long range programs and thus have greater potential for growth. Nevertheless, it should be noted that there is still a high potential for follow-up implementation for the following specific projects:

- Jamaica Cane to Energy:

Implementation of a cogeneration power plant utilizing cane derived biofuels.

- Jamshoro Power Plant Project in Pakistan:

Implementation of an oil fired power station.

- Oil Shale Power Project in Jordan:

Implementation of a power station utilizing indigenous oil shale fuel.

- Costa Rica Coal Power Project:

Implementation of a mine-mouth power plant.

Subsequent actions on the above are largely dependent on the resolution of "external" factors such as government policy, and an increase in the price of oil. Both the Cane to Energy and Jamshoro Power Plant feasibility studies demonstrated that the projects are feasible and can be implemented at some future time. In the case of the Oil Shale Project, the feasibility study is still underway. The Costa Rica Coal Power Project will require additional feasibility study work in the future before its feasibility can be established.

As such, the work performed under the work orders has been a factor in additional follow up work not directly related to the implementation of the specific projects which were studied. In the case of Pakistan, for example, the findings from the detailed study of the pipeline to transport fuel oil from Karachi port to the site, which was part of the Jamshoro feasibility study, were used as an input in the design of a similar pipeline to pump crude oil from oil fields near Jamshoro to a refinery in Karachi. The results of the power plant feasibility study demonstrated that the project was technically and financially feasible. This action contributed to a private sector initiative to build a nearly identical power plant. The government of Pakistan has already issued a letter of intent to the sponsors of the private project. In the case of the Jamaica Cane Energy Project, the results of the study have resulted in an increased interest in the utilization of cane derived bio-fuels for the generation of electricity. Other similar studies are either currently underway or will be undertaken in the near future for similar applications in other countries (i.e. Dominican Republic, Thailand, the Philippines and Swaziland).

Furthermore, as a result of the cane energy study the Office of Energy has embarked on a development effort for a prototype collector of cane field trash (discarded leaves and stalks) which once completed, will enhance the attractiveness of future similar projects. Finally, other studies such as the Somalia Electric System Rehabilitation Assessment are being used by the government and the World Bank as their basic document for outlining and implementing the ongoing technical assistance program in energy and power generating sectors in Somalia.

6. Project Promotion and Information Dissemination

This area was identified as a key issue which requires considerable effort on the part of all the parties involved. The current lack of significant field activities is indicative of the need for greater emphasis in this area. An underlying problem to this issue is the need to define specific objectives which will be attractive to the missions and will encourage their utilization of the services provided under the program. One problem seems to be a general lack of knowledge and interest in energy programs in many of the missions. Therefore, the first step in defining a strategy and effective promotion program for CETA would be to define the market. Once that is accomplished, the needs of that market and the program to promote the services which will

satisfy those needs can be defined. In general, from the results of the interviews and questionnaires, it seems that there is a very good potential for utilization of CETA in:

- Private power development
- Institutional development
- Indigenous fuel resource assessment

Those needs coincide with the recommendations for AID support identified in the Report to Congress on the Power Shortage Crisis in Developing Countries. Thus, CETA could still play a significant role in supporting overall AID policy and objectives.

This potential, as previously mentioned, can be achieved through the preparation and implementation of a well coordinated promotional program which addresses the existing needs. Such a program is currently underway under close cooperation between the contractor and the Office of Energy staff.

Another issue regarding future promotion of CETAP is the extent of utilization of contractor's personnel for such an effort as opposed to the agency's own personnel resources. There are many differing positions on this matter. For example, it was pointed out by some of those interviewed that the contractor is perceived by the missions as a promoter of his own interests rather than the program's objectives; therefore, it was stated that the actual promotion of the program should be undertaken by agency personnel in order to obtain full effectiveness. On the other hand, such an approach could negate the utilization of the valuable assets which the contractor has such as technical know-how, country marketing intelligence, networking capability, etc. Therefore, the key seems to be a solution which involves participation in the promotional effort by both the Office of Energy and the contractor. This solution should include adequate budgeting for both parties.

There is a high degree of sensitivity to this issue on the part of both the contractor and the Office of Energy staff and, as a result, an integrated approach is being undertaken. Future budget planning by the Office of Energy will take into account the need for active participation by their staff in program promotion.

IV. B. Overall Project Accomplishments, Needs and Priorities

The success of the project in meeting its goals and objectives on a technical level is largely determined from the outcome of the field activities, by the quality of the work accomplished and the actual implementation of any activities or projects for which the field activity laid the ground work. These issues have been discussed above as they have related to Bechtel's performance of its contract. The following section is a discussion of the larger issues involved in the team's attempt to qualify the success of CETA in meeting its overall objectives and of CETA's relative value and importance given the Office of Energy's and host country AID Mission's emerging priorities and foci for energy assistance and projects.

1. S&T/EY Project Management and Administration

On a day-to-day, technical level, the Office of Energy's management and administration of CETA has been carried out satisfactorily. The organizational structure and chain of command is basically sound, providing for adequate project controls, oversight and review.

The evaluation team observed that long range, strategic project programming have evolved due to both internal and external factors. Relevant internal factors were changes in the Office's programming goals and priorities, as well as in staff. Externally, the need to react to rapid changes in the international energy situation has also had an affect on the project. Thus, overall project planning has been necessarily broad and flexible to adapt to these changes.

2. Appropriateness of Activities to Project Scope

The field activities undertaken have for the most part met the definition of the types of activities that were established in the terms and scope of the contract, with some amount of flexibility shown for the types of assistance requested on the part of the Missions and host countries. Resource assessments have taken place (Costa Rica, Jamaica, Thailand), training of host country personnel in aspects of conventional energy resource and project management were carried out (Ecuador), and technical feasibility studies were completed for the utilization of indigenous energy resources (Pakistan, Costa Rica, Jordan and Jamaica).

3. Project and Task Order Impacts on Developing Country Energy Situations

The current phase of the CETA project and resulting contract was envisioned as a means by which to tap into the technical expertise of a major U.S. energy engineering firm in a relatively quick and efficient manner and therefore reduce the level of effort on the part of the Office of Energy to identify and select contractors to perform specific task orders within the agenda of the Office and in response to the international energy situation. Many of the projects that have been undertaken since 1985 were "in the works" or had been identified as possibilities or were reactions to requests for technical assistance prior to issuance of the contract. By the time the projects were completed, the international energy situation had changed a great deal and affected the relevance for many of the types of technical assistance activities defined for CETA. Mission priorities have also changed with the result that many host country Missions are placing less emphasis on energy projects in their portfolios, and few are interested in pursuing additional conventional energy projects.

These facts are reflected in the responses on the part of the Missions to the questions 2 and 3 in the questionnaire (see Appendices A and B) related to project results and to the response on the part of the Mission and host country institutions to the TSO projects. Figure IV-2, below, summarizes the results of the Missions' rating of the results of the TSO projects and their relative impacts on the host country energy situations (Question 2) in terms of:

- A. Assisting the host country in efforts to reduce dependence on imported fuels.

- B. Encouraging development of indigenous conventional energy resources by contributing to a better understanding of:(please. rate each).
1. The physical resource base, and/or engineering requirements for further exploitation of indigenous energy resources,
 2. Economic/financial impacts of energy resource development,
 3. Potential environmental impacts of resource development and environmental viability of resource development.
- C. Identification of needed inputs and actions for effective follow on.
- D. Training/manpower and institutional issues (pricing reform, regulatory practices, improved planning etc.)
- E. Relative importance in terms of the Mission's overall objectives and priorities for energy activities in Costa Rica.

Figure IV-2
Missions' Rating of Project Results and Impacts
Question 2

Mission	A	B-1	B-2	B-3	C	D	E
Costa Rica	2	5	3	3	4	NA	3
Ecuador	1	1	1	1	2	2	2
Indonesia	NA	NA	NA	NA	NA	2	4
Jamaica	2	2	2	2	4	NA	3
Jordan	5	3	5	2	5	4	4
Pakistan	5	4	4	5	4	4	4
Somalia	NA	NA	NA	NA	NA	4	4
Thailand	1	2	2	NA	2	2	2

(Scale 1 = no impact, 2 = useful, 3 = significant,
4 = very significant, 5 = critical; NA = Not Applicable)

In response to the request to rate the project in terms of its impact on assisting the host country in efforts to reduce dependence on imported fuels (question 2-A), two Missions felt that there was little impact, two thought that the project was useful and two others that the impact was critical. Two Missions, Indonesia and Somalia, indicated that the question was not applicable to the context of the project, since theirs were institutional development projects, and this is perhaps the reason why Ecuador indicated that there was no impact. Costa Rica and Jamaica felt that the projects were useful, but did not give a higher score since the projects have not been implemented. Jordan and Pakistan felt the project to be critical perhaps because the projects have the real potential to reduce energy imports or have at least contributed to the implementation of projects that will.

Somalia and Indonesia felt that questions 2. B-1,-2 and -3 were not applicable to the context of their respective projects, most likely due to the nature of the TSO. Ecuador similarly indicated that there was no impact. Jamaica and Thailand felt that the project was useful in all three areas (except a N/A for B-3 from Thailand since this was outside the scope of work for the TSO); The other Missions gave varying levels of response to segments of the question; in most cases that the impact was significant or greater.

In response to question 2-C; what impact did the project have in terms of identifying needed inputs and actions for effective project follow on?, Somalia and Indonesia felt the question to be not applicable, while Ecuador and Thailand felt it was useful and the other Missions felt it was very significant (Costa Rica, Jamaica, Pakistan) or critical (Jordan).

Most Missions felt the project was useful in terms of its impact on training/manpower and institutional issues; Pakistan felt it was very significant and Somalia indicated that it had a critical impact. Costa Rica and Jamaica felt the question was not applicable.

As to the relative importance of the project in terms of the Mission's overall objectives and priorities for energy activities, half the respondents said it was very critical (Indonesia, Jordan, Pakistan, Somalia), Costa Rica and Jamaica felt it was significant, and Ecuador

and Thailand felt it was useful.

Section 3 of the survey attempted to determine the "success" of the project in terms of Mission and/or Host Government response to the project based on the responses to six questions. Most Missions felt that the project met the Mission's/host country institution's objectives as defined in the TSO statement of work.

When asked whether the Mission of host country institution has/had implemented any of the recommendations that resulted from the project, Indonesia and Somalia said yes, Ecuador, Jamaica and Thailand said no, and Costa Rica, Jordan and Pakistan indicated that implementation is dependent upon external factors impinging on the project. Ecuador explained that the host country institution's staffing changes caused a discontinuity and changing of priorities was the primary reason for non-action. The Jamaica Energy Officer qualified his response by stating that issues related to project financing were unresolved, thus placing the project on hold. Thailand gave no explanation for their answer, but this can be explained from the fact that the basic conclusion of the final report was that use of natural gas for transport fuel in Thailand was not feasible for economic reasons. In Costa Rica, the conclusion of the coal resource study is necessary for the coal plant to be considered. In Jordan, low oil prices are suppressing interest in investment in new capital projects related to oil shale utilization in the country, and in Pakistan, the issue of project financing has not been resolved. The answers provided to this question defined the responses to questions 3.D, E and F.

The Missions were also asked whether the results of the TSO would result in further requests for technical assistance under CETA. Only Pakistan and Costa Rica indicated they would, if for the former, the financing issues could be resolved, and for the later, possibly when the coal resource study is completed. The basic reason given for the other Missions saying no was that the Missions were ending or phasing out energy programs from their portfolios.

Based on these responses, and the qualifications and explanations provided, the overall assessment is that although the some of the TSO's undertaken have had an only an indirect impact on developing country energy situations or specific follow-up activities have been postponed, others have had a direct impact by laying the groundwork for other

projects within the host country or in another country. For example, the Jamshoro studies provided critical information for the design of an oil pipeline to carry crude-oil from the oil fields near Jamshoro to the refinery in Karachi and the Somalia project has resulted in World Bank financial support to the ENEE the Somalian energy sector.

4. Regional Bureau and Mission Energy Needs and Priorities

As stated above, the majority of the CETA TSOs implemented to date were conceived and designed in response to the international energy situation of relatively high oil prices and USAID's mandate to assist developing countries to reduce their dependence on foreign sources of energy. The success of the TSO's in meeting this objective has been qualified above. Perhaps the most important issue at this point in time is the relevance of CETA to the emerging needs and priorities of the Regional Bureaus and Missions for which the Office of Energy is to supply advice and technical assistance.

The evaluation team asked the Missions to indicate the relative priority of conventional energy activities to the Mission within its project portfolio. Pakistan, with its strong energy program of four separate energy projects, placed these activities as high priority. Costa Rica stated that a cane to energy project is possible, but a definite time frame was not available, and felt that this project was of medium priority for the Mission. In Indonesia, the Puspipstek project is the only on-going energy project in the Mission's portfolio, and that it was possible that further assistance may be requested through CETA, but that this was a low priority for the Mission. All the other Missions surveyed stated that, since they were either phasing out their energy programs or had no plans for new ones, that CETA, and energy activities in general, had in effect no or very low priority for them.

However, most of the Missions did prioritize the types of technical assistance related to energy that they felt was relevant to the Mission according to the following subject areas:

- A. Prefeasibility/Feasibility Project Studies
- B. Project/Program Design
- C. Resource Assessments (eg: coal, oil, gas reserves)
- D. Training:
 - 1. Technical/Engineering
 - 2. Management and Administration
 - 3. Planning/Programming
- E. Institutional Development
- F. Policy/Pricing Reform
- G. Private Power Development
- H. Environmental Protection

Figure 3 below provides the results by Mission.

Figure IV-3
Types Of Energy Assistance
Activities/Areas of Interest and Priority For
Missions Surveyed

Areas and Corresponding Response

Mission	A	B	C	D	E	F	G	H
Costa Rica	1		3	4	7	5	2	6
Ecuador	NA							
Indonesia				3		2	1	4
Jamaica	NA							
Jordan			3	1			2	
Pakistan	4	5	3	8	7	2	1	6
Somalia	NA							
Thailand		3	4			1	2	5

(Scale relative to Missions priorities of interest:
1 = highest interest level ... 8 is lowest)

Although no single issue was selected as of primary importance among all Missions, five felt that Private Power Development and Policy/Pricing Reform were of the greatest interest.

5. Project Promotion and Information Dissemination

The Office of Energy's efforts to promote CETA among the Missions and Regional Bureaus has been, and most likely will continue to be in the future, constrained by several major factors. The first is that of the Office's budgetary and staff time limitations which restrict the number and length of personal visits to the Missions crucial for determination of specific Mission needs, priorities and opportunities for technical assistance under CETA. When an Office staff member does make a visit to an overseas Mission, they must necessarily discuss a wide range of issues with the Mission staff including the projects of their fellow staff members. This may have the effect of

diluting the impact of the visit when sufficient time may not be given to fully discuss the details of particular projects and of follow-up actions that should be taken on completed TSOs.

In light of the above, the Office has in some cases allocated promotional activities to the Contractor. Promotional activities on the part of the contractor has had both advantages and disadvantages. They are advantageous since the Contractor has greater flexibility for travel within its budget (once approved) and for staff time (if directed to do so). However, they may have been disadvantageous also, because the Contractor's staff person may be viewed as a spokes-person for Bechtel, rather than for the Office of Energy.

Perhaps the most important factor limiting the promotion of CETA is that many of the Missions view energy activities, especially those defined under CETA, as low priority for them. Thus the Office has a difficult time promoting a program in which the "customer" is generally disinterested in the product. This is not true across the board for all Missions. Some Missions do have an interest in CETA activities, especially in the area of private power development.

V. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The results of our evaluation lead to the general conclusion that the project has met its objectives: to provide developing countries world-wide, through the Office of Energy and host country Mission sponsorship, a range of technical assistance including:

- o The identification and evaluation of indigenous conventional energy resources.
- o The development of conventional energy resources.
- o To promote utilization of these resources to reduce dependence on oil imports.
- o To conduct resource assessments and surveys of conventional energy resources.
- o To facilitate access to the technologies, services, and investment needed to exploit indigenous resources.
- o To provide in-country technical training required to manage the development of these resources.

We have also concluded that contractor performance and Energy Office management have been competent and that the objectives of the project have been well served.

We have noted that the output of field activities undertaken under CETA has been affected by the changing international energy environment which has been marked by a regime of lower world market prices for oil and other energy resources. Lower oil costs have resulted in changing investment priorities at the project level throughout the world. In the case of developing countries, however, many of the original objectives established for the CETA project remain valid, particularly in the context of increasing debt burdens and fiscal constraints. The development of indigenous energy resources, energy efficiency and the search for applicable new energy technologies continues to be high on the national

agenda in many countries.

We conclude, therefore, that the CETA project should be continued. In the remaining parts of this section we identify our conclusions with respect to performance and project accomplishments and needs upon which our recommendations are based.

1. Contractor Performance

The evaluation team concludes that the Contractor's performance has been of a generally high technical and managerial quality. Individual technical service orders have been staffed by very qualified individuals, and have been implemented in a cost effective manner. The contractor has been responsive to requests for technical assistance from the Office of Energy, Regional Bureaus and Missions. The outputs of activities undertaken under specific TSOs have been well received, and have been consistent with issued statements of work.

2. Project Management

The project has been managed effectively by the Office of Energy according to defined program plans, and the contractor has been provided with the necessary guidance for effective implementation of project objectives.

The Office of Energy has considered the energy needs and priorities of the Missions and host countries in developing its project program plans and has responded to these needs effectively.

3. Field Activities

The activities undertaken during the course of the contract have met the definition of those that are stipulated in the contractor's Statement of Work with a degree of flexibility to allow for the specific needs of the host country and related Mission to promote the development of indigenous energy resources.

The project and associated technical service orders have had a positive impact on the energy situations in developing countries to the extent that the studies have provided relevant and necessary information for making informed choices on indigenous energy development in an economically, technically and environmentally sound manner. Specific TSOs in this regard

include the Jamshoro feasibility studies, the Jamaica cane energy project, the Thailand natural gas study and the Jordan oil shale project.

While field activities undertaken to date have been useful, and fall within the original objectives of the project, the evaluation team has also been noted that in the most recent period the relative importance of these activities has declined in terms of project expenditures. In our view, this reflects reassessment of national priorities and of Mission assistance plans as countries respond to new fiscal realities and to changes in international energy markets. It is also our view that this situation is temporary.

Since the implementation of new field activities consistent with project objectives is key to the continued success of the project, the Energy Office has directed its attention to developing an effective effort to promote project activities in selected areas. As mentioned, these areas are: activities in support of private power generation, applications of advanced and environmentally sound energy technologies, assistance for energy resource assessments and efforts to provide countries with practical assistance in institutional development and strengthening.

Thus, we conclude that the CETA program is of significant value in supporting AID policies and objectives.

B. RECOMMENDATIONS

The CETA project, while carried out in a technically competent manner, and well managed by the Office of Energy, requires a certain amount of "mid course adjustment" in order to maximize the benefits of the program. As has been pointed out elsewhere in this report, the immediate objective of the CETA program should be to increase its utilization by the missions. Specifically, we recommend the following:

- Implementation of an effective promotional effort.
- Redirection of project priorities to better reflect emerging global energy trends and AID energy initiatives.
- Reduction of the awkward nature of the TSO Process.

1. Project Promotion

The promotion of CETA to clients has met with varying degrees of success. Financial resource limitations have restricted the ability of the Project Officer to travel to foster awareness of the CETA project, as well as to superintend field activities. Accordingly, promotion activities for CETA have often been shouldered by Bechtel project personnel while in the field. Mission personnel are apt to perceive these promotional efforts as more on the behalf of the contractor than the Washington Project Office.

In order to accomplish a revitalization of the program, an aggressive promotional effort is required, particularly with the AID missions. Both the contractor and the staff of the Office of Energy are keenly aware of the need for such a promotional effort and are actively involved in a coordinated effort to develop and implement it.

The importance of field activities to CETA success requires that a very specific effort be made to develop more field activities. The development of more field activities requires that more effort should be placed on project promotion, especially by the Office of Energy staff. The promotion of greater awareness of CETA throughout the AID missions will increase the demand for the CETA Project's services, hence increasing the effectiveness of the project.

CETA activities will necessarily overlap with other projects now under way and currently being developed by the Office of Energy. To sharpen the focus of future activities to be undertaken by CETA, we recommend an immediate effort to review the promotion plan already developed with a view towards identifying specific promotional needs. There should be a specific allocation of promotional resources within CETA to encourage a more active dialogue with the Missions, Regional Bureaus, and host country agencies who comprise the present and prospective clients for the program.

2. Project Priorities

The global circumstances and conditions within which this project operates have changed since it's inception. As stated before, this is due to the new trends in the priorities of developing countries created by lower oil prices in international energy markets. This has altered energy priorities and polices throughout the world, including the developing world. Thus the

redirection of the project's priorities to better reflect emerging energy trends and AID energy initiatives outside the CETA project is desirable. The new effort should be directed towards a sharpened focus for the areas of work in which CETA is the best support vehicle.

The surveys conducted by the evaluation team found that there is a need for the services provided through the CETA program. Needs for technical services are anticipated principally in the areas of:

- Private power development
- Institutional development
- Advanced, innovative and environmentally sound technologies and power systems related to conventional resources
- Indigenous fuel resource assessment

In view of the needs identified and AID's report to Congress, we recommend that CETA focus on these as its future areas of priority. The key is to review CETA objectives to better delineate the areas of work in which promotional actions are to be taken, and where field activities can provide maximum benefits for the country concerned. The contractor should also identify internal resources that can be brought to bear in each area.

2. Washington Project Office

Given the current level of field activities to the project, and the increased participation by Washington office staff in marketing and performing those activities, the current level of contractor staff can be justified. However, should field activities diminish, a reassessment of Washington Support Staff should be made. If necessary, the contractor should be required to reduce its support staff.

3. Technical Service Orders

In the process of the evaluation, the team also found that the current procedure for initiating technical service orders (TSO) is cumbersome. Most field activities are undertaken as TSOs. The development and execution of each TSO requires many stages. The process is initiated by a

client request (host country, AID Mission, or Office of Energy). Each major field activity compels amendment of the original contract, which requires a lengthy proposal, review and authorization process for the TSO to be undertaken.

We recommend that the TSO process be streamlined. This process is particularly awkward in view of the need for the project to quickly respond to mission and host country requests. We therefore recommend that a simpler process be created to finance field activities of this nature. A contract amendment covering this point may be the best way to attain this goal.

APPENDIX A
COUNTRY QUESTIONNAIRES

COSTA RICA TELEX

TO: Heriberto Rodriguez
Energy Officer

SUBJECT: QUESTIONNAIRE FOR EVALUATION OF THE CONVENTIONAL ENERGY TECHNICAL ASSISTANCE (CETA) PROJECT

This questionnaire is sent per your advance notification by S&T/EY, Wash. We have been instructed by Mr. Alberto Sabadell, CETA Project Officer, S&T/EY/USAID, Wash., to contact you concerning the following:

IDEA, Inc., under contract to S&T/EY, is evaluating the CETA Program. CETA was designed to assist developing countries to identify, evaluate and develop indigenous conventional energy resources, and provide in-country technical training required to assess, manage or exploit these resources.

Our objective is to evaluate effectiveness of program to date, and assess scope for program redesign to improve future effectiveness of CETA. As CETA activities will continue for 3 more years, it is critical that current priorities of mission CDSS, and country-specific energy sector priorities be factored into CETA planning. With this in mind, we would appreciate your frank and objective answers to the following questions as they pertain to specific CETA projects undertaken in your country and/or to the CETA in general.

The specific task order performed under CETA for your Mission was:
Prefeasibility Study of a Mine Mouth Coal Fired Power Plant
Dates: 8/17/86 to 12/31/86

Please respond to the questionnaire via telex, telefax or international courier to:

Paul Hesse
IDEA, Inc.
1111 14th, St., N.W.
Washington, D.C. 20005
(202) 289-4332
telex: 798735 IDEA WSH
telefax: 202-3712194

We will contact you at a later date for clarifications based on your written response.

QUESTIONNAIRE:

"Project" appearing below hereby refers to the task orders identified above.

1. CONTRACTOR PERFORMANCE

Please rate performance of the contractor, Bechtel National, Inc., on a scale of 1-5, in following areas: (scale: 1=poor, 2=acceptable, 3=good, 4=excellent, 5= outstanding).

- A. Technical Expertise
- B. Management and Administration (of activity)
 - 1. Mechanisms and Procedures Used
 - 2. Meeting deadlines and schedules
- C. Quality of Documentation
(Reports - mid-and end-of project)
- D. Responsiveness to Mission Requests
- E. Quality of Staff/Consultants Provided
- F. Quality and Appropriateness of Conclusions & Recommendations Made
- H. Promotion of CETA Program Objectives

2. PROJECT RESULTS

Where applicable, please rate project impact in terms of: (scale: 1= no impact, 2=useful, 3=significant, 4= very significant, 5= critical).

- A. Assisting country in efforts to reduce dependence on imported fuels.
- B. Encouraging development of indigenous conventional energy resources by contributing to a better understanding of:(pls. rate each).
 - 1. The physical resource base, and/or engineering requirements for further exploitation of indigenous energy resources,
 - 2. Economic/financial impacts of energy resource development,
 - 3. Potential environmental impacts of resource development and environmental viability of resource development.
- C. Identification of needed inputs and actions for effective follow on.
- D. Training/manpower and institutional issues (pricing reform, regulatory practices, improved planning etc.)
- E. Relative importance in terms of the Mission's overall objectives and priorities for energy activities in Costa Rica.

3. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT

- A. Did project meet mission/host country objectives as defined by the statement of work?
- B. Has Mission and/or host government implemented any recommendations that resulted from project?
- C. Is it likely that the results of this study (task orders) will result in further requests for technical assistance under CETA.
- D. If project objectives were not met, and/or recommendations were not implemented, please identify reasons:
- E. Are follow up activities underway or planned for which the project recommended or identified ?
- F. Is it likely that the project will result in the actual financing and implementation of the mine-mouth power plant project ?

4. PRIVATE SECTOR IMPACTS

Was there significant private sector involvement in the project, and/or in subsequent follow-on activities that resulted? If so, please identify and briefly describe such involvement:

5. CURRENT & FUTURE MISSION PROJECTS

A. Please identify specific on-going or planned programs/projects where CETA services may contribute (include, where possible: project number/title, dates, 1-o-p USAID obligated funds by Fiscal year, cofunding levels by source).

B. Please rank the relative importance of the projects identified in 5A to other Mission projects and activities in terms of CDSS:

- High Priority
- Medium Priority
- Low Priority

C. Please define the obligated funds for projects identified in 5A, as a proportion of total mission obligations for technical assistance in relevant fiscal years:

6. RELEVANCE OF CETA TO MISSION PRIORITIES

A. What importance would you place on CETA in the context of your Mission's CDSS, budget obligations and likely project portfolio ?

B. To date, CETA has focussed on providing technical support services for prefeasibility and feasibility studies, project design, institutional and resource assessments, and training. Please rank order the following potential areas of future CETA activities in terms of their relevance to Mission priorities.

Prefeasibility/Feasibility Project Studies
Project/Program Design
Resource Assessments (eg: coal, oil, gas reserves)
Training:
 Technical/Engineering
 Management and Administration
 Planning/Programming
Institutional Development
Policy/Pricing Reform
Private Power Development
Environmental Protection

Please identify specific needs in any of the above areas.

C. What recommendations do you have to improve or enhance the range of technical services available under CETA for it to be appropriate for your Mission's energy programs.

ECUADOR LETTER

August 23, 1988

Mr. Fausto Maldonado
Energy Officer
USAID/Ecuador
American Embassy
Quito, Ecuador

SUBJECT: QUESTIONNAIRE FOR EVALUATION OF THE CONVENTIONAL ENERGY TECHNICAL ASSISTANCE (CETA) PROJECT

Dear Mr. Maldonado:

This questionnaire is sent per your advance notification by S&T/EY, Wash. We have been instructed by Mr. Alberto Sabadell, CETA Project Officer, S&T/EY/USAID, Wash., to contact you concerning the following:

IDEA, Inc., under contract to S&T/EY, is evaluating CETA. CETA was designed to assist developing countries to identify, evaluate and develop indigenous conventional energy resources, and provide in-country technical training required to assess, manage or exploit these resources.

Our objective is to evaluate the effectiveness of CETA to date, and assess scope for program redesign to improve future effectiveness of CETA. As CETA activities will continue for 3 more years, it is critical that current priorities of mission CDSS, and country-specific energy sector priorities be factored into CETA planning. With this in mind, we would appreciate your frank and objective answers to the following questions as they pertain to specific CETA projects undertaken in your country and/or to CETA in general.

The specific task order performed under CETA for your Mission was:
Petroleum Financial Administration Project - Training Program Structure Component (for the Oil Industry) - Direccion General Tecnica Petrolera
Petroleum Training Program Evaluation
Dates: 9/26/85 - 1/31/86

Please respond to the questionnaire via telex, telefax or international courier to:

Paul Hesse (202) 289-4332
IDEA, Inc. telex: 798735 IDEA WSH
1111 14th, St., N.W. telefax: 202-3712194
Washington, D.C. 20005

We will contact you at a later date for clarifications based on your written response.

QUESTIONNAIRE:

"Project" appearing below hereby refers to the task orders identified above.

1. CONTRACTOR PERFORMANCE

Please rate performance of the contractor, Bechtel National, Inc., on a scale of 1-5, in following areas: (scale: 1=poor, 2=acceptable, 3=good, 4=excellent, 5= outstanding).

- A. Technical Expertise
- B. Management and Administration (of activity)
 - 1. Mechanisms and Procedures Used
 - 2. Meeting deadlines and schedules
- C. Quality of Documentation
(Reports - mid-and end-of project)
- D. Responsiveness to Mission Requests
- E. Quality of Staff/Consultants Provided
- F. Quality and Appropriateness of Conclusions & Recommendations Made
- H. Promotion of CETA Program Objectives

2. PROJECT RESULTS

Where applicable, please rate project impact in terms of: (scale: 1= no impact, 2=useful, 3=significant, 4= very significant, 5= critical).

- A. Assisting country in efforts to reduce dependence on imported fuels
- B. Encouraging development of indigenous conventional energy resources by contributing to a better understanding of: (pls. rate each in each area)
 - 1. The physical resource base, and/or engineering requirements for further exploitation of indigenous energy resources,
 - 2. Economic/financial impacts of energy resource development,
 - 3. Potential environmental impacts of resource development and environmental viability of resource development.
- C. Identification of needed inputs and actions for effective follow on.
- D. Training/manpower and institutional issues (pricing reform, regulatory practices, improved planning etc.)
- E. Relative importance in terms of the Mission's overall objectives and priorities for energy activities in Ecuador.

3. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT

- A. Did project meet mission/host country objectives as defined by statement of work? (Did the results of the training program have positive results for the Dieccion General Tecnica Petrolera/Ecuador in terms of enhancing staff skills and work performance, upgrading institutional capacity for project analysis and evaluation and general financial administration control and analysis of petroleum reserves in Ecuador?)
- B. Has Mission and/or host government implemented any recommendations that resulted from project?
- C. Is it likely that the results of this study (task orders) will result in further requests for technical assistance under CETA.
- D. If project objectives were not met, and/or recommendations were not implemented, please identify reasons:

E. Are follow up activities underway or planned for which the project recommended or identified ?

4. PRIVATE SECTOR IMPACTS

Was there significant private sector involvement in the project, and/or in subsequent follow-on activities that resulted? If so, please identify and briefly describe such involvement:

5. CURRENT & FUTURE MISSION PROJECTS

A. Please identify specific on-going or planned programs/projects where CETA services may contribute (include, where possible: project number/title, dates, l-o-p USAID obligated funds by Fiscal year, cofunding levels by source)

B. Please rank the relative importance of the projects identified in 5A to other Mission projects and activities in terms of CDSS:

- High Priority
- Medium Priority
- Low Priority

C. Please define the obligated funds for projects identified in 5A, as a proportion of total mission obligations for technical assistance in relevant fiscal years:

6. RELEVANCE OF CETA TO MISSION PRIORITIES

A. What importance would you place on CETA in the context of your Mission's CDSS, budget obligations and likely project portfolio ?

B. To date, CETA has focussed on providing technical support services for prefeasibility and feasibility studies, project design, institutional and resource assessments, and training. Please rank order the following potential areas of future CETA activities in terms of their relevance to Mission priorities.

- Prefeasibility/Feasibility Project Studies
- Project/Program Design
- Resource Assessments (eg: coal, oil, gas reserves)
- Training: Technical/Engineering
 - Management and Administration
 - Planning/Programming
- Institutional Development
- Policy/Pricing Reform
- Private Power Development
- Environmental Protection

Please identify specific needs in any of the above areas.

C. What recommendations do you have to improve or enhance the range of technical services available under CETA for it to be appropriate for your Mission's energy programs.

INDONESIA TELEX

To: Energy Officer, USAID/Indonesia

SUBJECT: QUESTIONNAIRE FOR EVALUATION OF THE CONVENTIONAL ENERGY TECHNICAL ASSISTANCE (CETA) PROJECT

This questionnaire is sent per your advance notification by S&T/EY, Wash. We have been instructed by Mr. Alberto Sabadell, CETA Project Officer, S&T/EY/USAID, Wash., to contact you concerning the following:

IDEA, Inc., under contract to S&T/EY, is evaluating the CETA Program. CETA was designed to assist developing countries to identify, evaluate and develop indigenous conventional energy resources, and provide in-country technical training required to assess, manage or exploit these resources.

Our objective is to evaluate the effectiveness of CETA to date, and assess the scope for program redesign to improve future effectiveness of CETA. As CETA activities will continue for 3 more years, it is critical that current priorities of mission CDSS, and country-specific energy sector priorities be factored into CETA planning. With this in mind, we would appreciate your frank and objective answers to the following questions as they pertain to specific CETA projects undertaken in your country and/or to the CETA in general.

The specific task order performed under CETA for your Mission was:
Support Activities for Laboratorium Sumber Day Energi (LSDE) - Pusiptek Energy Research Laboratory

Please respond to the questionnaire via telex, telefax or international courier to:

Paul Hesse
IDEA, Inc.
1111 14th, St., N.W.
Washington, D.C. 20005
(202) 289-4332
telex: 798735 IDEA WSH
telefax: 202-3712194

We will contact you at a later date for clarifications based on your written response.

QUESTIONNAIRE:

"Project" appearing below hereby refers to the task orders identified above.

1. CONTRACTOR PERFORMANCE

Please rate performance of the contractor, Bechtel National, Inc., on a scale of 1-5, in following areas: (scale: 1=poor, 2=acceptable, 3=good, 4=excellent, 5= outstanding).

- A. Technical Expertise
- B. Management and Administration (of activity)
 - 1. Mechanisms and Procedures Used
 - 2. Meeting deadlines and schedules
- C. Quality of Documentation
(Reports - mid-and end-of project)
- D. Responsiveness to Mission Requests
- E. Quality of Staff/Consultants Provided
- F. Quality and Appropriateness of Conclusions & Recommendations Made
- H. Promotion of CETA Program Objectives

2. PROJECT RESULTS

Where applicable, please rate project impact in terms of: (scale: 1= no impact, 2=useful, 3=significant, 4= very significant, 5= critical).

- A. Assisting country in efforts to reduce dependence on imported fuels
- B. Encouraging development of indigenous conventional energy resources by contributing to a better understanding of:(pls. rate each in each area)
 - 1. The physical resource base, and/or engineering requirements for further exploitation of indigenous energy resources,
 - 2. Economic/financial impacts of energy resource development,
 - 3. Potential environmental impacts of resource development and environmental viability of resource development.
- C. Identification of needed inputs and actions for effective follow on.
- D. Training/manpower and institutional issues (pricing reform, regulatory practices, improved planning etc.)
- E. Relative importance in terms of the Mission's overall objectives and priorities for energy activities in Indonesia.

3. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT

- A. Did project meet mission/host country objectives as defined by statement of work?
- B. Has Mission and/or host government implemented any recommendations that resulted from project? Please describe the present status of AID's assistance to LSDE and/or the follow up activities that were undertaken, and are underway or planned for which the consultant's mission laid the groundwork ?
- C. Is it likely that the results of this study (task orders) will result in further requests for technical assistance under CETA.
- D. If project objectives were not met, and/or recommendations were not implemented, please identify reasons:

4. PRIVATE SECTOR IMPACTS

Was there significant private sector involvement in the project, and/or in subsequent follow-on activities that resulted? If so, please identify and briefly describe such involvement:

5. CURRENT & FUTURE MISSION PROJECTS

A. Please identify specific on-going or planned programs/projects where CETA services may contribute (include, where possible: project number/title, dates, l-o-p USAID obligated funds by Fiscal year, cofunding levels by source)

B. Please rank the relative importance of the projects identified in 5A to other Mission projects and activities in terms of CDSS:
High Priority
Medium Priority
Low Priority

C. Please define the obligated funds for projects identified in 5A, as a proportion of total mission obligations for technical assistance in relevant fiscal years:

6. RELEVANCE OF CETA TO MISSION PRIORITIES

A. What importance would you place on CETA in the context of your Mission's CDSS, budget obligations and likely project portfolio ?

B. To date, CETA has focussed on providing technical support services for prefeasibility and feasibility studies, project design, institutional and resource assessments, and training. Please rank order the following potential areas of future CETA activities in terms of their relevance to Mission priorities.

Prefeasibility/Feasibility Project Studies
Project/Program Design
Resource Assessments (eg: coal, oil, gas reserves)
Training:
 Technical/Engineering
 Management and Administration
 Planning/Programming
Institutional Development
Policy/Pricing Reform
Private Power Development
Environmental Protection

Please identify specific needs in any of the above areas.

C. What recommendations do you have to improve or enhance the range of technical services available under CETA for it to be appropriate for your Mission's energy programs.

JAMAICA LETTER

August 23, 1988

Mr. Charles Mathews
Energy Officer
USAID/Jamaica
Kingston, Jamaica

SUBJECT: QUESTIONNAIRE FOR EVALUATION OF THE CONVENTIONAL ENERGY TECHNICAL ASSISTANCE (CETA) PROJECT

Dear Mr. Mathews:

This questionnaire is sent per your advance notification by S&T/EY, Wash. We have been instructed by Mr. Alberto Sabadell, CETA Project Officer, S&T/EY/USAID, Wash., to contact you concerning the following:

IDEA, Inc., under contract to S&T/EY, is evaluating the CETA Program. CETA was designed to assist developing countries to identify, evaluate and develop indigenous conventional energy resources, and provide in-country technical training required to assess, manage or exploit these resources.

Our objective is to evaluate effectiveness of CETA to date, and assess the scope for program redesign to improve future effectiveness of CETA. As CETA activities will continue for 3 more years, it is critical that current priorities of mission CDSS, and country-specific energy sector priorities be factored into CETA planning. With this in mind, we would appreciate your frank and objective answers to the following questions as they pertain to specific CETA projects undertaken in your country and/or to CETA in general.

The specific task order performed under CETA for your Mission was:
Feasibility Study of Cane to Energy Project - Monymusk Cane Energy Project
Date: 3/24/86 to 8/4/86

Please respond to the questionnaire via telex, telefax or international courier to:

Paul Hesse (202) 289-4332
IDEA, Inc. telex: 798735 IDEA WSH
1111 14th, St., N.W. telefax: 202-3712194
Washington, D.C. 20005

We will contact you at a later date for clarifications based on your written response.

QUESTIONNAIRE:

"Project" appearing below hereby refers to the task orders identified above.

1. CONTRACTOR PERFORMANCE

Please rate performance of the contractor, Bechtel National, Inc., on a scale of 1-5, in following areas: (scale: 1=poor, 2=acceptable, 3=good, 4=excellent, 5= outstanding).

60

- A. Technical Expertise
- B. Management and Administration (of activity)
 - 1. Mechanisms and Procedures Used
 - 2. Meeting deadlines and schedules
- C. Quality of Documentation
(Reports - mid-and end-of project)
- D. Responsiveness to Mission Requests
- E. Quality of Staff/Consultants Provided
- F. Quality and Appropriateness of Conclusions & Recommendations Made
- H. Promotion of CETA Program Objectives

2. PROJECT RESULTS

Where applicable, please rate project impact in terms of: (scale: 1= no impact, 2=useful, 3=significant, 4= very significant, 5= critical).

- A. Assisting country in efforts to reduce dependence on imported fuels
- B. Encouraging development of indigenous conventional energy resources by contributing to a better understanding of: (pls. rate each in each area)
 - 1. The physical resource base, and/or engineering requirements for further exploitation of indigenous energy resources,
 - 2. Economic/financial impacts of energy resource development,
 - 3. Potential environmental impacts of resource development and environmental viability of resource development.
- C. Identification of needed inputs and actions for effective follow on.
- D. Training/manpower and institutional issues (pricing reform, regulatory practices, improved planning etc.)
- E. Relative importance in terms of the Mission's overall objectives and priorities for energy activities in Jamaica.

3. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT

- A. Did project meet mission/host country objectives as defined by the statement of work?
- B. Has Mission and/or host government implemented any recommendations that resulted from project?
- C. Is it likely that the results of this study (task orders) will result in further requests for technical assistance under CETA?
- D. If project objectives were not met, and/or recommendations were not implemented, please identify reasons:
- E. Are follow up activities underway or planned for which the project recommended or identified ?
- F. Is it likely that the project will result in the actual financing and implementation of the Monymusk project ?

4. PRIVATE SECTOR IMPACTS

Was there significant private sector involvement in the project, and/or in

subsequent follow-on activities that resulted? If so, please identify and briefly describe such involvement:

5. CURRENT & FUTURE MISSION PROJECTS

A. Please identify specific on-going or planned programs/projects where CETA services may contribute (include, where possible: project number/title, dates, 1-o-p USAID obligated funds by Fiscal year, cofunding levels by source)

B. Please rank the relative importance of the projects identified in 5A to other Mission projects and activities in terms of CDSS:

- High Priority
- Medium Priority
- Low Priority

C. Please define the obligated funds for projects identified in 5A, as a proportion of total mission obligations for technical assistance in relevant fiscal years:

6. RELEVANCE OF CETA TO MISSION PRIORITIES

A. What importance would you place on CETA in the context of your Mission's CDSS, budget obligations and likely project portfolio ?

B. To date, CETA has focussed on providing technical support services for prefeasibility and feasibility studies, project design, institutional and resource assessments, and training. Please rank order the following potential areas of future CETA activities in terms of their relevance to Mission priorities.

Prefeasibility/Feasibility Project Studies
Project/Program Design
Resource Assessments (eg: coal, oil, gas reserves)
Training: Technical/Engineering
 Management and Administration
 Planning/Programming
Institutional Development
Policy/Pricing Reform
Private Power Development
Environmental Protection

Please identify specific needs in any of the above areas.

C. What recommendations do you have to improve or enhance the range of technical services available under CETA for it to be appropriate for your Mission's energy programs.

Thank you for your assistance in this regard,

Paul Hesse
IDEA, Inc.

JORDAN TELEX

TO: Fared Salahi
Energy Officer, USAID/Jordan

SUBJECT: QUESTIONNAIRE FOR EVALUATION OF THE CONVENTIONAL ENERGY TECHNICAL ASSISTANCE PROGRAM (CETA)

This questionnaire is sent per your advance notification by S&T/EY, Wash. We have been instructed by Mr. Alberto Sabadell, CETA Project Officer, S&T/EY/USAID, Wash., to contact you concerning the following:

IDEA, Inc., under contract to S&T/EY, is evaluating the CETA Program. CETA was designed to assist developing countries to identify, evaluate and develop indigenous conventional energy resources, and provide in-country technical training required to assess, manage or exploit these resources.

Our objective is to evaluate effectiveness of CETA to date, and assess scope for program redesign to improve future effectiveness of CETA. As CETA activities will continue for 3 more years, it is critical that current priorities of mission CDSS, and country-specific energy sector priorities be factored into CETA planning. With this in mind, we would appreciate your frank and objective answers to the following questions as they pertain to specific CETA projects undertaken in your country and/or to the CETA in general.

The specific task order performed under CETA for your Mission was:
Assessment of Oil Shale to Power Project
Dates: 9/26/86 - Present

Please respond to the questionnaire via telex, telefax or international courier to:

Paul Hesse
IDEA, Inc.
1111 14th, St., N.W.
Washington, D.C. 20005
(202) 289-4332
telex: 798735 IDEA WSH
telefax: 202-3712194

We will contact you at a later date for clarifications based on your written response.

QUESTIONNAIRE:

"Project" appearing below hereby refers to the task orders identified above.

1. CONTRACTOR PERFORMANCE

Please rate performance of the contractor, Bechtel National, Inc., on a scale of 1-5, in following areas: (scale: 1=poor, 2=acceptable, 3=good, 4=excellent, 5= outstanding).

50

- A. Technical Expertise
- B. Management and Administration (of activity)
 - 1. Mechanisms and Procedures Used
 - 2. Meeting deadlines and schedules
- C. Quality of Documentation
(Reports - mid-and end-of project)
- D. Responsiveness to Mission Requests
- E. Quality of Staff/Consultants Provided
- F. Quality and Appropriateness of Conclusions & Recommendations Made
- H. Promotion of CETA Program Objectives

2. PROJECT RESULTS

Where applicable, please rate project impact in terms of: (scale: 1= no impact, 2=useful, 3=significant, 4= very significant, 5= critical).

- A. Assisting country in efforts to reduce dependence on imported fuels.
- B. Encouraging development of indigenous conventional energy resources by contributing to a better understanding of:(pls. rate each in)
 - 1. The physical resource base, and/or engineering requirements for further exploitation of indigenous energy resources,
 - 2. Economic/financial impacts of energy resource development,
 - 3. Potential environmental impacts of resource development and environmental viability of resource development.
- C. Identification of needed inputs and actions for effective follow on.
- D. Training/manpower and institutional issues (pricing reform, regulatory practices, improved planning etc.)
- E. Relative importance in terms of the Mission's overall objectives and priorities for energy activities in Jordan.

3. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT

- A. Did project meet mission/host country objectives as defined by statement of work?
- B. Has Mission and/or host government implemented any recommendations that resulted from project?
- C. Is it likely that the results of this study (task orders) will result in further requests for technical assistance under CETA.
- D. If project objectives were not met, and/or recommendations were not implemented, please identify reasons:
- E. Are follow up activities underway or planned for which the project recommended or identified ?
- F. Is it likely that the project will result in the actual financing and implementation of the Jordan Oil Shale project ?

4. PRIVATE SECTOR IMPACTS

Was there significant private sector involvement in the project, and/or in subsequent follow-on activities that resulted? If so, please identify and briefly describe such involvement:

5. CURRENT & FUTURE MISSION PROJECTS

A. Please identify specific on-going or planned programs/projects where CETA services may contribute (include, where possible: project number/title, dates, 1-o-p USAID obligated funds by Fiscal year, cofunding levels by source)

B. Please rank the relative importance of the projects identified in 5A to other Mission projects and activities in terms of CDSS:

- High Priority
- Medium Priority
- Low Priority

C. Please define the obligated funds for projects identified in 5A, as a proportion of total mission obligations for technical assistance in relevant fiscal years:

6. RELEVANCE OF CETA TO MISSION PRIORITIES

A. What importance would you place on CETA in the context of your Mission's CDSS, budget obligations and likely project portfolio ?

B. To date, CETA has focussed on providing technical support services for prefeasibility and feasibility studies, project design, institutional and resource assessments, and training. Please rank order the following potential areas of future CETA activities in terms of their relevance to Mission priorities.

- Prefeasibility/Feasibility Project Studies
- Project/Program Design
- Resource Assessments (eg: coal, oil, gas reserves)
- Training:
 - Technical/Engineering
 - Management and Administration
 - Planning/Programming
- Institutional Development
- Policy/Pricing Reform
- Private Power Development
- Environmental Protection

Please identify specific needs in any of the above areas.

C. What recommendations do you have to improve or enhance the range of technical services available under CETA for it to be appropriate for your Mission's energy programs.

PAKISTAN TELEX

TO: David Johnston
USAID/Pakistan

SUBJECT: QUESTIONNAIRE FOR EVALUATION OF THE CONVENTIONAL ENERGY TECHNICAL ASSISTANCE (CETA) PROJECT

This questionnaire is sent per your advance notification by S&T/EY, Wash. We have been instructed by Mr. Alberto Sabadell, CETA Project Officer, S&T/EY/USAID, Wash., to contact you concerning the following:

IDEA, Inc., under contract to S&T/EY, is evaluating the CETA Program. CETA was designed to assist developing countries to identify, evaluate and develop indigenous conventional energy resources, and provide in-country technical training required to assess, manage or exploit these resources.

Our objective is to evaluate effectiveness of program to date, and assess scope for program redesign to improve future effectiveness of CETA. As CETA activities will continue for 3 more years, it is critical that current priorities of mission CDSS, and country-specific energy sector priorities be factored into CETA planning. With this in mind, we would appreciate your frank and objective answers to the following questions as they pertain to specific CETA projects undertaken in your country and/or to the CETA in general.

The specific task orders performed under CETA for your Mission which we are focusing on are:

1. Prefeasibility Study of the Jamshoro Power Plant Project
Dates: 11/5/85 to 1/31/86
2. Feasibility Study of the Jamshoro Power Plant Project
Dates: 7/7/86 to 11/30/86
3. Planning for the Jamshoro Feasibility Study Jamshoro Power Project
Dates: - to 9/30/86
4. Program Design Issues and Options for Private Sector Power and Distribution Project
Dates: 9/30/86 to 1/31/87

Please respond to the questionnaire via telex, telefax or international courier to:

Paul Hesse
IDEA, Inc.
1111 14th, St., N.W.
Washington, D.C. 20005
(202) 289-4332
telex: 798735 IDEA WSH
telefax: 202-3712194

We will contact you at a later date for clarifications based on your written response.

QUESTIONNAIRE:

"Project" appearing below hereby refers to the task orders identified

above.

1. CONTRACTOR PERFORMANCE

Please rate performance of the contractor, Bechtel National, Inc., on a scale of 1-5, in following areas: (scale: 1=poor, 2=acceptable, 3=good, 4=excellent, 5= outstanding).

- A. Technical Expertise
- B. Management and Administration (of activity)
 - 1. Mechanisms and Procedures Used
 - 2. Meeting deadlines and schedules
- C. Quality of Documentation
(Reports - mid-and end-of project)
- D. Responsiveness to Mission Requests
- E. Quality of Staff/Consultants Provided
- F. Quality and Appropriateness of Conclusions & Recommendations Made
- H. Promotion of CETA Program Objectives

2. PROJECT RESULTS

Where applicable, please rate project impact in terms of: (scale: 1= no impact, 2=useful, 3=significant, 4= very significant, 5= critical).

- A. Assisting country in efforts to reduce dependence on imported fuels.
- B. Encouraging development of indigenous conventional energy resources by contributing to a better understanding of:(pls. rate each in each area),
 - 1. The physical resource base, and/or engineering requirements for further exploitation of indigenous energy resources,
 - 2. Economic/financial impacts of energy resource development,
 - 3. Potential environmental impacts of resource development and environmental viability of resource development.
- C. Identification of needed inputs and actions for effective follow on.
- D. Training/manpower and institutional issues (pricing reform, regulatory practices, improved planning etc.)
- E. Relative importance in terms of the Mission's overall objectives and priorities for energy activities in Pakistan.

3. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT

- A. Did project meet mission/host country objectives as defined by statement of work?
- B. Has Mission and/or host government implemented any recommendations that resulted from project?
- C. Is it likely that the results of these studies (task orders) will result in the actual financing and construction of the Jamshoro project, and in the case of 4, in the implementation of private power projects in Pakistan ? Why, Why not ?
- D. If project objectives were not met, and/or recommendations were not implemented, please identify reasons:
- E. Are follow-up activities planned or in progress ? If so, please identify and describe these.

4. PRIVATE SECTOR IMPACTS

Was there significant private sector involvement in the project, and/or in subsequent follow-on activities that resulted? If so, please identify and briefly describe such involvement:

5. CURRENT & FUTURE MISSION PROJECTS

A. Please identify specific on-going or planned programs/projects where CETA services may contribute (include, where possible: project number/title, dates, l-o-p USAID obligated funds by Fiscal year, cofunding levels by source).

B. Please rank the relative importance of the projects identified in 5A to other Mission projects and activities in terms of CDSS:

- High Priority
- Medium Priority
- Low Priority

C. Please define the obligated funds for projects identified in 5A, as a proportion of total mission obligations for technical assistance in relevant fiscal years:

6. RELEVANCE OF CETA TO MISSION PRIORITIES

A. What importance would you place on CETA in the context of your Mission's CDSS, budget obligations and likely project portfolio ?

B. To date, CETA has focussed on providing technical support services for prefeasibility and feasibility studies, project design, institutional and resource assessments, and training. Please rank order the following potential areas of future CETA activities in terms of their relevance to Mission priorities.

- Prefeasibility/Feasibility Project Studies
- Project/Program Design
- Resource Assessments (eg: coal, oil, gas reserves)
- Training:
 - Technical/Engineering
 - Management and Administration
 - Planning/Programming
- Institutional Development
- Policy/Pricing Reform
- Private Power Development
- Environmental Protection

Please identify specific needs in any of the above areas.

C. What recommendations do you have to improve or enhance the range of technical services available under CETA for it to be appropriate for your Mission's energy programs.

END QUESTIONNAIRE

Thank you for your assistance in this regard.
Paul Hesse, IDEA, Inc.

CHARLES BLISS TELEX
USAID/Pakistan

SUBJECT: EVALUATION OF THE CONVENTIONAL ENERGY TECHNICAL ASSISTANCE PROGRAM (CETA)

We have been advised by Alberto Sabadel, S&T/EY to contact you concerning the following:

IDEA, Inc., and K & M Eng. and Consulting, under contract to S&T/EY, are evaluating the CETA Program. The objective of eval. is to review the conceptual and implementation aspects of CETA, and to recommend changes to improve the effectiveness of A.I.D. assistance in the development and utilization of indigenous conventional energy resources worldwide. As CETA activities will continue for three more years, it is critical that actual performance and lessons learned be examined, and that the energy situation of AID assisted countries be factored into CETA program planning.

We would appreciate your input into our evaluation. If it is convenient, we would like to call you on Tuesday, 8/16/88. Please let me know if that is a good time to call, and where you can be reached on that, or another date, by telex. Our telex no. is:

798735 IDEA WSH

The following is a list of basic questions that we are sending to all Missions in which a CETA TSO project took place so that you can anticipate the context of our call. We would like your response to these questions as far as they are relevant to your present responsibilities and knowledge, as well as your overall viewpoint on the CETA program.

1. How would you rate the performance of the contractor (Bechtel National, Inc.) in carrying out the project in terms of:
 - A. Technical Expertise
 - B. Management and Administration
 - C. Quality of Documentation
(Reports - mid-and end-of project)
 - D. Responsiveness to Mission Requests
 - F. Quality of Staff/Consultants Provided
 - G. Quality of Conclusions/Recommendations Made
2. How would you rate the effectiveness of the project in terms of:
 - A. Reducing country dependence on imported fuels
 - B. Development of indigenous conventional energy resources in a:
 1. Physically,
 2. Economically,
 3. Environmentally,viaible and sustainable manner.
3. How do host government officials view the program/project and its results?

4. How has the host government acted to sustain the project or carry out recommendations made by the contractor?

5. To what extent have host country private sector interests become involved in the project and subsequent follow up activities or projects.

6. Is there any evidence that the project recommendations are being implemented by the host government in other areas in which they could potentially be applied.

7. To what extent has the Mission acted on the recommendations directed to it on the part of the contractor (undertaken or planning further activities or follow-up projects related to the project)?

A. Number and Title of new or associated projects:

B. Fiscal Resources Committed (Amount in U.S. Dollars) to:

Planned Projects

Projects Underway

C. Other resources committed:

8. How does/do the above activity(ies) rank in importance relative to other Mission projects and activities in terms of:

A. Overall Mission development objectives and plans:

High Priority

Medium Priority

Low Priority

B. Percentage of total Mission project's budget committed to each project for relevant fiscal years:

We, myself and Adolfo Menedez and Michael Kappaz, look forward to speaking to you.

Sincerely, Paul Hesse, IDEA, Inc.

SOMALIA TELEX

TO: David Vincent
Energy Officer, USAID/Somalia

SUBJECT: QUESTIONNAIRE FOR EVALUATION OF THE CONVENTIONAL ENERGY TECHNICAL ASSISTANCE (CETA) PROJECT

This questionnaire is sent per your advance notification by S&T/EY, Wash. We have been instructed by Mr. Alberto Sabadell, CETA Project Officer, S&T/EY/USAID, Wash., to contact you concerning the following:

IDEA, Inc., under contract to S&T/EY, is evaluating the CETA Program. CETA was designed to assist developing countries to identify, evaluate and develop indigenous conventional energy resources, and provide in-country technical training required to assess, manage or exploit these resources.

Our objective is to evaluate effectiveness of program to date, and assess scope for program redesign to improve future effectiveness of CETA. As CETA activities will continue for 3 more years, it is critical that current priorities of mission CDSS, and country-specific energy sector priorities be factored into CETA planning. With this in mind, we would appreciate your frank and objective answers to the following questions as they pertain to specific CETA projects undertaken in your country and/or to the CETA in general.

The specific task order performed under CETA for your Mission was:
System Rehabilitation Assessment and Management Audit of the Ente Nazionale Energia Elettrica (ENEE)
Dates: 2/15/86 to 4/18/86

Please respond to the questionnaire via telex, telefax or international courier to:

Paul Hesse
IDEA, Inc.
1111 14th, St., N.W.
Washington, D.C. 20005
(202) 289-4332, telex: 798735 IDEA WSH telefax: 202-3712194

We will contact you at a later date for clarifications based on your written response.

QUESTIONNAIRE:

"Project" appearing below hereby refers to the task orders identified above.

1. CONTRACTOR PERFORMANCE

Please rate performance of the contractor, Bechtel National, Inc., on a scale of 1-5, in following areas: (scale: 1=poor, 2=acceptable, 3=good, 4=excellent, 5= outstanding).

A. Technical Expertise

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Was there significant private sector involvement in the project, and/or in subsequent follow-on activities that resulted? If so, please identify and briefly describe such involvement:

5. CURRENT & FUTURE MISSION PROJECTS

A. Please identify specific on-going or planned programs/projects where CETA services may contribute (include, where possible: project number/title, dates, 1-o-p USAID obligated funds by Fiscal year, cofunding levels by source)

B. Please rank the relative importance of the projects identified in 5A to other Mission projects and activities in terms of CDSS:

- High Priority
- Medium Priority
- Low Priority

C. Please define the obligated funds for projects identified in 5A, as a proportion of total mission obligations for technical assistance in relevant fiscal years:

6. RELEVANCE OF CETA TO MISSION PRIORITIES

A. What importance would you place on CETA in the context of your Mission's CDSS, budget obligations and likely project portfolio ?

B. To date, CETA has focussed on providing technical support services for prefeasibility and feasibility studies, project design, institutional and resource assessments, and training. Please rank order the following potential areas of future CETA activities in terms of their relevance to Mission priorities.

Prefeasibility/Feasibility Project Studies
Project/Program Design
Resource Assessments (eg: coal, oil, gas reserves)
Training:
 Technical/Engineering
 Management and Administration
 Planning/Programming
Institutional Development
Policy/Pricing Reform
Private Power Development
Environmental Protection

Please identify specific needs in any of the above areas.

C. What recommendations do you have to improve or enhance the range of technical services available under CETA for it to be appropriate for your Mission's energy programs.

END QUESTIONNAIRE

Thank you for your assistance in this regard.
Paul Hesse, IDEA, Inc.

- B. Management and Administration (of activity)
 - 1. Mechanisms and Procedures Used
 - 2. Meeting deadlines and schedules
- C. Quality of Documentation
(Reports - mid-and end-of project)
- D. Responsiveness to Mission Requests
- E. Quality of Staff/Consultants Provided
- F. Quality and Appropriateness of Conclusions & Recommendations Made
- H. Promotion of CETA Program Objectives

2. PROJECT RESULTS

Where applicable, please rate project impact in terms of: (scale: 1= no impact, 2=useful, 3=significant, 4= very significant, 5= critical).

- A. Assisting country in efforts to reduce dependence on imported fuels.
- B. Encouraging development of indigenous conventional energy resources by contributing to a better understanding of:(pls. rate each).
 - 1. The physical resource base, and/or engineering requirements for further exploitation of indigenous energy resources,
 - 2. Economic/financial impacts of energy resource development,
 - 3. Potential environmental impacts of resource development and environmental viability of resource development.
- C. Identification of needed inputs and actions for effective follow on.
- D. Training/manpower and institutional issues (pricing reform, regulatory practices, improved planning etc.)
- E. Relative importance in terms of the Mission's overall objectives and priorities for energy activities in Somalia.

3. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT

- A. Did project meet mission/host country objectives as defined by statement of work?
- B. Has Mission and/or host government implemented any recommendations that resulted from project?
- C. Is it likely that the results of this study (task orders) will result in further requests for technical assistance under CETA?
- D. If project objectives were not met, and/or recommendations were not implemented, please identify reasons:
- E. Please describe the present status of AID's assistance to ENEE and/or the follow up activities that were undertaken, and are underway or planned for which the CETA assistance laid the groundwork ?
- F. To what extent has ENEE utilized and/or acted on the results of the CETA assistance to take concrete action in improving its management procedures, operations and planning activities.

4. PRIVATE SECTOR IMPACTS

THAILAND TELEX

TO: Mintara Silawatshananai
Energy Officer, USAID/Thailand

SUBJECT: QUESTIONNAIRE FOR EVALUATION OF THE CONVENTIONAL ENERGY TECHNICAL ASSISTANCE PROGRAM (CETA)

This questionnaire is sent per your advance notification by S&T/EY, Wash. We have been instructed by Mr. Alberto Sabadell, CETA Project Officer, S&T/EY/USAID, Wash., to contact you concerning the following:

IDEA, Inc., under contract to S&T/EY, is evaluating the CETA Program. CETA was designed to assist developing countries to identify, evaluate and develop indigenous conventional energy resources, and provide in-country technical training required to assess, manage or exploit these resources.

Our objective is to evaluate effectiveness of program to date, and assess scope for program redesign to improve future effectiveness of CETA. As CETA activities will continue for 3 more years, it is critical that current priorities of mission CDSS, and country-specific energy sector priorities be factored into CETA planning. With this in mind, we would appreciate your frank and objective answers to the following questions as they pertain to specific CETA projects undertaken in your country and/or to the CETA in general.

The specific task orders performed under CETA for your Mission was:

Consultant Mission to Assess the Use of Natural Gas as a Transport Fuel Study requested by Petroleum authority of Thailand (PTT) to USAID.
Dates: 1/29/85 - 1/31/86

Please respond to the questionnaire via telex, telefax or international courier to:

Paul Hesse

IDEA, Inc.

1111 14th, St., N.W.

Washington, D.C. 20005

(202) 289-4332, telex: 798735 IDEA WSH, telefax: 202-3712194

We will contact you at a later date for clarifications based on your written response.

QUESTIONNAIRE:

"Project" appearing below hereby refers to the task orders identified above.

1. CONTRACTOR PERFORMANCE

Please rate performance of the contractor, Bechtel National, Inc., on a scale of 1-5, in following areas: (scale: 1=poor, 2=acceptable, 3=good, 4=excellent, 5= outstanding).

A. Technical Expertise

- B. Management and Administration (of activity)
 - 1. Mechanisms and Procedures Used
 - 2. Meeting deadlines and schedules
- C. Quality of Documentation
(Reports - mid-and end-of project)
- D. Responsiveness to Mission Requests
- E. Quality of Staff/Consultants Provided
- F. Quality and Appropriateness of Conclusions & Recommendations Made.
- H. Promotion of CETA Program Objectives

2. PROJECT RESULTS

Where applicable, please rate project impact in terms of: (scale: 1= no impact, 2=useful, 3=significant, 4= very significant, 5= critical).

- A. Assisting country in efforts to reduce dependence on imported fuels.
- B. Encouraging development of indigenous conventional energy resources by contributing to a better understanding of:(pls. rate each)
 - 1. The physical resource base, and/or engineering requirements for further exploitation of indigenous energy resources,
 - 2. Economic/financial impacts of energy resource development,
 - 3. Potential environmental impacts of resource development and environmental viability of resource development.
- C. Identification of needed inputs and actions for effective follow on.
- D. Training/manpower and institutional issues (pricing reform, regulatory practices, improved planning etc.)
- E. Relative importance in terms of the Mission's overall objectives and priorities for energy activities in Thailand.

3. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT

- A. Did project meet mission/host country objectives as defined by statement of work?
- B. Has Mission and/or host government implemented any recommendations that resulted from project?
- C. Is it likely that the results of these studies (task orders) will result in further requests for technical assistance under CETA.
- D. If project objectives were not met, and/or recommendations were not implemented, please identify reasons:
- E. Are follow-up activities planned or in progress ? If so, please identify and describe these.

4. PRIVATE SECTOR IMPACTS

Was there significant private sector involvement in the project, and/or in subsequent follow-on activities that resulted? If so, please identify and briefly describe such involvement:

5. CURRENT & FUTURE MISSION PROJECTS

- A. Please identify specific on-going or planned programs/projects where CETA services may contribute (include, where possible: project number/title, dates, 1-o-p USAID obligated funds by Fiscal year, cofunding levels by source)

B. Please rank the relative importance of the projects identified in 5A to other Mission projects and activities in terms of CDSS:

- High Priority
- Medium Priority
- Low Priority

C. Please define the obligated funds for projects identified in 5A, as a proportion of total mission obligations for technical assistance in relevant fiscal years:

6. RELEVANCE OF CETA TO MISSION PRIORITIES

A. What importance would you place on CETA in the context of your Mission's CDSS, budget obligations and likely project portfolio ?

B. To date, CETA has focussed on providing technical support services for prefeasibility and feasibility studies, project design, institutional and resource assessments, and training. Please rank order the following potential areas of future CETA activities in terms of their relevance to Mission priorities.

Prefeasibility/Feasibility Project Studies

Project/Program Design

Resource Assessments (eg: coal, oil, gas reserves)

Training:

Technical/Engineering

Management and Administration

Planning/Programming

Institutional Development

Policy/Pricing Reform

Private Power Development

Environmental Protection

Please identify specific needs in any of the above areas.

C. What recommendations do you have to improve or enhance the range of technical services available under CETA for it to be appropriate for your Mission's energy programs.

END QUESTIONNAIRE

Thankyou for your assistance in this regard,
Paul Hesse, IDEA, Inc.

APPENDIX B
QUESTIONNAIRE RESPONSES



UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT
AMERICAN EMBASSY
JAKARTA, INDONESIA

Letter No. II/2777

14 September 1988

Mr. Paul Hesse
IDEA, INC.
TELEX NO. 798735 IDEA WSH
TELEFAX 202-3712194

Subj.: Conventional Energy Technical Assistance
- Program (CETAP) Evaluation Questionnaire

Dear Mr. Hesse,

This is in response to your telex dated August 23, 1988 addressed to Mr. Lawrence Odle. There is no Mr. Odle in this office, however, the PUSPIPTK Energy Research Laboratory is a Mission project.

Our answers to specific questions are provided below, keyed to the same number as in the telex. The task order, supporting activities for Laboratorium Sumber Daya dan Energi (LSDE), was performed by Bechtel National Inc., under a buy-in to Contract No. LAC-5724-C-00-5126-00. This activity was initiated on January 13, 1986 and completed on July 31, 1986.

1. Contractor Performance

- A. 4
- B1. 4
- B2. 4
- C. 4
- D. 3
- E. 5
- F. 4
- H. 4

2. Project result

- A. NA
- B1. NA
- B2. NA
- B3. NA
- C. NA
- D. 2
- E. 4

3. Mission/Host Government response to project

- A. In general the project meets the objectives as defined by the statement of work. Some deviations to the scope during the performance of the task were necessary due to condition prevailing at that time. These deviations were documented in the final report, a copy of which was sent to ST/XY.

- B. The Contractor provided general management support to the Director LSDE for a short period of time. His activities helped to define and formulate the organization which was to come into being on the establishment of LSDE. Prior to this establishment a number of critical

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activities had to be undertaken, these were defined and networked by the contractor. As a result of follow-on to his work BPPT was able to establish LSDE as a semi-autonomous entity. Support to this entity continues in a variety of forms one of which is the procurement of Fuel and Combustion Research equipment which is currently underway.

- C. This activity supported LSDE in institutional building, therefore the result of this effort in itself will not result in further requests for technical assistance.

- D. Not applicable.

4. Private sector impact.

- At this time, private sector involvement in this project is not significant.

5. Current and future Mission projects.

- A. Currently the PUSPIPTK project is the only on-going energy project in the Mission portfolio. CETAP services may be required in providing a general TA contractor for this project. However, details are unavailable at this time.

- B. Low priority.

- C. Insignificant

6. Relevance of CETAP to Mission priorities.

- A. As in Ja, there is only one on-going energy project in the Mission. No other energy project is planned in the near future.

- B. Rank order in terms of Mission priorities

- 1. Private power development

- 2. Policy/Pricing reform

- 3. Training

- 4. Environmental protection

If other information is required, please let us know.

Sincerely,



Edi Setianto
Energy Officer

cc:

Mr. Alberto Sabadell, ST/EY



AGENCY FOR INTERNATIONAL DEVELOPMENT
UNITED STATES A.I.D. MISSION TO COSTA RICA

APO Miami, FL 34020
Telephone 33-11-55
Telex 3580 AIDCR KR
Apartado Postal 10053
1000 San José, Costa Rica

September 19, 1988

Mr. Paul Hesse
IDEA, Inc.

TELEFAX: 202-3712194

SUBJECT: Questionnaire for Evaluation of the Conventional Energy Technical Assistance Program (CETAP).

REF.: Prefeasibility Study of a Maine Mouth Fired Power Plant - Bechtel National Inc.

Answers to Questions:

I. CONTRACTOR PERFORMANCE

<u>Question</u>	<u>Rate</u>
A. Technical expertise	4
B. Management and administration	
1. Mechanisms and procedures used	4
2. Meeting deadliness and schedules	4
C. Quality of Reports	4
D. Responsivness to Mission requests	N.A.
E. Quality of staff/consultants provided	N.A.
F. Quality and appropriateness of conclusions and recommendations made	5
H. Promotion of CETA program objectives	3

Note: NA = Non Applicable

II. PROJECT RESULTS

A. Assisting country in efforts to reduce dependence on imported fuels	2
--	---

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- B. Encouraging development of indigenous conventional energy resources by contributing to a better understanding:
 - 1. The physical resource base, and/or engineering requirements for further exploitation of indigenous energy resources 5
 - 2. Economic/Financial impact of energy resource development 3
 - 3. Potential environmental impacts of resource development and environmental viability of resource development 3
- C. Identification of needed inputs and actions for effective follow on 4
- D. Training/manpower and institutional issues N.A.
- E. Relative importance in terms of the Mission's overall objectives and priorities for energy activities in Costa Rica. 3

III. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT

- A. Did project met Mission/Host country objective defined by statement of work.

Answer:

Yes

- B. Has Mission and/or host Government implemented any recommendations that resulted from project.

Answer:

Only partially, 1.2.7.a

- C. Is it likely that the results of this study will result in further requests for technical assistance under CETAP.

Answer:

Not before the coal resources study is completed.

- D. If project objectives were not met, and/or recommendations were not implemented, please identified reasons:

Answer:

Project was in an early stage requiring development of the coal reserves.

- E. Are follow up activities underway or planned for which the project recommended or identified?

Answer:

Given the level of investment to develop the coal reserves, the GOCR is carrying out some of the recommendations at a very slow rate.

- F. Is it likely that the project will result in the actual financing and implementation of the mine-mouth power plant project?

Answer:

GOCR plans are for tapping indigenous coal after year 2000. Due to the requirements to increase Costa Rica's electricity base load capacity due to unexpectedly rapid growth in demand, the country is looking for indigenous energy solutions that make the best use of its limited investment funds.

IV. PRIVATE SECTOR IMPACTS

Was there significant private sector involvement in the project, and/or in subsequent follow-on activities that resulted?

Answer:

No involvement of private sector in this project.

V. CURRENT AND FUTURE MISSION PROJECTS

Answer:

- A. One on-going project, Electric Load Management, Contract DHR-5728-Z-02-7014-00, Order No. 02 with Hagler, Bailly and Company, Inc.

Planned project, Electric Power from Sugarcane in Costa Rica. No obligation at this time.

Answer:

- B. Projects in V-A can be ranked as medium priority to other Mission projects.
- C. Obligated funds for projects V-A are very small proportion of total Mission obligations for T.A.

VI. RELEVANCE OF CETAP TO MISSION PRIORITIES

Answer:

- A. Given that energy is not the highest priority in this Mission's program, I would place a medium priority.

Answer:

- B. I would rank in the following order

Prefeasibility/Feasibility Project studies
Private Power Development Project Design
Resource Assessments (coal)
Training:

Technical/Engineering
Management and administration
Planning/Programming
Policy/Pricing
Environmental Protection
Institutional Development

- C. To concentrate on solutions for the near term electricity demand, that will affect the economy of Costa Rica.

Sincerely,

Heriberto Rodríguez
USAID/Costa Rica
Energy Officer



OCT 27 1988

ARDO-88-975
October 17, 1988

Mr. Paul Hesse
IDEA
International Development
and Energy Associates, Inc.
Suite 802, 1111 14th. Street, N.W.
Washington, D.C., 20005

Dear Mr. Hesse:

I have received your letter and the questionnaire that I am sending to you now. The activity to which it refers was implemented through the Conventional Energy Technical Assistance Program by a Coppers and Lybrand team.

RESPONSES TO THE QUESTIONNAIRE

1. Contractor Performance

- A. 3 to 4
- B. 4
- C. Quality of Report: 4
The team Leader visited USAID several times to provide information about training program development.
- D. 3 to 4
- E. 3
- F. 3
- G. 3

2. Project Results

- A. 1
- B. (1): 1
(2): 1
(3): 1
- C. 2
- D. 2
- E. 2

Comments: The very short turnover of the Director of DGTP led to these training program results. In the fact the Director who requested and approved the training was not responsible for its implementation and the last part of the training was still in the hands of another director.

A small, handwritten mark or signature is located in the bottom right corner of the page.

Each of them had different ideas, and finally to my knowledge no follow-up was given to the training program.

3. Mission/Host Government Response to Project.

- A. I think that due to the situation explained above, the project did not meet the country objectives, nor the Mission's expectations. Although the project may have enhanced staff skills and work performance I am not sure it led to general upgrading of the institutional capacity. In fact I had conversations with the only two participants who showed further interest in other training under CETAP or CETP, and they mentioned that no support was given to the staff who participated in the project.
- B. To my knowledge the GOE has not implemented any recommendations.

USAID/Ecuador only had, at that time, and "Alternative Energy Sources Project" being implemented by the National Institute of Energy. However this project was about to end (USAID authorized an extension from December 30, 1985 to August 31, 1986). No relationship was established between this project, the DGTP Training and other agencies dealing with oil production its management and financial aspects like the Dirección General de Hidrocarburos.

- C. Since 1984, we have had two changes in Government. The new Government which took charge on August, 10 1988 may have interest in the CETAP but not related to the DGTP project.
- D. Both the DGTP internal problems (see Coopers and Lybrand Evaluation Report) and the Mission policy of not providing further assistance in energy - related fields were influential in the recommendations not being implemented

A second phase was intended for the Project, to be implemented as a practical hands on activity in the U.S. However the DGTP Director (appointed in January 1986) never showed interest in supporting such follow-up training, in fact he requested that the remaining money be used for the purchase of computers and software which was not acceptable since funds were allocated for training. Finally, USAID had to deobligate the funds and use them for other training programs.

E. No.

4. Private Sector Impacts

Since it was an activity in and for a public sector agency, private sector involvement was neither expected nor have subsequent follow-on activities resulted. The only consequence may be that some of the participants have moved from DGTP to private oil companies and the training they received has been useful to them.

5. Current & Future Mission Projects.

A. USAID/Ecuador has no current programs dealing with energy and CETAP services will not be required.

B. C. No applicable

6. Relevance of CETAP to Mission Priorities

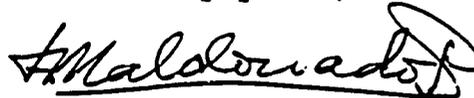
A. Mission's current portfolio does not include activities related to energy and no funds have been obligated for this purpose.

B. In view of the current situation in the Mission and the recent change in the Government it is difficult to rank the potential areas in Ecuador.

C. None

I hope my responses will be useful to your evaluation. In case you need more information do not hesitate to cable or write to me. Attached please find a copy of the Coopers & Lybrand Evaluation report of the DGTP training Program.

Sincerely yours,



Fausto Maldonado
Program Specialist

JAMAICA RESPONSE

Response to CETA Evaluation Questionnaire. Answers interpreted from notes taken during phone conversation on 9/16/88 with:

Mr. Charles Mathews
Energy Officer
USAID/Jamaica

Feasibility Study of Cane to Energy Project - Monymusk Cane Energy Project

Date: 3/24/86 to 8/4/86

QUESTIONNAIRE:

1. CONTRACTOR PERFORMANCE

- A. 4
- B. 1. NA
2. 3
- C. 3: Report was well done, but certain information, which Bechtel considered to be proprietary, was withheld from the Mission and the report (information regarding the cost/kwh of the power produced). Mission considered this to be "unfair" since Bechtel was contracted to perform the study and should have been forthcoming with information considered important for usefulness of the project on a worldwide basis.
- D. 2 (as in 1-a above)
- E. 4
- F. 4 (but should have been backed up with more info., as in 1-A.
- H. If any it was incidental to Bechtel's, ie they were more interested in promoting Bechtel.

2. PROJECT RESULTS

- A. 2 - Project was useful in providing technical info., process provided understanding of the political issues involved with the project which were not discussed in the report.
- B. 1. 2
2. 2
3. 2
- C. 4
- D. Question not really applicable to context of project.
- E. 3, but due to the characteristics and history of the project, the Mission's objectives were served more incidentally than directly.

3. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT

- A. Primary host Mission/country objectives were subjugated to Bechtel's interests (per answer in 1-A).
- B. Final report indicated that project is feasible, but rec.s have not been implemented because no capital has been invested.
- C. Yes, in a sense: S&T/EY is funding the development of a prototype

- cane trash collector, and field trails were completed in June and July/88 (but were not conclusive since harvesting season has already wound down). Field trails scheduled in 11-12/88.
- D. The main objective was to provide info. on feasibility of the project and of the bottom line cost of power generation (cost/kwh). The latter being of major importance was not disclosed and the Jamaica PSC would not indicate what they would be willing to pay for purchased power. Therefore, no agreement was reached on power cost delivery and purchase.
 - E. Cane trash collector equipment prototype field trails continuing. Other than this, nothing else is planned.
 - F. Only if Bechtel and Jamaica come to agreement. Project financing impeded by Bechtel's requirement for secure concessions from GOJ.

4. PRIVATE SECTOR IMPACTS

There is limited private sector involvement, other than Bechtel's, in the project except for the selling of cane to the mill by independent growers.

5. CURRENT & FUTURE MISSION PROJECTS

- A. There are no specific energy projects planned by the Mission. Present Energy Sector Assistance Project (ESAP) is ending 9/88. There is not much more to do that hasn't already been done.
- B. NA due to answer in 5-A, but historically energy received a high priority among Mission objectives.
- C. NA

6. RELEVANCE OF CETAP TO MISSION PRIORITIES

- A. As of now, none (5-A).
- B. This question not entirely relevant per ans. 5-A above, but Mission under ESAP put fair amount of effort to all the areas except Private Power; investment climate not right for private power in Jamaica.

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JORDAN RESPONSE

EASYLINK MBX 1554350A001 8SEP88 06:03/13:32 EST
VIA: 798735

TO: 62813914

VIA WUI
IDEA WSH

24350 USAID JO
TO: MR. PAUL HESSE
IDEA, INC

SUBJECT: EVALUATION OF THE CETAP - JORDANIAN OIL SHALE

IN RESPONSE TO YOUR TELEX ON THE ABOVE REFERENCED SUBJECT, THE ANSWERS TO YOUR QUESTIONNAIRE ARE AS FOLLOW:

1. PLEASE REFER THIS QUESTION TO S AND T/EY, AID/W. MISSION HAS NO CONTACT WITH BECHTEL NATIONAL, INC.

- 2.A. - 5
- 2.B.1 - 3
- 2.B.2 - 5
- 2.B.3 - 2
- 2.C. - 5
- 2.D. - 2
- 2.E. - 4 +
- 3.A. - YES
- 3.B. - NOT YET, THE REPORT IS NOT COMPLETE.
- 3.C. - NO
- 3.D. - NOT APPLICABLE, SEE ITEM 3B ABOVE.
- 3.E. - NOT YET, THE REPORT IS NOT COMPLETE.
- 3.F. - YES. HOWEVER, THAT DEPENDS ON THE WORLD MARKET OIL PRICE.

4. - PRACTICALLY NONE TILL NOW WITH THE EXCEPTION OF THE INVOLVEMENT OF U.S. CONSULTANTS IN THE STUDY. HOWEVER, PRIVATE SECTOR IS EXPECTED TO GET INVOLVED AT LATER STAGES IN FINANCING FACILITY CONSTRUCTION, OPERATION AND ELECTRICITY GENERATION.

- 5.A. - NONE
- 5.B. - NOT APPLICABLE
- 5.C. - NAAPPLICABLE
- 6.A. - NOT SIGNIFICANT
- 6.B. - 1: TRAINING, 2: PRIVATE POWER DEVELOPMENT, 3: RESOURCE ASSESSMENTS.
- 6.C. - NONE. IN THE PAST THE CETA AND AT PRESENT THE FOLLOW-UP OF ETP PROGRAM HAVE PROVIDED THE NEEDED TRAINING IN DIFFERENT FIELDS OF ENERGY PLANNING, PROGRAMING, MANAGERMENTS ETC. TO THE JORDANIAN GOVERNMENT TECHNICAL STAFF.

REGARDS
FARID SALAHI
USAID/JORDAN

PAKISTAN RESPONSE

EASYLINK MBX 1028130A001 5SEP88 08:05/09:50 EST
ESL REDELIVERY
VIA: 798735

TO: 62813914

VIA WUI
IDEA WSH

54270 USAID PK

REF 3441/88
TELEX SERVICE (USAID)

TO: MR. PAUL HESSE
IDEA, INC.
1111 14TH ST., N.W.
WASHINGTON, D.C. 20005

FROM: DAVID JOHNSTON, CHIEF, O/E&E
USAID/PAKISTAN

SUBJ: AID/WASHINGTON'S CONVENTIONAL ENERGY TECHNICAL ASSISTANCE
PROJECT (CETAP): QUESTIONNAIRE FOR EVALUATION

REF: YOUR TELEX ON THE SUBJECT DATED AUGUST 25, 1988

A. OUR CONTROL-1843 DATED AUGUST 31, 1988.

B. I UNDERSTAND THAT MR. JOHN MORGAN OF THIS OFFICE WAS ALSO PRESENT DURING YOUR INTERVIEW ON THE SUBJECT WITH ANE/TR/ENR OFFICIALS IN AID/WASHINGTON, NAMELY MESSERS ICHORD AND ARCHER. AS A SUPPLEMENT TO THE INFORMATION PROVIDED BY MR. MORGAN DURING THIS MEETING, FOLLOWING IS THE ITEMWISE RESPONSE TO YOUR QUESTIONNAIRE.

1. CONTRACTOR PERFORMANCE (RATING FROM A SCALE OF ZERO TO FIVE IS GIVEN IN PARENTHESIS):

- (A) TECHNICAL EXPERTISE (FOUR)
- (B) MANAGEMENT AND ADMINISTRATION OF ACTIVITY
 - 1. MECHANISMS AND PROCEDURES USED (FOUR)
 - 2. MEETING DEADLINES AND SCHEDULES (FIVE)
- (C) QUALITY OF DOCUMENTATION (FIVE)
- (D) RESPONSIVENESS TO MISSION REQUESTS (THREE)
- (E) QUALITY OF STAFF/CONSULTANTS PROVIDED (FOUR)
- (F) QUALITY AND APPROPRIATENESS OF CONCLUSIONS AND RECOMMENDATIONS MADE (FOUR)
- (G) PROMOTION OF CETA PROGRAM OBJECTIVES (FOUR)

2. PROJECT RESULTS (RATING FROM SCALE OF ZERO TO FIVE IS GIVEN

IN PARENTHESIS):

- (A) ASSISTING COUNTRY IN EFFORTS TO REDUCE DEPENDENCE ON IMPORTED FUELS (FIVE)
- (B) ENCOURAGING DEVELOPMENT OF INDIGENOUS CONVENTIONAL ENERGY RESOURCES BY CONTRIBUTING TO A BETTER UNDERSTANDING OF:
 - 1. THE PHYSICAL RESOURCE BASE, AND/OR ENGINEERING REQUIREMENTS FOR FURTHER EXPLOITATION OF INDIGENOUS ENERGY RESOURCE DEVELOPMENT (FOUR)
 - 2. ECONOMIC/FINANCIAL IMPACTS OF ENERGY RESOURCE DEVELOPMENT (FOUR)
 - 3. POTENTIAL ENVIRONMENTAL IMPACTS OF RESOURCE DEVELOPMENT AND ENVIRONMENTAL VIABILITY OF RESOURCE DEVELOPMENT (FIVE)
- (C) IDENTIFICATION OF NEEDED INPUTS AND ACTIONS FOR EFFECTIVE FOLLOW ON (FOUR)
- (D) TRAINING/MANPOWER AND INSTITUTIONAL ISSUES (FOUR)
- (E) RELATIVE IMPORTANCE IN TERMS OF THE MISSION'S OVERALL OBJECTIVES AND PRIORITIES FOR ENERGY ACTIVITIES IN PAKISTAN (FOUR)

3. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT:

- (A) THE PROJECT HAS MET MISSION/HOST COUNTRY OBJECTIVES AS DEFINED IN THE STATEMENT OF WORK. THE DETAILED FEASIBILITY STUDY HAS ESTABLISHED THAT THE JAMSHORO POWER PLANT EXPANSION PROJECT IS A TECHNICALLY AND FINANCIALLY VIABLE PROJECT. THIS ACTIVITY ALSO CONTRIBUTED TO THE MISSION OBJECTIVE OF DONOR COORDINATION SINCE IT WAS UNDERTAKEN ON A SPECIFIC WORLD BANK/GO REQUEST.
- (B) MISSION'S INTENTION FROM THE ONSET OF THE FEASIBILITY STUDY UNDERTAKING WAS THAT IT WOULD NOT FINANCE THE JAMSHORO EXPANSION PROJECT IF AND WHEN IT WAS BUILT AND THAT MISSION'S INVOLVEMENT WOULD BE CONFINED UP TO THE DETAILED FEASIBILITY STUDY STAGE. THIS DECISION WAS IN LINE WITH THE ECONOMIC ASSISTANCE PROGRAM PRIORITIES AT THE TIME.
- (C) THE GOP PLANS TO GO AHEAD WITH PROJECT CONSTRUCTION AS SOON AS PROJECT FINANCING ARRANGEMENTS ARE IN PLACE. THE MISSION BELIEVES THAT RESULTS OF THE STUDY HAVE, HOWEVER, CONTRIBUTED TO A PRIVATE SECTOR INITIATIVE TO BUILD A NEARLY IDENTICAL POWER PLANT. GOP HAS ALREADY ISSUED A LETTER OF INTENT TO THE SPONSOR OF THE PRIVATE

PROJECT.

- (D) THE DELAY IN THE CONSTRUCTION OF THE JAMSHORO EXPANSION PROJECT WAS DUE TO THE SHIFT IN A MAJOR DONOR'S POLICY TO FINANCE POWER PLANTS IN THE PRIVATE SECTOR RATHER THAN IN THE PUBLIC SECTOR.

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- (E) GOP IS PRESENTLY EXAMINING ALTERNATENNANCING ARRANGEMENTS AND EXPECTS TO BE ABLE TO UNDERTAKE THE PROJECT SOMETIME IN THE NEAR FUTURE.
4. THE DETAILED STUDY OF THE PIPELINE TO TRANSPORT FUEL-OIL FROM THE KARACHI PORT TO SITE WAS ALSO WITHIN BECHTEL'S SCOPE OF WORK FOR THE JAMSHORO FEASIBILITY STUDY. THE FINDINGS WERE USED AS INPUT IN THE DESIGN OF A SIMILAR PIPELINE TO PUMP CRUDE-OIL FROM OIL FIELDS NEAR JAMSHORO TO THE REFINERY IN KARACHI. ALSO SEE 3(C) ABOVE.
5. CURRENT AND FUTURE MISSION PROJECTS:
- (A) THE MISSION'S OFFICE OF ENERGY AND ENVIRONMENT (E&E) IS CURRENTLY MANAGING FOUR PROJECTS, NAMELY ENERGY PLANNING AND DEVELOPMENT (391-0478), RURAL ELECTRIFICATION (391-0473), PRIVATE SECTOR POWER (391-0494) AND ENERGY COMMODITIES AND EQUIPMENT (391-0486). CONSIDERING THE WIDE RANGE OF ACTIVITIES UNDER THESE PROJECTS, WE FORESEE A FUTURE NEED TO BUY-IN TO THE CETAP TO CARRY OUT VARIOUS KIND OF STUDIES IN SUPPORT OF THESSSION'S POLICY DIALOGUE ACTIVITIES. THE PRIVATE SECTOR POWER PROJECT IS BEING CO-FINANCED BY THE WORLD BANK AND OTHER BILATERAL DONORS. USAID'S CONTRIBUTION IN THE LOP FUNDING FOR ENERGY SECTOR PROJECTS IS AS FOLLOWS: RURAL ELECTRIFICATION PROJECT (R.E.), DOLS 340 MILLION, PRIVATE SECTOR POWER (PSP), DOLS 170 MILLION, ENERGY PLANNING AND DEVELOPMENT PROJECT (EP&D), DOLS 105 MILLION, ENERGY COMMODITIES AND EQUIPMENT (ECE), DOLS 100 MILLION. THE PROJECT ASSISTANCE COMPLETION DATES (PACD) FOR E&E PROJECTS ARE: R.E. PROJECT, SEPTEMBER 1992, PRIVATE SECTOR POWER, SEPTEMBER 1998, ECE PROJECT, FEBRUARY 1990, AND EP&D PROJECT, JULY 1990.
- (B) ALL THE PROJECTS IN THE MISSION'S ENERGY PORTFOLIO HAVE A HIGH PRIORITY AND VISIBILITY.
- (C) THE REQUESTED DETAILS FOR OBLIGATIONS AND SCHEDULES OF ANY MISSION BUY-INS CANNOT BE PROVIDED.
6. (A) SAME AS 5(A) ABOVE
- (B) LLOWING IS A PROPOSED RANKING OF POTENTIAL AREAS OF FUTURE CETP ACTIVITIES IN TERMS OF THEIR RELEVANCE TO OUR PRIORITIES:
1. PRIVATE POWER DEVELOPMENT
 2. POLICY/PRICING REFORM
 3. RESOURCE ASSESSMENTS
 4. PREFEASIBILITY/FEASIBILITY PROJECT STUDIES
 5. PROJECT/PROGRAM DESIGN
 6. ENVIRONMENTAL PROTECTION
 7. INSTITUTIONAL DEVELOPMENT

8. TRAINING

SPECIFIC NEEDS AGAINST THE ABOVE PRIORITIES CANNOT BE PROVIDED.

- (C) IN OUR OPINION, SOME OTHER AREAS IN WHICH CETAP COULD BE ABLE TO ASSIST ARE: INSTITUTIONAL CAPABILITY OF HOST COUNTRY GOVERNMENT TO EFFECTIVELY ADMINISTER PRIVATE SECTOR ENERGY PROJECTS, AND SPECIALIZED TRAINING IN THE FIELD OF PRIVATE UTILITIES (POWER), TARIFF REFORM, RENEWABLE ENERGY SOURCES, ENVIRONMENTAL IMPACT ASSESSMENT AND ANALYSES, ETC. SINCE THE CURRENT MISSION EMPHASIS IS MORE ON POLICY DIALOGUE TYPE ACIITIES RATHER THAN CAPITAL PROJECTS, CETAP'S AREA OF CONCENTRATION SHOULD ALSO INCLUDE ASSISTANCE IN POLICY ANALYSIS.

C. REGARDS.

END:1802PST/
54270 USAID PK
IDEA WSH

ABV TLX SENT FROM USAID/ISLAMABAD,PAK SEPT 5TH 1988

MMMM

READ REQUEST COMPLETED
EASYLINK

02

UNCLASSIFIED
Department of State

INCOMING
TELEGRAM

PAGE 01 MOGADI 10622 081056Z 0202 020707 A109656
ACTION AID-00

MOGADI 10622 081056Z 0202 026707 A10
ASSISTANCE PROGRAM IN ENERGY AND POWER GENERATING
SECTORS IN SOMALIA.

ACTION OFFICE STEY-02
INFO AFEA-F3 AFPO-04 AFTR-05 SAST-01 RELO-01 TELE-02
/010 A4 KL00

4. PRIVATE SECTOR IMPACTS:
NONE

INFO LOG-00 CCO-00 PASS-00 /000 W
-----351273 081057Z /30

5. CURRENT AND FUTURE MISSION PROJECTS
SEE ANSWERS ON 3E

O 081054Z SEP 88
FM AMEMBASSY MOGADISHU
TO SECSTATE WASHDC IMMEDIATE 6935

6. RELEVANCE OF CETAP TO MISSION PRIORITIES
SEE ANSWER ON 3E

UNCLAS MOGADISHU 10622

7. INSTITUTIONAL AND RESOURCE ASSESSMENTS
NONE

ADM AID DIRECT RELAY

E.O. 12356: N/A
SUBJECT: QUESTIONNAIRE FOR EVALUATION OF THE
CONVENTIONAL ENERGY TECHNICAL ASSISTANCE PROGRAM
(CETAP). SYSTEM REHABILITATION ASSESSMENT AND
MANAGEMENT AUDIT OF THE ENEE BY BECHTEL NATIONAL, INC.,
FEB. 15 TO APRIL 18, 1988.

8. RECOMMENDATIONS
SINCE ENERGY IS NOT A PRIORITY IN OUR MISSION, CDSS AND
PROJECT PORTFOLIO NO FURTHER ASSISTANCE FROM CETAP IS
ANTICIPATED.

REF: TELEX OF AUGUST 25, 1988

DAN VINCENT
POB/ENGINEERING DIVISION
USAID/SOMALIA
AMERICAN EMBASSY
MOGADISHU, SOMALIA
TELEX 789 AEMBA MOG
BORICH

TO: PAUL NESSE
IDEAM INC.
1111 14TH ST., N

NOTE: PASSED ABOVE ADDRESSEE BY OC/T

WASHINGTON, DC 20005
TEL. (202) 289-4332
TELEX 798735 IDEA WSO

SUBJECT: QUESTIONNAIRE FOR EVALUATION OF THE
CONVENTIONAL ENERGY TECHNICAL ASSISTANCE PROGRAM
(CETAP). SYSTEM REHABILITATION ASSESSMENT AND
MANAGEMENT AUDIT OF THE ENEE BY BECHTEL NATIONAL INC.,
FEB. 15 TO APRIL 18, 1988.

REF: TELEX OF AUGUST 25, 1988

AS REQUESTED IN YOUR TELEX, THE FOLLOWING ARE MISSION'S
RATING OF ABOVE PROGRAM:

1. CONTRACTOR PERFORMANCE

A - 5
B - 5
C - 5
D - 5
E - 5
F - 4
J - N/A

2. PROJECT RESULTS

A - N/A
B - N/A
C - N/A
D - 5
E - 4.

3. MISSION/HOST GOVERNMENT RESPONSE TO PROJECT

A - YES
B - YES
C - NO
D - N/A
E - NONE (NOTE: ENERGY IS NOT A PRIORITY IN
USAID/SOMALIA STRATEGY AND PROGRAM.
F - THE REPORT PREPARED BY BECHTEL HAS BEEN USED BY
ENEE AND THE WORLD BANK AS THEIR BASIC DOCUMENT FOR
OUTLINING AND IMPLEMENTING THE ONGOING TECHNICAL

UNCLASSIFIED

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THAILAND RESPONSE

EASYLINK MBX 2528007A001 13SEP88 22:13/07:29 EST
VIA: 798735

TO: 62813914

RCA SEP 13 2310
IDEA WSH

14 SEPTEMBER, 1988

MR. PAUL HESSE
IDEA, INC.
1111 14TH ST., NW
WASHINGTON, D.C. 20005
TELEX NO.: 798735 IDEA WSH

SUBJECT: QUESTIONNAIRE FOR EVALUATION OF THE CONVENTIONAL ENERGY
TECHNICAL ASSISTANCE PROGRAM (CETAP)

WITH REFERENCE TO YOUR TELEX OF AUGUST 24, 1988, THE FOLLOWING
ANSWERS ARE CODED TO YOUR LIST OF QUESTIONS. WE UNDERSTAND THAT
YOU WILL CALL US AT A LATER DATE FOR CLARIFICATION OF THESE
WRITTEN RESPONSES.

1. A - 2
B1 - 2
B2 - 1
C - 2
D - 1
E - 2
F - 1
H - 1
 2. A - 1
B1 - 2
B2 - 2
B3 - N/A
C - 2
D - 2
E - 2
 3. A - NO.
B - NO.
C - NO.
D - FINAL REPORT WAS DELIVERED LATE. NATURAL GAS IS NOT FEASIBLE
FOR EXPANDED USE AS A TRANSPORT FUEL HERE.
E - NO.
 4. STUDY WAS CONDUCTED WITH ASSISTANCE FROM THE PETROLEUM AUTHORITY
OF THAILAND.
 5. N/A
- 

6. B - PREFEASIBILITY/FEASIBILITY PROJECT STUDIES

PROJECT/PROGRAM DESIGN - 3

TRAINING - 4

INSTITUTIONAL DEVELOPMENT - N/A

POLICY/PRICING REFORM - 1

PRIVATE POWER DEVELOPMENT - 2

ENVIRONMENT/PROTECTION - 5

C MISSION DOES NOT HAVE ANY CONVENTIONAL ENERGY PROJECTS AT PRESENT TIME, ONLY CENTRALLY FUNDED TRAINING AND TA. MISSION PLANNING DOES NOT INCLUDE ANY MORE ENERGY PROJECTS. THE RTG IS INTERESTED IN FUNDING FOR LARGE PROJECT IMPLEMENTATION, NOT FEASIBILITY STUDIES.

CRAIG STEFFENSEN
USAID/THAILAND

IDEA WSH

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APPENDIX C
SUMMARY OF CETA TECHNICAL SERVICE ORDERS (TSO)

APPENDIX C

SUMMARY OF CETA TECHNICAL SERVICE ORDERS (TSO)

The following is a summary of the Statement of Work (SOW), the results as indicated in the deliverables (ie: final reports), the conclusions and recommendations made in the final report and the follow up activities, if any, made for the individual TSO of the CETA project as of September, 1985. Each TSO number, its title and the country in which the work was performed is indicated in bold, underlined type. For each, the dates of performance, the dollar amount of the TSO as awarded in separate contract amendments, and who the project's main initiators where are provided.

TSO# 1. Prefeasibility Study of the Jamshoro Power Plant Project
Pakistan

Dates: 11/5/85 to 1/31/86

Amount: \$162,436.00

Initiated By: USAID/Pakistan

Scope of Work:

Objectives:

Conduct a study to determine guidelines for a power plant engineering feasibility study for a power generation complex at Jamshoro.

- a. Evaluate technical configurations for the units including conventional steam, combined cycle, and others; and optimum size of the complex, and its impact on the National grid.
- b. Identify the least cost approach to solving the fuel supply mix and logistics for the plant.
- c. Investigate the feasibility of using and sizing an oil pipeline from Karachi and/or other coastal area to supply the various fuel supply options.
- d. Identify the order-of-magnitude cost of the total project.

SOW:

To meet the above objectives, contractor will perform the following tasks:

1. Fuel Supply Logistics. Investigate potential transportation alternatives for the fuel required by the plant. For the pipeline:
Pipeline Route,
Pipeline size and pumping requirements, and
optimal fuel mixing for viscosity control,
Assess potential for future use with coal/oil mixtures or other alternatives for possible future coal substitution.

2. Investigate powerplant configurations including conventional steam and combined-cycle technologies for the station, and make recommendations for specific configurations for the first two units and for additional four units. Evaluate sensitivity of the configurations to the fuel mixture (Task 1).
3. Provide a detailed pre-feasibility report which summarizes the findings of the above tasks, and which will serve as the basis for USAID, World Bank and WAPDA to issue for solicitation a full scale feasibility report. Components of the report will include: identification of hardware options, order-of-magnitude costs, and project implementation schedule.

Results - Deliverables:

Prefeasibility Study of the Jamshoro Power Plant Project

Conclusions/Recommendations:

Recommended for a conventional oil fired steam generation plant, and against a combined cycle unit. Concluded optimum unit size and evaluated options.

Follow Up Activities:

Feasibility Study

TSO# 5. Feasibility Study of the Jamshoro Power Plant Project

Oil-Fired Power Generation Complex at Jamshoro - Assessment of Feasibility.
Pakistan

Dates: 7/7/86 to 11/30/86

Amount: \$937,400.00

Initiated By: Continuation of TSO 1.

Scope of Work:

Objective:

Perform a detailed feasibility study of the proposed Phase II of the Jamshoro Complex, including the proposed fuel pipelines from Karachi to Jamshoro and Jamshoro to Kotri.

SOW:

Contractor will perform an assessment of the feasibility of the proposed Phase II of the Jamshoro Complex under the terms described in the detailed SOW.

Results - Deliverables:

Report: Feasibility Study of the Jamshoro Power Plant Project
December 1986

Conclusions/Recommendations:

Concluded that it was feasible to build the plant as recommended by the Prefeasibility Study, and identified specific details necessary for the construction of the plant.

Follow Up Activities:

None.

TSO # 7. **Planning for the Jamshoro Feasibility Study**
Jamshoro Power Project in Pakistan
Pakistan

Dates: 9/26/85 to 9/30/86

Amount: 18,658.00

Initiated By: Continuation of Work From Previous TSOs.

Scope of Work:

Objective:

Provide technical support to USAID/Pakistan in preliminary planning for the feasibility study to be conducted under TSO # 5.

SOW:

1. Review the SOW with representatives of USAID/Pakistan.
2. Establish preliminary project organization and staffing.
3. Review qualifications of designated team members.
4. Develop work plan outline.
5. Establish a time schedule.

TSO # 11. Program Design Issues and Options for Private Sector Power and Distribution Project
Private Sector Power Generation and Distribution Project
Design Pakistan

Dates: 9/30/86 to 1/31/87

Amount: \$78,024.00

Initiated By:

Scope of Work:

Objective:

Identify the key issues that are relevant to the successful inducement for the private sector to invest and participate in power system expansion and operations in Pakistan, and develop the preliminary analysis required for high-level GOP Mission dialogue regarding the proposed project.

SOW:

1. Review Mission project concept paper and related background documents (18 total).
2. Develop preliminary list of key project issues including:
 - Scope of Project
 - GOP/AID/Multilateral Bank Lending
 - Power Generation Project Development

3 to 7. See attached sheet.

Results - Deliverables:

Report: Program Design Issues and Options for Private Sector Power and Distribution Project, June 1987

Conclusions/Recommendations:

Identified issues and opportunities for private sector power generation in Pakistan. Recommended institutional reforms necessary for private sector power generation to be successful.

Follow Up Activities:

None.

TSO # 2. Consultant Mission to Assess the Use of Natural Gas as a Transport Fuel Thailand

Dates: 1/29/85 - 1/31/86

Amount: \$67,044.00

Initiated By: Study requested by Petroleum authority of Thailand (PTT) to USAID.

Scope of Work:

Objective:

Investigate alternative uses of natural gas with particular emphasis on its uses as a transport fuel. Project undertaken in two phases:

1. Scoping phase to examine existing proposals for using Thailand's natural gas, determine if sufficient supplies are available, and assess relative economics of using natural gas a transport fuel;
2. In-depth assessment phase, if results of phase one are positive; produce a work plan for more in-depth analysis with the following objectives: a. find most economic and financially attractive means to use Thai natural gas for transport fuel; b. assess the technical, economic and financial feasibility of using compressed natural (CNG) as a transport fuel; c. determine the competitiveness of using CNG over other fuels; d. recommend an implementation plan for a CNG project in Thailand.

SOW - Specific Activities:

1. Review existing studies.
2. Prepare an overview of projections for natural gas use now incorporated in Thailand's current development plan.
3. Prepare and analysis of which transport fuels should be given priority and which technologies might be considered to provide those fuels.
4. Prepare a detailed work plan for phase two (above).

Results - Deliverables:

Final Report: Natural Gas Utilization As A Transport Fuel In Thailand, September 1986.

Conclusions/Recommendations:

1. Reserves of natural gas are sufficient to support substantial use as a transport fuel.
2. But, pace of current development (12/85) will not sustain large scale use for a transportation fuel.
3. Current Thai natural gas price is twice 9/86 U.S. price but is insufficient to justify further development of existing proven reserves.

4. Current gas prices are too high to compete with imported diesel fuel.
5. Lack of existing gas distribution pipelines limit economic use of CNG to large vehicle fleets in metro Bangkok.
6. Cost of pipeline construction will not be covered by replacement of even large percentages of transport use of diesel with CNG.

Thus, there is little economic incentive for a natural gas transport fuel feasibility study. Despite this, the team developed work plans for further study phases.

Follow Up Activities:

No other Mission funded or CETA activities undertaken to follow up results of project since conclusions were negative for use of natural gas as transport fuel.

TSO # 3. System Rehabilitation Assessment and Management Audit of the Ente Nazionale Energia Elettrica (ENEE)
Technical Assistance to the Somali Power Company.
Somalia

Dates: 2/15/86 to 4/18/86

Amount: \$74,119.00

Initiated By: Request from GOS to USAID/Somalia

Scope of Work:

1. Examine existing and future power demands based on realistic loads and development plans;
2. Examine technical and operational performance of generation, transmission, distribution and auxiliary equip.;
3. Examine technical and non-technical system losses including elimination of low system load factors;
4. Examine availability of spare parts and timely fuel supplies, and adequacy of operational supervision and maintenance;
5. Examine adequacy of billing and accounting procedures to avoid high loss rates; and
6. Identify personnel needs and opportunities for training.
7. Final report should: provide a description of the institutional requirements to achieve the objectives of the work; a description of the equipment, spare parts supplies and other physical resources that should be provided to achieve the objectives; and estimate costs of the physical resources required including identification of possible suppliers.

Results - Deliverables:

Summary Report: System Rehabilitation Assessment and Management Audit of the Ente Nazionale Energia Elettrica (ENEE), May 1986

Recommendations/Conclusions:

Recommended action to be taken by the Somali government to rehabilitate all phases of ENEE, including power generation, transmission, mnapower, and financial aspects.

Follow Up Activities:

None.

TSO # 4. Support Activities for Laboratorium Sumber Day Energi (LSDE) Pusiptek Energy Research Laboratory - Technical Asst Indonesia

Date: TSO: 1/13/86 to 9/30/86

Amount: 203,138 or 121,975

Initiated By: Mission request for technical assistance.

Scope of Work:

- 1: Review LSDE Master Plan to determine basic direction of laboratory development in terms of mission goals, organization etc. Provide suggestions on implementation of master plan.
- 2: Analysis and Inventory of BPPT Projects.
Assess their usefulness.
- 3: Review GOI Agency Work related to the CCCT Division.
Identify specific needs that LSDE can serve.
Identify how these institutions and their staffs can contribute to research to be undertaken within LSDE/CCCT.
- 4: Industrial Use of CCCT Research.
Assess types of existing co.s in Indonesia that can benefit from CCCT work and types of new co.s that could be created based on CCCT research.
- 5: Project Formulation and Prioritization.
Work with Battelle and recommend modifications to existing projects and suggestions for new projects.
- 6: Project Papers.
 - A. No. 1: Results of Tasks 2, 3, and 4; listed and annotated.
 - B. No. 2: Recommendations of priorities among projects identified.
 - C. No. 3: Training plan for LSDE staff participation in all the Tasks.
- 7: Advisory Services.
Advise and assist the CCCT Div. Manager and staff in their efforts to develop the first annual operating plan for the Division.
- 8: Assistance Regarding Projects Proposed By Others.
Assist BPPT in formulating projects proposed by third parties and other donors.

Results - Deliverables:

Final Report: Bechtel Support Activities for the LSDE, July 31, 1986.
Summary of Activities:

1. 1/86 to 2/86 - Review Draft Masterplan
Recommendations on draft made by Lijesen were not incorporated into Final Master Plan by Battelle
2. 1/86 - Project Assessment to USAID
3. 2/86 - Assistance to Battelle
4. 2/86 - Formation of BPPT Assistance Team
5. 2/86 - Assistance in Establishing Steering Committee
6. 2 to 5/86 - Review BPPT Energy Projects
Analyzed 65 on-going projects at BPPT.
7. 4/86 - Assistance to USAID
Assistance in articulating USAID perspective and expectations for assistance to project.
8. 6/86 - Presentation to Steering Committee
9. 6 and 7/86 - Continued LSDE Project Development
Defined major activities necessary to have LSDE functioning as a major research laboratory.
10. 6 and 7/86 - Major Procurement
Review of procurement plans equipment for fuel and combustion research.
11. Assistance to LSDE Project Development Team.
Training of LSDE staff for task organization.

Conclusions/Recommendations:

Conclusions:

1. Project to develop research laboratory at Serpong is very complex; three specific problems or difficulties identified:
 1. Conceptual difficulties in articulating research priorities.
 2. Moving the project forward.
 3. Transition from energy research at BPPT to research at BPPT and LSDE.
2. USAID and BPPT have different Project Perspectives: BPPT wants to get technical programs and equipment in place; USAID thinks institutional, budget and appropriate staffing issues should be ironed out first.
3. BPPT staff will require technical assistance in all aspects of its project development due to complexity of undertaking and the inexperience of the current staff.

Recommendations:

1. USAID and BPPT must come to terms (which they were on the way to).
2. BPPT and LSDE staff will require "day to day" assistance. ie expat. Expat. advisors will be required for overall project management.
3. Need definition of LSDE priorities.

4. Shift focus of project work to specific issues, especially in regard to those actions necessary for opening of Laboratory.
5. USAID must continue its commitment and support.

Follow Up Activities:

BPPT established LSDE as a semi-autonomous entity. Support to LSDE continues in a variety of forms one of which is the procurement of Fuel and Combustion equipment which is currently underway.

**TSO # 6. Feasibility Study of Cane to Energy Project
Monymusk Cane Energy Project in Jamaica
Jamaica**

Date: TSO: 3/24/86 to 4/8/86

Amount: \$91,737.00

Initiated By: Continuation of work initiated by USAID/Jamaica.

Scope of Work:

Objective:

Provision of technical and management support to USAID in preparation of the Monymusk Cane Energy Project in Jamaica.

SOW:

1. Provide guidance and support for preparation of the feasibility report.
2. Prepare an analysis to identify and estimate the potential electrical power market for this project.
3. Coordinate and integrate with the conceptual design, cost estimating, and economic-financial analysis of the project between Bechtel and TDP and Bechtel and Ronco.

Results - Deliverables:

Final Report: Feasibility Study: Volumes 1 , 2A and 2B.

Conclusions/Recommendations:

1. An investment of US \$47 million for the proposed power station would be technically, financially and economically feasible (the later if US \$9 million is provided to ensure the target level of cane production each year). Base case electrical pricing for sale to JPS in 1990 was estimated to be cost-competitive with future coal-steam units at levelized 75 mills per kWh.
2. Annual cane production levels are critical for achieving the estimated rates of return (more than double from current levels).

Follow Up Activities:

Field trials have been conducted on cane trash collecting equipment, but where conducted when harvesting season had almost ended. Thus results where inconclusive. More trails are planned for next season.

Project has not been started up for variety of reasons, mainly political in nature and due to hesitancy of Bechtel and GOJ to come to terms on financing of the project.

TSO # 8. Consultant Mission for Assessment of Oil Shale to Power Project Jordan

Dates: 9/26/88 - Still Open

Amount: \$ 354.870.00

Initiated By: Private sector interests and the Government of Jordan with USAID/Jordan

Scope of Work:

Objective:

Confirm potential for developing a commercial scale power generation project that will use circulating fluidized bed technology to directly burn indigenous oil shale, and to develop project definition.

SOW:

1. Information Collection:
 - Meet officials,
 - Acquire reports, and
 - Visit candidate site.
2. Preliminary Assessment:
 - Post trip data analysis,
 - Identification of key issues, and
 - Preliminary Overview.
3. Project Definition:
 - Expand resource assessment,
 - Develop sample acquisition plan,
 - Define oil shale combustion test,
 - Plan water supply definition,
 - Create Conceptual Integrated Production System Plan, and
 - Develop Conceptual Cost Estimate And Prefeasibility Evaluation.
4. Action Plan:
 - Overall Project Approach, and
 - Plan, budget, schedule for sample acquisition, test burn and preliminary feasibility evaluation.

Results - Deliverables:

Report: Report on Phase I, Consultants Preliminary Assessment

Conclusions/Recommendations

Evidence of project viability enough that it was recommended to proceed with a detailed Prefeasibility Study, Phase II.

Follow Up Activities:

Complete Phase II

**TSO # 9. Prefeasibility Study of a Coal Fired Power Plant
Costa Rica**

Dates: 8/17/86 to 12/31/86

Amount: \$86,346.00

Initiated By: Mission request for technical assistance and continuation of previously initiated.

Scope of Work:

Objective:

Develop a work scope and conduct a prefeasibility study of a mine-mouth 40 MW coal fired power plant, develop a preliminary conceptual design, provide order of magnitude cost estimates and provide comments and recommendations to RECOPE on their Phase I Geological Report, Dravo's mining feasibility study report and RECOPE's subsequent geological investigations.

SOW:

1. Develop a work scope which shall include a work plan, proposed schedule and milestone chart, detailed level of effort projections for proposed technical resources and a detailed budget.
2. Conduct a Prefeasibility Study including:
 - site selection for mine-mouth plant,
 - conceptual plans for mine development and materials handling,
 - develop a baseline preliminary conceptual design for one plant,
 - prepare an order of magnitude costs of coal-fired power plant, including connection to grid,
 - evaluate potential for conversion of a cement factory to coal use, including process changes and estimated cost,
 - provide brief comments regarding feasibility of coal substitution for Bunker oil at Moin, Colina and San Antonio Power Stations,
 - perform technical and economic assessment of the above options.
 - coordinate closely with USGS, the Mission and GOCR agencies,

- develop list of coal uses to assist RECOPE in planning future coal utilization,
- provide comparative prices per million BTU from coal, Bunker C fuel, biomass, diesel and hydropower.

Results - Deliverables:

Final Reports: Prefeasibility Study of Coal Use In Costa Rica:

Report on Task 1: Coal Fired Power Plant

Report on Task 2: Coal Reserves and Mine Mouth Assessment

Report on Tasks 3, 4, 5 & 6

Conclusions/Recommendations:

Report 1:

1. Cost estimates in the studies were in the +/-25% range for unit sizes from 10 to 60 MW. Further studies should focus on 50 to 60 MW unit size with cost estimates at much higher accuracy.
2. Both dollar costs per installed kw and cost of electricity decrease with increase in plant size. Further studies should use 50 to 60 MW base load plant size with 70 or greater percent plant capacity factor.
3. 60 kilometer 138 kv transmission line required to deliver electricity from proposed mine-mouth plant to Port Limon at a cost of some US \$6 million. Further study is needed to determine if the plant could be built at Port Limon, ie whether the cost of coal transport would be less than that of the transmission line.
4. Further coal transportation studies should be undertaken for delivery of coal to power plants and cement plants under different siting scenarios.
5. Environmental emission and solid and liquid waste discharge limits should be established for the plant with appropriate environmental studies. These standards or limits will affect the plant costs.

Report 2:

1. Based on the order of magnitude cost of \$26.50/tonne of coal, further study of Uatsi coal field should be continued.
2. Study should be undertaken by a fully qualified engineering firm.
3. The geology of the deposit should be thoroughly reviewed.

Reader is referred to pages 2-8 and 2-9 of the report for remainder as they are too extensive to be presented here.

Follow Up Activities:

Given level of investment required to develop the coal reserves, the GOCR is carrying out some of the recommendations at a very slow rate.

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TSO # 12. Petroleum Financial Administration Project - Training Program Structure Component (for the Oil Industry)
Ecuador

Dates: 9/26/85 - 1/31/86

Amount: \$ 85,000.00

Initiated By: Course sponsored by USAID/Ecuador and S&T/EY.

Scope of Work:

1. Begin introductory course on basic petroleum terminology and concepts in:
 1. Petroleum Engineering and Industry Operations
 2. Petroleum Accounting
 3. Quantitative Methods for Petroleum-Related Analysis
Taught in Ecuador, for three weeks after above course
 4. Petroleum Finance

Results - Deliverables:

Training program was evaluated in 1/86. Report detailed evaluation results and made recommendations to improve overall performance of DGTP. Report also provided background information of the training program and the present situation of DGTP.

Conclusions/Recommendations:

Training program and associated courses were judged to be of good quality, were well planned and implemented, the instructors were very well qualified, and that the majority of the participants had increased their skills and technical abilities. The overall assessment on the part of the contractor was that the program has achieved its goals and objectives. However, USAID offered a contrary opinion: due to a repeated turnover in the directorship of DGTP and resulting hiatus in activities, little attention and no follow up was given to the results of the training program. USAID/Ecuador felt that although the program enhanced staff skills it did not lead to a general upgrading of institutional capabilities.

Follow Up Activities:

To USAID/Ecuador's knowledge the GOE has not implemented any of the recommendations put forth by the contractor and no follow up has occurred. This is probably primarily due to the changing political scene in Ecuador and staff changes in the DGTP.

APPENDIX D

**RESPONSIBILITIES AND ACTIVITIES OF THE CETA
WASHINGTON PROJECT OFFICE**

RESPONSIBILITIES AND ACTIVITIES OF THE CETA
WASHINGTON PROJECT OFFICE

As specified in the original RFP and the CETA contract, Bechtel established a Washington, D.C. Project Office (WPO) staffed with a project manager plus other key individuals (full and part time) to assist in project planning, budgeting, scheduling, logistics, selection of field personnel, and progress review. These activities are carried out in liaison with Bechtel's home office, USAID field missions and relevant industry representatives. Among the priority functions specified by the contract, WPO has provided the following:

- A. PROGRAM/PROJECT PLANNING
- B. ORGANIZING AND MOBILIZING FIELD ACTIVITIES
- C. REACTING TO UNSCHEDULED REQUESTS
- D. TECHNOLOGY STATE OF THE ART REVIEWS
- E. REPORTING

These five WPO functions are described below. Following the general descriptions below, selected examples of WPO activities under each functional area are provided. Backup files are available for all of the example activities.

- A. PROGRAM/PROJECT PLANNING - Reviewed activities proposed by A.I.D. in terms of appropriateness; stage of identification and development, particularly with respect to USAID Mission interest and involvements; the logical scope for a first phase effort; the readiness of the host country to accept a counterpart role in its performance; and other factors considered to be relevant. Evaluated expected host-country benefits and costs where possible. Developed master program schedule for the accomplishment of selected activities that reflect priorities assigned and which indicated the rate at which funds could be obligated to perform them. The above planning effort was conducted on a broad basis for the entire conventional energy program on five separate occasions during the first two-and-a-half years of the contract. Planning was also done for individual field activities. Examples of this specific planning effort, including laying the groundwork, developing work scopes and budgets, and initiating the activity, are the following:
 - The Pakistan/Jamshoro power plant studies, which required 11 months of Washington office planning effort;

- The Jordan oil shale study required 16 months of effort;
- The Jamaican cane energy project required five months before the study and 15 months after the study to present results and attempt to implement the project;
- Philippines private power required 8 months of effort;
- Somalia technical assistance to the National Power Company required 4 months.
- The India IGCC study, which will begin in Jan 1989, required 16 months.

B. ORGANIZING AND MOBILIZING FIELD ACTIVITIES - After Office of Energy decisions to undertake a field activity, WPO performed the following:

- **Scope of Work:** Prepared proposals describing the objectives to be achieved, the approach to be implemented, the specific subtasks to be undertaken, the schedule to be followed, and requirements for reporting to show progress and final conclusions. Provided work scopes on field activities for subcontractors (individual consultants and companies). Prepared solicitations, conducted competitive evaluations of proposals, and negotiated contracts for subcontracting work.
- **Budget:** Prepared in-depth line-item budgets, and rationale to support them, projecting estimated cost of work.
- **Personnel Assignment:** Defined requirements, evaluated qualifications, and specified staff personnel from the Bechtel organization or subcontractors, to be assigned to perform the tasks. Provided specific task-oriented resumes of personnel qualifications and experience, and designated the person to act as team leader. Provided logistics support including travel, visa, and in-country backup.
- **Concurrences and Clearances:** Assisted the Office of Energy to arrange for the necessary concurrences and clearances from offices within AID/Washington and from the respective USAID Missions.

C. REACTING TO UNSCHEDULED REQUESTS - WPO has provided services requested by the Office of Energy that are not specifically identified as part of the centrally-planned schedule of tasks but are nevertheless within the general scope of the contact. Specific examples of these services are listed later in this write-up.

- D. TECHNOLOGY STATE OF THE ART REVIEWS - WPO's Home Office has an on-going "in-house" activity that keeps aware of what is being done in the various conventional energy technologies. The Washington Office continually reviews material from the Home Office and elsewhere with the purpose of evaluating its potential for introduction into the countries that are receiving assistance under this program. Specific examples of this effort for the first two-and-a-half years of the contract are cited later in this write-up.
- E. REPORTING - The Washington Project Office provides several kinds of reports:
- Periodic contract reports related to invoices and budget projections of past, current and future work in the Washington Project Office and for Field Activities.
 - Periodic activity reports showing program/project status, information about the content of field activities, and special reports about technologies or programs of general interest to a wide audience.
 - WPO also receives all draft reports from field activity teams, conducts review meetings with various parties-at-interest, including U.S. Government agencies, multinational organizations, trade associations, private industry, and the financial community, and recommends/makes revisions to the reports based on these inputs. For example, the Jamaica cane energy study draft report was reviewed with the World Bank, IFC, Inter-American Development Bank, Department of Energy, Department of Commerce, the White House, Congressional staffs, NRECA, General Electric, Westinghouse, Tate & Lyle Limited, Princeton University, and the University of Puerto Rico. to name a few.

SELECTED EXAMPLES OF WASHINGTON PROJECT OFFICE ACTIVITIES UNDER EACH OF THE FIVE FUNCTIONAL AREAS

A. PROGRAM/PROJECT PLANNING

1. At the request of the Government of Morocco, made a presentation to officials of several ministries on progress in the Jordan Oil Shale study and potential for applying the direct combustion technology to Moroccan needs. Prepared follow-on briefing packages. GOM expressed interest in further assistance for shale power development in the Tarfaya region. (4/88 to Present)

2. On a trip to Israel to present and review oil shale activities related to the Jordan shale study, opened a dialogue with companies at the leading edge of oil shale direct combustion and desalination using low grade heat. Compared Israeli data to Jordan study results. Prepared trip report. (4/88 to Present)
3. In a visit to Egypt, presented CETA capabilities in Energy and generated interest in energy technology screening tools, expert systems based on computers, private power concepts, and advisory services and workshops in the energy area. Prepared trip report and follow-on briefing packages. (4/88 to Present)
4. Prepared a paper on energy problems in LDCs and the need for an expanded A.I.D. energy budget. (11/86 to 12/86)
5. Supported the Jamaica cane to energy project during and after the study report was submitted through scores of meetings, letters, concept papers, briefings and revised economic analyses involving the Jamaican Prime Minister and Minister of Energy and senior officials of the U.S. Government, financial institutions, multilateral lenders, and private companies. (2/86 to 3/88)
6. Evaluated status of Bolivia/Brazil gas discussions through contacts with TDP, the Italian Government and Electroconsult Company, and Bechtel Field personnel in Rio de Janeiro. (4/87)
7. Coordinated with various Bechtel offices to gather information on fluidized bed combustion and other technology transfer opportunities in India. Made arrangements for Bechtel participation as commercialization experts in team visit to India to promote new energy programs. Bechtel participation subsequently cancelled. (10/85 to 12/85)
8. Developed a detailed scope of work for a rice hull power plant project to be implemented with major private sector participation, including Agri-Electric and Universal Energy International. (9/86 to 12/86)
9. Developed concept and work scope for an advanced fossil energy technology guide and screening tool to assist LDCs in their decision making related to indigenous energy resources and how to exploit them with advanced U.S. technologies. (11/87 to Present)
10. Developed concept and work scope for a new program initiative related to energy and free trade zones. Conducted an initial screening of free trade zones in USAID priority countries to identify promising energy projects (1/88 to 6/88)

11. Established working relations with California Energy Commission (CEC) to improve exchange of information and identify joint opportunities with A.I.D. in such areas as Philippines geothermal and biomass to power, private sector power development in the Philippines, Thailand, and Costa Rica, and energy training programs. CEC workshop on Southeast Asia and Central American trade opportunities was attended and a report prepared. (2/88 to Present)
12. Developed relationship between AMFAC Energy Corporation in Hawaii and A.I.D. for the cane to energy program. Arranged briefing by AMFAC President George St. John to Office of Energy staff. (2/87 to Present)
13. Assisted in organizing, coordinating, implementing, providing in-country logistics, and following up the Philippines/ASEAN Agro-Industrial Roundtable Conference in Manila. Presentation on cane energy was prepared and delivered. Groundwork was laid for private power contacts and initiatives. (2/87 to Present)
14. Prepared briefing package and letters on Moroccan oil shale, the Jordan oil shale study and cane energy for use by the Office of Energy in an extended visit to Morocco. (7/87 to 11/87)
15. Evaluated the technology and economics of a private sector proposal by CTC Company for a municipal solid waste/sludge power plant opportunity in Cairo. Prepared issue papers, briefing materials, and arranged meetings with the principals. Briefed USAID Mission officials in Cairo. (1/87 to 7/87)
16. Prepared statements of work for Pakistan in three areas: 1) Developing a national level tariff structure, 2) review of forecasted power supply and demand over the next twenty years, and 3) determining the cost of interruption of power supply to the local economy. (3/86 to 5/86)
17. Developed a work scope for identifying private sector conventional fossil energy opportunities for dual fuel use in the Philippines sugar industry. Prepared cables, letters and briefing materials and made presentations to Philippine sugar industry representatives, the Philippine Embassy, A.I.D. officials, venture capitalists, and banks. (6/87 to Present)
18. After a visit and interviews, prepared a technical profile of the Philippine cane plantation and sugar mill at the Central Azucarero de Tarlac, a candidate for private power initiatives. (5/87 to 7/87)
19. Evaluated and provided a written review of an energy park proposal by Energy Resources, Inc. (11/87)

20. Developed a brochure on CETA capabilities and experience in English and Spanish. (4/88 to 7/88)
21. Prepared paper on candidate conventional energy projects in power generation, power system efficiency, privatization, rural electrification, institutional programs for utilities, and power/energy planning. (7/86)
22. Developed brief on the need for power system rehabilitation in Sudan and a proposal on conducting a survey of requirements. (5/86)
23. Prepared concept paper suggesting requirements/criteria for evaluating proposed energy activities of the Office of Energy and selecting candidate countries. (3/86)
24. Prepared a briefing paper on the need for A.I.D. to establish a fund to promote private sector power generation and distribution in the industrial, agricultural, and commercial sectors of Pakistan. (8/86)
25. Prepared a concept paper comparing public and project financing approaches using the Jordan oil shale case as an example. (6/86)
26. Created a marketing plan for CETA in the areas of indigenous fuel development, energy technology applications, and private power. (3/88 to 5/88)
27. Prepared a discussion paper on opportunities in Third World countries for U.S. fossil energy technologies and services. (2/87 to 3/87)
28. Prepared and made presentations on opportunities for U.S. energy industry participation in U.S. Government programs that address energy problems in developing countries, to the Office of Fossil Energy and International Affairs of the Department of Energy. (11/86 to 12/86)
29. Developed concept papers for Office of Energy's "piggy-back" and "lead" modes for reinforcing existing or stimulating new private sector involvement in Third World energy problems. (3/87 to 5/87)

B. ORGANIZING AND MOBILIZING FIELD ACTIVITIES

1. Assisted in developing and coordinating TDP, GOI and Mission support for Indian Integrated Gasification Combined Cycle (IGCC) project. Prepared several preliminary work scopes and budgets, gathered information from U.S. vendors on gasification

technologies, and gave numerous briefings to parties at interest. (9/87 to Present)

2. Prepared assessment of existing private power activities and a work statement for private power development in the Philippines, to include biomass, geothermal and coal options. Work has been initiated. (2/88 to Present)
3. Conducted preliminary scoping and discussions for providing assistance to the PLN in Indonesia for evaluating private power GOT project proposals. (7/88 to 10/88)
4. Identified and arranged participation of cooperating country nationals in field activities in Jordan, Jamaica, Costa Rica, Somalia, Indonesia, Thailand, Philippines, and Pakistan. (11/85 to Present)
5. Prepared a concept outline and activity schedule for oil and gas development requirements in Yemen, including organization development and manpower planning. This followed the confirmation of major fossil energy reserves. (3/86 to 6/86)

C. REACTING TO UNSCHEDULED REQUESTS

1. Developed and presented a briefing on Conventional Energy Field Activities to the University of Pennsylvania Energy Policy and Planning course. (1/88 to 2/88)
2. Made a presentation on a computer based energy technology screening tool for use in LDCs to the University of Pennsylvania Energy Policy and Planning course. (5/88 to 6/88)
3. Prepared and presented a briefing on the power crisis, economic development, and a role for the private sector to the Global Development Conference. (3/88 to 4/88)
4. Delivered a presentation on commercial low grade coal development in Costa Rica to the 14th Biennial Lignite Symposium. (4/87 to 5/87)
5. Delivered a presentation on U.S. International Private Power Experience to the Central American and Caribbean Workshop on Electric Power held in Costa Rica. (8/88 to 9/88)
6. Prepared private power case studies of projects utilizing fluidized bed/low grade coal and cane to energy technologies. The studies included generic design parameters, projects costs, financing plans and assumptions, and cash flow analyses. (1/88 to 3/88)

7. Prepared a report on private power for input to the Office of Energy "White Paper." The report provided an overview of the international privatization experience of U.S. companies, lessons learned from that experience, and a process for analyzing and developing projects. (9/87 to 12/87)
8. For India, performed a study and submitted a report on the state of competitiveness of the U.S. energy industry in supplying equipment and services for several technologies designated as high priority by the Indian Government. (2/88 to 5/88)
9. Helped form and coordinate an "Ad Hoc" energy industry advisory group with representatives of major corporations. Informal meetings have been held to discuss the developing world power crisis and U.S. industry views on appropriate actions. This informal association has now evolved into the A.I.D. Administrator's "Energy Industry Review Group," currently visiting selected countries to elicit ideas on how best A.I.D. and the private sector can work together in tackling the power crisis. (3/87 to Present)
10. Prepared a memo on current and future private power activities of the Office of Energy in the Latin American/Caribbean region. (7/88)
11. Prepared a paper titled "A Second Look at A.I.D., Energy, and the Developing World" for use by the Office of Energy in briefing U.S. Government officials and various Washington organizations. (4/86 to 6/86)
12. Prepared briefing materials for use with the A.I.D. Administrator on energy activities related to institution building, technology transfer, and leveraging World Bank projects. (10/86)
13. Prepared an issues paper dealing with questions of private power policies, legislation and existing initiatives in the Dominican Republic. (6/87)
14. Reviewed and prepared a memo with comments on the DOE report entitled, "U.S. Fossil Fueled Technologies for Developing Countries - Dominican Republic Country Packet." (6/88)
15. Reviewed and prepared written comments on the draft report "An Analysis of the Commodity Import Program as a Mechanism to Finance Renewable Energy Transactions." (3/88)
16. Prepared an issue outline for the subject of "Grants/Loans/Cost Sharing for Prefeasibility and Feasibility Studies of Private Power and other Energy Projects." (5/88)

17. Reviewed and prepared written comments on the USAID document dealing with Egypt's emergency power project. (3/88)
18. Prepared and presented a briefing on private power experience in Turkey (developing a coal-fired power project) to the Bangkok Workshop on "Energy Conservation and Private Power Generation." (8/86 to 10/86)
19. Prepared outlines and identified candidates for CETA participation in the Indonesia seminar on Private Power. (11/87 to 12/87)
20. Participated in a Johns Hopkins University (SAIS) seminar on energy issues in the Third World. Continued the contact with participants through correspondence dealing with private power issues. (2/88 to 4/88)
21. Analyzed, prepared briefing papers, and made presentations on Puerto Rican "936" funds as a potential source of financing for the Jamaican cane energy project and other candidate energy projects in the Caribbean. (5/86 to 11/87)
22. Briefed National Security Council staff of the White House on private power initiatives, including Jamaica cane energy and the Jordan oil shale project. (10/87)
23. Collected information and held discussions on the prospects for a Bolivia/Brazil gas pipeline of interest to A.I.D. and TDP. (2/88 to 3/88)
24. Reviewed clean coal program reports of Department of Energy and attended San Francisco DOE meeting, reporting on results. (3/88 to Present)
25. Reviewed and reported comments on the "Energy Policy Paper" drafted by PPC/PDPR. (3/88)
26. Reviewed and provided comments on the action plan for "Promotion of Market Towns Through Development of the Electric Power Sector" prepared by AFR/TR/ANR. (10/88)
27. Prepared and made a presentation to the Board of Directors of the U.S. ASEAN Center for Technology Exchange which resulted in the addition of an energy agenda to the program of the Center. Information exchange and cooperation continues. (10/87 to Present)
28. Identified and briefed candidate speakers for the second ASEAN Science and Technology week. (9/88 to 11/88)

29. Provided continuing support to cane trash collection equipment negotiation, procurement, design and field testing activities. Support provided in Washington, Louisiana, and Jamaica. (2/87 to Present)
30. Participated in plenary session and presented private power experience to panel discussions of the "Rice Residue Utilization Convocation" held at Louisiana State University Agricultural Center. (1/88)
31. Assisted in setting up the program agenda for a visit to the U.S. by senior officials of Moroccan energy ministries. (3/88 to 4/88)
32. Monitored the Pakland 120 megawatt private power proposal activities and regularly briefed Office of Energy staff on progress, barriers, and implications for other private power initiatives. (10/87 to Present)
33. Reviewed Pakistan financial window concept and prepared an issue paper as background for Office of Energy positions on the project. (10/87 to 11/87)
34. Made presentations to Asia/Near East and Office of Energy review meetings dealing with Pakistan private sector power project design concepts. Senior Bechtel financial experts made several trips from San Francisco for the reviews. (12/87 to 2/88)
35. Assisted TDP in defining work scope and identifying qualified individuals for performing a definitional mission in the Philippines related to rehabilitation and upgrading of the generation and transmission system of the National Power Corporation. (11/87 to 12/87)
36. Evaluated cost, features, and experience of software packages available on the market for economic planning use in the petroleum process industry. This information was used by the Government of Jordan to make a decision on procuring a software package for the Jordanian refinery industry. (3/88 to 4/88)
37. Developed a set of guidelines for evaluating private power projects, covering such issues as project structure, payback provisions, country/project selection criteria, and host country support considerations. (9/88 to 10/88)
38. Provided written inputs to Office of Energy research efforts into innovative mechanisms for attracting private capital into developing country projects. (3/87)
39. Evaluated and provided written comments on a draft "Qualification Questionnaire for Private Energy Projects." (11/88)

40. Developed a framework in graphical form for helping to assess private sector energy projects brought to the attention of the Office of Energy. (12/88)
41. Assembled background information and descriptive letters for A.I.D. Administrator's Industry Review Group planned visits to Egypt, Philippines and Indonesia. (11/88 to Present)
42. Reviewed and commented on drafts of all report inputs to the "White Paper" prepared for Congress. (10/87 to 12/87)
43. Presented a briefing on private power and the Jamaica cane-energy project to the U.S. Energy Association's Executive seminar on the Third World power crisis. (2/88)
44. Presented a briefing on private power project development phase issues to the Woodrow Wilson School of Princeton University. (3/88)
45. Developed briefing materials and charts describing Office of Energy programs for use in presentations and exhibits at energy workshop. (4/87 to 5/87)
46. Made a presentation on A.I.D. energy programs to the National Science Foundation/BOSTID. (8/86)
47. Prepared review of ROCAP FY 89/90 Action Plan. (5/88)

D. TECHNOLOGY STATE OF THE ART REVIEWS

1. Performed a review of a low-grade biofuels-to-methane process under development by Cambridge Scientific, Inc. to assess its potential for application to A.I.D. assisted LDCs. (7/87)
2. Conducted a preliminary assessment of a rotary furnace pyrolysis combustion system for the combustion of low grade solid waste fuel, a system developed by Universal Energy International, Inc. (3/86 to 9/86)
3. Prepared proposal for coal cleaning, AFBC and micropulverization system to convert gas/oil designed boilers to coal-firing. (5/88 to 6/88)
4. Prepared concept for improved coal utilization and energy flexibility through a method that cleans raw coal to produce a coarse conventional clean coal for use in standard boilers, a fine coal for further cleaning with microbubble flotation, and a waste product. (5/88 to 6/88)

5. Developed a concept for and conducted preliminary economic analysis of a lignite/municipal solid waste power generation and desalination plant for Madras, India as an approach to addressing growing waste, power and water problems. Presentations and meetings held with Chief Minister of Tamil Nadu Province and other potential participants. (8/87 to Present)
6. Prepared concept papers for the Office of Energy's current and planned activities to transfer fluidized bed combustion and integrated gasification combined cycle technologies to LDCs. (3/88)
7. Created a library and information files on indigenous energy resources, advanced energy technologies, and private power activities and experience of U.S. and foreign companies. (11/85 to Present)
8. Visited experimental farms in Puerto Rico where high density canes are grown and reviewed implications for Jamaica cane energy project economics. (2/87)
9. Reviewed and compared with Jamaica study a report entitled, "Bagasse and Coal Fired Power Plant at Basseterre, St. Kitts." (2/87)
10. Assessed the economics for an integrated gasification combined cycle project in India proposed by Orient Engineers, Ltd. (11/87)
11. Held numerous meetings with Agri-Electric Company (Willis Noland) to relate cane energy study experience to rice hulls to energy concept. Arranged Agri-Electric meeting with Bechtel review team in San Francisco where assessments of power plant performance were made. (10/85 to Present)
12. Conducted reviews of Tampa Energy Corporation (Arthur McDonnell) cane to ethanol project in the Dominican Republic. Contacted Congressional, trade association, and U.S. industry parties and collected information on ethanol industry trends and legislation. Arranged review meeting in San Francisco with Bechtel technical and financial team. Evaluated economics of project concept. Met with candidate participants in Dominican Republic. (2/87 to Present)
13. Established library and information base on municipal solid waste-to-energy technologies and experience. Prepared and made presentations on technical solutions to MSW disposal problems of LDCs. Provided inputs to the BST MSW report. (1/87 to Present)
14. Reviewed a draft proposal of Gruppo Epsilon, S.A. for producing electricity and ethanol from sugar cane in the Philippines. (9/87)

15. Developed and presented a seminar to A.I.D. and TDP staff members on clean coal technology advances. (12/88)
16. Developed concept paper for methanol synthesis mini-plants and a review of market conditions in 16 countries that are promising candidates for the concept. (3/86 to 4/86)

E. REPORTING

1. Prepared numerous "Weekly Reports" for the Office of Energy on subjects related to CETA field activities. (Ongoing)
2. Regularly briefed Bechtel senior management on CETA project and involved them as needed in certain activities such as private power, technology reviews, administrative issues, conflict of interest questions, and Office of Energy program directions. (10/85 to Present)
3. Set up an accounting system capable of completely segregating Washington-based costs from the field operations technical services orders. (10/85 to Present)
4. Prepared and presented briefings orally or in writing on field activities to USAID Missions in Jamaica, Costa Rica, Dominican Republic, Jordan, Egypt, Morocco, Indonesia, Pakistan, Thailand, and the Philippines. (12/85 to Present)