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Republic of the Philippines
Department of Energy

**Technical Assistance to the DOE
Energy Sector Action Plan
(Interim Phase)**

Project Completion Report

30 September 1994

Prepared by:

RCG/Hagler Bailly, Inc.
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Arlington, VA 22209

Prepared for:

**Office of Energy, Environment, and Technology
Bureau for Global Programs, Field Support and Research
United States Agency for International Development**



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EXECUTIVE SUMMARY

The USAID-sponsored technical assistance program for the Philippine Department of Energy (DOE) was begun in November 1993 and completed at the end of September 1994. The program provided direct support to DOE in implementing the provisions of the energy sector action plan (ESAP).

OBJECTIVE AND DESCRIPTION

The objective of this technical assistance program was to assist the DOE in fulfilling its mandate to bring about a fundamental performance improvement of the energy sector. DOE had requested that USAID provide institutional and technical specialists to assist DOE staff in the following areas:

- ▶ Privatization and Market Liberalization
- ▶ Institutional Development
- ▶ Efficiency, Environment and Renewables.

USAID proposed to meet this request through a program of short-term technical assistance, coordinated by a resident advisor. Upon award of the contract, Hagler Bailly assigned a resident advisor and immediately began to define the technical assistance program. A work plan was developed which defined the immediate technical assistance needs of the DOE within the provisions of the ESAP. From this work plan, nine task orders were developed that addressed the following areas:

Privatization & Market Liberalization	Institutional Development	Efficiency, Environment and Renewables
TO2 - NPC Privatization	TO1 - Resident Advisor	TO3 - DSM/IRP Pre-Assessment
TO6 - NPC Privatization Follow-up	TO4 - Commodity Procurement	TO9 - Training in Mini-hydropower Engineering
TO7 - Gas Negotiation	TO5 - Energy Information System	
	TO8 - Commodity Procurement	

RESULTS AND ACCOMPLISHMENTS

All nine task orders were completed and the deliverables were presented within the task order work plan. A summary of task orders and results is contained in the following task order matrix. The interim-phase contract was also completed within budget and within the extended project assistance completion date. Some of the more noteworthy results are summarized as follows:

Task Order Nos. 2 and 6: NPC Privatization - This task encompassed assembling a comprehensive evaluation and analysis of fundamental restructuring of the power sector. The prime deliverable, *Report on Restructuring and Privatization of the Electricity Industry of the Philippines*, was widely accepted and incorporated into the DOE energy plan submitted to Congress in September 1993.

Task Order No. 3: DSM/IRP Pre-Assessment - This task brought current efforts underway in DSM and IRP into focus under a recommended report: *Demand-Side Management Action Plan for the Philippines*. The action plan was presented to a wide audience and at the World Bank Utility DSM Conference in Manila. In addition, a draft DSM department order was adopted in principle and circulated for approval.

Task Order Nos. 4, 5, and 8: Energy Information Systems - The DOE was provided with a modern network-based computer system which will form the foundation of a new energy information system. A U.S. study tour was conducted at USDOE/EJA and the New York State Energy office, and the DOE installed an INTERNET work station in cooperation with the Global Energy and Environment Network (GLEEN) program.

Task Order No. 7: Gas Negotiation - This task involved conducting an analysis and evaluation for the development of offshore gas reserves, providing workshops and training in gas contract negotiation methods, and computer-based economic models of gas development and utilization scenarios, and delivering a report: *Development of Offshore Gas Reserves*.

NEXT STEPS

The interim phase of this technical support program has only begun the process of strengthening DOE. Further technical assistance will be required in the following areas: institutional strengthening of the Department, implementing power sector restructuring and privatization, development of offshore gas reserves and the establishment of a gas industry in the Philippines, DSM/IRP, energy efficiency, and renewables.

USAID EEP Task Order Matrix -- Technical Assistance to the Philippine Department of Energy

Task Order	Deliverables	Results/Accomplishments
<p>1. Resident Advisor: Provide the services of a resident advisor to coordinate the TA program, develop task orders, and manage short-term consultants to complete the approved task orders:</p> <ul style="list-style-type: none"> - 20 weeks TA - Preparation of task orders - Coordination of consultants/tasks - Budgets, reports, USAID/DOE requirements - General technical assistance 	<ol style="list-style-type: none"> 1. Approved final work plan 2. Approved task orders 3. General management 4. Manage short-term consultants 5. Submission of reports 6. Satisfy administrative requirements 	<p>The resident advisor was on-board for 11 months and provided the following:</p> <ol style="list-style-type: none"> 1. 39 man-weeks of TA 2. Developed final ESAP work plan 3. Developed 9 task orders for approval 4. All task orders completed 5. Reports and other task deliverables
<p>2. NPC Privatization: Assist DOE in formulating the appropriate policy for privatization of NPC:</p> <ul style="list-style-type: none"> - Review options and establish criteria - Power development plan and profile - BOT/BOO implications - Regulatory issues and legal factors - Institutional - Social/political/regional - Financial markets - Fuel supply/availability - Indigenous resources - Profile generation/supply/delivery - Action plan - Policy formulation - 280 days of short-term consultants 	<ol style="list-style-type: none"> 1. Comprehensive report of findings and recommendations for DOE to use as a basis for policy formulation, and that DOE can use as an implementation plan. 2. Initiate public consultations whereby the maximum number of power sector entities participate in the development of the action plan. 	<p>The NPC privatization task team developed a draft report entitled: <i>Restructuring and Privatization of the Electricity Industry in the Philippines</i>. The report included findings, recommendations, and an action plan for DOE. In addition, the following was accomplished:</p> <ol style="list-style-type: none"> 1. A two-day workshop was conducted in Manila for power sector representatives. 2. High-level briefings were conducted with DOE, NPC, and USAID. 3. Public consultations were conducted which involved representatives from all segments of the Philippine electricity industry. <p>230 days of short-term TA were expended</p>

Task Order	Deliverables	Results/Accomplishments
<p>3. DSM/IRP Pre-Assessment: Conduct an evaluation of current DSM programs in the Philippines and develop a priority action plan for DOE to use in promoting DSM/IRP:</p> <ul style="list-style-type: none"> - Evaluate the institutional environment - Define the roles and responsibilities of other donor programs - Evaluate current power rate structure - Evaluate planning functions - Assess Philippine capabilities and needs - Evaluate privatization effects - Assemble a compendium of practical DSM programs that could be implemented in the Philippines - Lay the foundation for further DSM program development - 75 days of short-term consultants 	<ol style="list-style-type: none"> 1. Report of findings and priority action plan for DOE. 2. Initiative a collaborative process whereby the maximum number of power sector entities participate in the development of the action plan. 	<p>The DSM pre-assessment was completed in accordance with the approved task order and the priority action plan was issued. In addition, a one-day workshop was held in Manila for key power sector representatives, and Hagler Bailly participated in the World Bank Utility DSM workshop where the USAID action plan was presented.</p> <p>77 days of short-term TA were expended.</p>
<p>4. Initial Commodity Procurement: Procure an initial set of commodities for DOE:</p> <ul style="list-style-type: none"> - High-speed FAX machine - High-resolution LCD data presenter - High-output overhead projector 	<p>Specify, procure, and deliver equipment.</p>	<p>All the specified equipment was procured and delivered to DOE.</p>

Task Order	Deliverables	Results/Accomplishments
<p>5. Energy Information System: Assist DOE with upgrading and establishing the Energy Information System:</p> <ul style="list-style-type: none"> - Evaluation of DOE information system processing capabilities and requirements. - Develop hardware/software recommendations and equipment specs - Establish INTERNET connection - Procure and install hardware/software upgrades - Conduct a U.S. study tour to USDOE and a State energy information agency - Develop an implementation plan based on the hardware/software upgrades and information gathered during the U.S. study tour. - 73 days of short-term consultants 	<ol style="list-style-type: none"> 1. Conduct U.S. study tour 2. Develop the energy information system action plan for DOE 3. Conduct the hardware/software assessment, develop specifications for upgrades, procure and install equipment 4. Establish one INTERNET work station at DOE 	<ol style="list-style-type: none"> 1. Computer hardware and software were procured, delivered, and commissioned for the DOE EIS system. 2. The INTERNET connection was established and is up and running. 3. The U.S. study tour was conducted during September 1994. 4. The PDOE EIS Implementation plan was developed and issued at the conclusion of the study tour.
<p>6. NPC Privatization Follow-Up: Provide DOE with follow-up technical assistance to the draft restructuring report in order to assist them with presentation of the energy plan to the Government:</p> <ul style="list-style-type: none"> - General TA to strengthen the report findings - Two workshops - Study tour - 156 days of short-term consultants 	<ol style="list-style-type: none"> 1. General follow-up TA and development of a final restructuring report 2. Workshops 3. Study tour 4. Assistance with development of the final energy plan presentation to Government 	<ol style="list-style-type: none"> 1. A series of ten workshops were conducted throughout the Philippines to disseminate information and gather comments. 2. The final restructuring report was issued. 3. The ERB assessment was conducted and a report contained in the final restructuring report. 4. Technical assistance was provided to DOE in the submission of a privatization plan to Congress and other government agencies. 5. The study tour was not conducted.

Task Order	Deliverables	Results/Accomplishments
<p>7. Gas Negotiation: Provide TA to the Gas Negotiation multi-agency committee:</p> <ul style="list-style-type: none"> - Review the realism of the project cost - Review realism of gas reserves - Identify strategic sectors - Advise the government negotiation team on pertinent contract issues and strategies. - Provide comparative information on contracting issues - Assist in the preparation of gas negotiation contract guidelines - Conduct a negotiation workshop - 126 days of short-term consultants 	<ol style="list-style-type: none"> 1. Report with results of the review of investment and reserves. 2. Report that advises DOE on pertinent contract issues and guidelines, and illustrates representative contracts. 3. Workshop on negotiation techniques. 	<ol style="list-style-type: none"> 1. A draft report was issued with results of the gas pipeline project evaluation. 2. Reserve estimates were validated. 3. A two-day workshop was held on the project feasibility analysis, and on gas negotiation techniques. 4. A final report was issued with principal findings and recommendations.
<p>8. Commodity Procurement: Procure the final commodities (primarily computer hardware and software) in support of Task Order No. 5 EIS.</p>	<p>Commodity specifications, purchase orders, delivery and commissioning.</p>	<ol style="list-style-type: none"> 1. All commodities were procured as specified, delivered, and commissioned.
<p>9. Training in Mini-Hydropower Engineering: Provide DOE with a short course on the principle of mini-hydropower engineering to strengthen their expertise:</p> <ul style="list-style-type: none"> - Hydraulics - Geotechnical engineering - Hydrology - Engineering economy 	<p>Conduct the four training modules.</p>	<ol style="list-style-type: none"> 1. The four course modules were conducted from July through September, and all participants completed the course requirements.

CHAPTER 1

BACKGROUND AND RATIONALE FOR THE PROJECT

In December 1992 the Philippine Government passed landmark legislation creating the new Department of Energy (DOE). Known as the Energy Act of 1992, Republic Act RA 7638, the legislation vested the Department with the responsibility and authority to bring about fundamental performance improvements in the Philippine energy sector. The Act called for the development of an Energy Sector Action Plan (ESAP), which was adopted and became the DOE's near-term action plan. To assist the Department with implementing the provisions of the ESAP, USAID developed a technical assistance program to provide support in the following general areas:

- ▶ ***Privatization and Market Liberalization:*** continued private sector participation in the electric power sector, privatization of the Philippines National Oil Corporation (PNOC), and decontrol of petroleum product pricing and imports.
- ▶ ***Institutional Development:*** assistance to establish and strengthen the new DOE organization and related bodies like the Energy Regulatory Board (ERB), development of new regulatory measures and improved environmental planning for energy facilities, continued rural electrification project work, and training.
- ▶ ***Efficiency, Environment, and Renewables:*** demand-side management strategies for the power sector and increased development of renewable energy resources.
- ▶ ***Economic Cooperation and Trade Promotion:*** promote activities that increase U.S. private sector involvement, including technology transfer in the energy sector.

The technical assistance program was accepted by both USAID and the DOE. A fast-track contracting approach was implemented which called for an interim (six-month) phase, followed by a long-term phase (two years). Hagler Bailly was contracted for the interim phase through a buy-in to the Energy Efficiency Project (EEP) under the Office of Energy, Environment, and Technology, Bureau for Global Programs, Field Support, and Research.

Hagler Bailly prepared the ESAP technical assistance work plan (see Appendix A2), which addressed all the functional areas of the ESAP. From this plan, nine task orders were developed to address the immediate needs of DOE within budget and schedule limitations. These task orders are contained in Appendix A1; they addressed: power sector restructuring, DSM/IRP action plan, energy information systems, offshore gas development, training in mini-hydropower engineering, and commodity procurement.

DSM/IRP action plan, energy information systems, offshore gas development, training in mini-hydropower engineering, and commodity procurement.

The interim-phase task orders were completed over an eleven-month period. Chapter 2 contains a summary of deliverables and accomplishments.

CHAPTER 2

SUMMARY OF RESULTS AND ACCOMPLISHMENTS

The interim phase of the ESAP technical assistance program achieved the objectives that were set out at the onset of the work, and delivered the required work products per the approved task orders. The program was implemented as planned and was turned over to the long-term contractor at the conclusion of the interim work. This chapter presents a summary of results and accomplishments for each approved task order; Exhibit 2-1 presents a summary matrix of deliverables.

Some of the project indicators are:

Project Indicator	Scheduled	Actual
Start Date	November 3, 1993	November 3, 1993
End Date	May 3, 1994	October 3, 1994
Duration	6 Months	11 Months
Level-of-Effort	810 days	858 days (*)
Budget	\$874,000	\$874,000 (*)
Deliverables	9 Task Orders Completed	9 Task Orders Completed

(*) Estimated - Actual as of 31 August = 635 days, \$663,160

Exceptions to these indicators are:

Schedule: The project began on schedule. An extension to the project completion date was requested to allow work to continue until the long-term contractor was established in the Philippines. This extended the total duration from 6 months to 11 months.

Level-of-Effort: The level of effort was increased by 48 days to provide additional technical assistance. The additional TA was within the overall budget for the project.

All other elements of the project were completed as planned. Exhibit 2-2 illustrates the project schedule of approved task orders.

SUMMARY OF RESULTS AND ACCOMPLISHMENTS ► 2-2

**Exhibit 2-1
Summary of Deliverables**

Task Order	Technical Reports	Information Dissemination	Training	Commodity Procurement	Other
1. Resident Advisor	ESAP Work Plan Trip Reports Monthly Reports Task Orders Completion Report	ESAP work plan and planning meetings	N/A	N/A	General management of short-term TA and other program tasks.
2. NPC Privatization	Draft restructuring report Proceedings of workshops	Two-day workshop in Manila	N/A	N/A	N/A
3. DSM/IRP Pre-Assessment	Draft DSM Action Plan Proceedings of workshop Final DSM Action Plan	One-day workshop in Manila on the DSM Action Plan World Bank Utility DSM Workshop	N/A	N/A	N/A
4. Initial Commodity Procurement	N/A	N/A	N/A	FAX machine LCD Panel Projector Miscellaneous	N/A
5. Energy Information Systems	EIS assessment report EIS Action Plan	N/A	Computer network training for hardware and software Four-week U.S. study tour	RE: Task Order 8	INTERNET connection established

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SUMMARY OF RESULTS AND ACCOMPLISHMENTS ► 2-3

Task Order	Technical Reports	Information Dissemination	Training	Commodity Procurement	Other
6. NPC Privatization Follow-Up	Final restructuring report Pricing study ERB assessment	10 Workshop consultations throughout the Philippines	None - study tour cancelled	N/A	N/A
7. Gas Negotiation	Draft report on project feasibility Verify reserve estimates Final report Computer model	One-day workshop on project feasibility and alternatives	One-day workshop on gas negotiation techniques	N/A	N/A
8. Commodity Procurement	N/A	N/A	Computer hardware and software training	Computer network hardware, software, and documentation	N/A
9. Training in Mini-Hydropower Engineering	N/A	N/A	Completed four-course module program with University of Philippines	N/A	N/A

2.1 TASK ORDER NO. 1: RESIDENT ADVISOR

Summary

The Resident Advisor (RA) began work in early November 1993 within two weeks after the interim project delivery order was issued. The first field trip was conducted to finalize the work plan, and make the necessary logistical and administrative arrangements for the short-term consultants to follow. Task orders were written for the first four tasks and preliminary data gathering was accomplished. Over the next month, preparations were made to begin the task order work in January 1994. The balance of the RA's time was spent in direct support of short-term consultants, and on the project management aspects of the program.

Task Order Indicators

Activity	Scheduled	Actual
Start Date	November 3, 1993	November 3, 1993
End Date	May 3, 1994	October 3, 1994
Duration	6 months	11 months
Level-of-Effort	100 days	196 Days (*)
Budget	\$147,148	\$210,000 (*)
Deliverables	Work plan Task orders Project management Trip reports Monthly reports Technical reports	Work plan Task orders Project management Trip reports Monthly reports Technical reports

(*) Estimated - Actual as of 31 August = 173 days, \$186,058

Exceptions

The level of effort and end date were modified to reflect the contract extension, which extended the project completion date to October 3, 1994. The extension was requested to allow continued work on the project until the long-term contractor was mobilized and established in country.

2.2 TASK ORDER NO. 2: NPC PRIVATIZATION

Summary

DOE assigned the highest priority to this task at the planning meetings held in November 1993. A task order was immediately approved that provided for a privatization report and action plan to be developed. In January 1994, the task leader began the work in Manila. A workshop was held in Manila in February, and the draft report was published in June. The draft report contained a summary of the privatization options, an analysis, recommendations, and an action plan for DOE and other Government of the Philippines (GOP) agencies to use in implementing the privatization process.

Task Order Indicators

Activity	Scheduled	Actual
Start Date	December 6, 1993	December 15, 1993
End Date	June 1, 1994	June 1, 1994
Duration	6 Months	7 Months
Level-of-Effort	280 Days	230 Days
Budget	\$345,149	\$170,000
Deliverables	Report of findings Action plan	Report of findings Action plan Workshop

Exceptions

The schedule was extended by one month to allow for completion of the draft report, and a workshop was added to the scope of work. The cost and level-of-effort were reduced due to the amount of time necessary to address strategic issues. Many of the draft report topics were deferred to the final report (see Task Order No. 6) so that host country counterpart staff could review the broad recommendations and action plan.

2.3 TASK ORDER NO. 3: DSM/IRP PRE-ASSESSMENT AND ACTION PLAN

Summary

The DSM/IRP pre-assessment and action plan were completed per the requirements of the approved task order. A draft action plan was issued in June 1994, and a final report and action plan were issued at the end of July. In addition, a one-day workshop was held in Manila to promote an open forum among representatives from DOE, other GOP agencies, utilities, industry, and other interested parties. The workshop fostered an exchange of information and development of the alternatives that went into the action plan. Hagler Bailly participated in the World Bank's Utility DSM Workshop to present the USAID action plan as a joint recommendation.

Task Order Indicators

Activity	Scheduled	Actual
Start Date	December 6, 1993	December 15, 1993
End Date	May 3, 1993	July 31, 1994
Duration	5 Months	8 Months
Level-of-Effort	75 Days	77 Days
Budget	\$69,324	\$71,000
Deliverables	Report of findings Action plan	Report of findings Action plan Workshop World Bank workshop

Exceptions

The action plan took longer to complete than was originally scheduled, primarily to allow for reviews of the draft report.

2.4 TASK ORDER NO. 4: INITIAL COMMODITY PROCUREMENT

Summary

This initial commodity procurement was approved to strengthen DOE's administrative efficiency through enhanced communications and presentation capabilities. The commodities were delivered and commissioned per the approved task order.

Task Order Indicators

Activity	Scheduled	Actual
Start Date	January 1, 1994	January 1, 1994
End Date	February 15, 1994	April 15, 1994
Duration	6 weeks	3.5 months
Level-of-Effort	N/A	N/A
Budget	\$16,250	\$14,000
Deliverables	FAX machine LCD panel Projector Misc. supplies	FAX machine LCD panel Projector Misc. supplies

Exceptions

Delivery time for the equipment delayed delivery by approximately two months. The total cost was somewhat less than estimated in the task order.

2.5 TASK ORDER NO. 5: ENERGY INFORMATION SYSTEM

Summary

The Energy Information System task was completed per the approved task order. Two field trips were made by an information systems specialist, computer network software and hardware were procured and commissioned, training was provided in network operations, and a U.S. study tour for two representatives of DOE was conducted.

Task Order Indicators

Activity	Scheduled	Actual
Start Date	April 1, 1994	April 1, 1994
End Date	September 3, 1994	September 30, 1994
Duration	4 Months	5 Months
Level-of-Effort	73 Days	65 Days (*)
Budget	\$60,866	\$60,000 (*)
Deliverables	U.S. study tour EIS action plan INTERNET	U.S. study tour EIS action plan INTERNET

(*) Estimated - Actual as of 31 August = 20 days, \$18,970

Exceptions

The schedule was extended through September to allow for DOE processing requirements for study tour attendees. Both the level-of-effort and cost were less than estimated.

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2.6 TASK ORDER NO. 6: NPC PRIVATIZATION FOLLOW-UP

Summary

The follow-up technical assistance provided an opportunity to widely disseminate the information contained in the draft restructuring report. A series of ten workshops were held throughout the country to disseminate information and obtain feedback. The results of these workshops were incorporated into the final report. DOE presented the final report to Congress as a part of the official DOE Energy Plan. In addition, a pricing study was completed to assess the impacts of restructuring on wholesale and retail prices, and an assessment was completed of the Energy Regulatory Board (ERB) under the restructured scenario.

Task Order Indicators:

Activity	Scheduled	Actual
Start Date	June 1, 1994	June 1, 1994
End Date	September 30, 1994	September 30, 1994
Duration	4 Months	4 Months
Level-of-Effort	156 Days	90 Days (*)
Budget	\$168,926	\$100,000 (*)
Deliverables	Follow-up TA 2 workshops Final report Study tour	Follow-up TA 10 workshops Final report None Pricing study ERB assessment

(*) Estimated - Actual as of 31 August =70 Days, \$57,753

Exceptions

A study tour had been included in the approved task order. However, DOE elected not to participate due to the impending energy plan presentation to Congress, and the desire to allocate funds for TA.

2.7 TASK ORDER NO. 7: GAS NEGOTIATION

Summary

DOE requested technical assistance with evaluating the offshore gas development program, and training the negotiation committee staff in gas negotiation techniques and contracting. An evaluation report was developed that: confirmed gas reserve estimates, evaluated the feasibility and costs of the project, determined a gas sales price, evaluated alternate project scenarios, and recommended negotiating strategies. In addition, an economic computer model was provided to DOE to carry out analyses. Workshops and training seminars were conducted for negotiating committee staff, and representative contracts were provided. A final report was issued to DOE and the multi-sector task force.

Task Order Indicators

Activity	Scheduled	Actual
Start Date	May 15, 1994	June 1, 1994
End Date	August 31, 1994	September 30, 1994
Duration	4 months	4 months
Level-of-Effort	126 Days	200 Days (*)
Budget	\$92,202	\$148,000 (*)
Deliverables	Feasibility study report Workshop/seminar	Feasibility study report Workshop/seminar

(*) Estimated - Actual as of 31 August = 65 Days, \$ 54,976

Exceptions

The budget was increased to cover additional work on gas reserves and the evaluation of alternative scenarios for production.

2.8 TASK ORDER NO. 8: COMMODITY PROCUREMENT

Summary

Computer network hardware and software were procured in conjunction with Task Order No. 5: Energy Information System. The equipment was procured, delivered, and commissioned on-site at DOE.

Task Order Indicators

Activity	Scheduled	Actual
Start Date	April 15, 1994	April 15, 1994
End Date	June 1, 1994	September 30, 1994
Duration	6 weeks	4.5 months
Level-of-Effort	None	None
Budget	\$58,750	90,000 (*)
Deliverables	Computer hardware & software	Computer hardware & software

(*) Estimated - Actual as of 31 August = \$ 87,432

Exceptions

The scheduled time for procurement was extended to allow for manufacturer delivery and shipment to the Philippines.

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2.9 TASK ORDER NO. 9: TRAINING IN MINI-HYDROPOWER ENGINEERING

Summary

Training in mini-hydropower engineering was provided through a subcontract to the National Hydraulic Research Center of the University of the Philippines (UP). Four course modules were scheduled and conducted per the approved task order. All participants completed the course and were issued certificates of completion.

Task Order Indicators

Activity	Scheduled	Actual
Start Date	June 1, 1994	July 15, 1994
End Date	August 31, 1994	September 15, 1994
Duration	3 months	3 months
Level-of-Effort	None	None
Budget	\$10,000	\$11,000 (*)
Deliverables	Four module course	Four module course

(*) Estimated - Actual as of 31 August = \$ 5,000

Exceptions

The start date for the course was extended to allow for scheduling with other UP commitments.

CHAPTER 3

NEXT STEPS

The work accomplished under this technical assistance program has assisted the DOE in moving ahead in several areas of the Energy Sector Action Plan. However, much work remains to be done and the DOE can still benefit from continued technical assistance in several areas. For the purposes of this discussion, three principal areas will be described:

- ▶ Follow up technical assistance on the nine task orders completed under the interim phase.
- ▶ Continuing technical assistance in other areas covered by the Energy Sector Action Plan.
- ▶ Other technical assistance

3.1 Follow-Up Technical Assistance to the Interim Phase

There are four primary areas of follow up activity: restructuring and privatization of the electricity industry (Task Orders 2 and 6), demand-side management (Task Order 3), energy information systems (Task Order 5), and development of offshore gas reserves (Task Order 7). The DOE and associated government agencies would benefit from continued technical assistance to maintain the pace of activity.

3.1.1 Restructuring and Privatization of the Electricity Industry

The final report has been accepted by DOE and submitted to the Government for consideration in the annual energy plan. However, there are numerous actions that need to be addressed in the near term to keep the restructuring effort moving:

1. Legislation - Drafting of new legislation will be required for fundamental restructuring changes in the electricity industry.

2. **Tariff Mechanisms** - Pricing studies, forecasts, and new rate setting methodologies will be needed to begin the process of setting tariff mechanisms for a restructured and privatized industry.
3. **Restructuring NAPOCOR Units** - Assist with the establishment of new entities, including: TRANSCO, regional generation subsidiaries, small power utilities group, and the hydroelectric power authority.
4. **Wheeling** - Assist DOE/ERB with developing and implementing retail and wholesale wheeling policy and tariffs.
5. **POOLCO** - Assist with the establishment of POOLCO and utility coordination operating rules.
6. **Strengthening of ERB** - Whatever changes and restructuring activities are undertaken in the future, the strengthening of ERB will be a necessary step.
7. **Utility IRP** - Integrated resource plans and the establishment of a coordinated industry planning process will be essential to strengthening utilities in acquiring their own power supplies
8. **Study Tour** - Conduct a study tour for selected DOE and other power sector officials to observe the power sector structure in other countries.
9. **Small Distribution Utilities and Rural Electric Cooperatives Consolidation** - The small distributors in the Philippines represent the weakest link in the electricity industry. Both the World Bank, USAID, and Hagler Bailly favor a consolidation program to strengthen these entities. USAID could sponsor pilot programs and act as facilitator among the international lenders to bring about some demonstration consolidations.

3.1.2 Demand-Side Management (DSM)

DSM offers great potential in the Philippines. The action plan developed under this task order presents a scenario for implementation in three distinct phases: institutional development and program design, pilot programs, and full-scale implementation. The proposed USAID/GEF DSM program will cover the first two phases, and pave the way for full-scale implementation. Assuming this program is put in place, no additional action should be necessary under the ESAP long term contract, or other AID sponsored programs. It is recommended that USAID utilize this GEF program to be a central technical assistance program for DSM, and to collaborate with development banks on developing associated funding mechanisms for utility DSM implementation.

3.1.3 Energy Information Systems

The interim program has provided the DOE with a new network based information system, and developed an action plan for implementing a central DOE energy information system (EIS). DOE may need additional technical support and some commodities to fully bring this system into reality. In addition, it is recommended that USAID Philippines enter into a collaborate effort with the Office of Energy's Global Energy and Environment Network (GLEEN) to establish a useful INTERNET network in the Philippines.

3.1.4 Development of Offshore Gas Reserves

The development of offshore gas reserves is only just beginning in the Philippines. The country faces a classic problem of trying to develop an indigenous energy resource, without a fully developed market for the gas. USAID technical assistance could be instrumental in assisting the Philippines with developing a natural gas industry. Some of the more immediate possibilities are:

1. Industry Structure - The industry does not exist at present. USAID could offer technical assistance similar to the electricity industry restructuring effort, which would assist the Government with establishing a private sector based gas industry. Laws, policies, regulatory structure, administration, and technical frameworks all need to be developed.
2. Market Development - Matching the producers with customers will be critical to the development of a gas market in the Philippines. USAID could provide valuable technical assistance in the following areas:
 - a. Power Plants - Conversion of existing plants (primarily in the metro Manila area), new facilities, and the BNPP conversion need pre-feasibility studies to determine the applicable costs and integration in the overall power development program.
 - b. Industrial Facilities - In a similar fashion, pre-feasibility studies are needed for proposed and potential existing industrial users.
 - c. Manila Gas Company (MGC) - Investigate the institutional and infrastructure requirements to bring MGC back into business as a privately owned distributor of natural gas.
3. Long-Term Development Strategy - The Philippines has great potential for long term development of natural gas reserves, but does not have a long term plan. USAID could provide assistance with developing these long term development plans.

3.2 Continuing Technical Assistance Under the ESAP

The following action items contained in the ESAP are priority areas in need of technical assistance under the long term contract (refer to Appendix A2 ESAP Work Plan):

1. Institutional strengthening at DOE
2. Training needs assessment for DOE
3. EMB strengthening
4. Power infrastructure environmental permits
5. Energy planning and forecasting methodologies
6. Efficiency and Renewables

3.3 Other Technical Assistance

The current technical assistance program is designed to support DOE in fulfilling its mandate under the provisions of the energy sector action plan (ESAP). Yet, the requirements of the country are changing and the ESAP may not encompass the entire possibilities and needs for technical assistance.

It is recommended that USAID consider the following expanded role for energy sector technical assistance in the Philippines:

1. Energy Sector Workshops - These workshops would be designed to assist DOE with setting the direction for future energy sector development in the Philippines. The purpose would be to bring together international energy specialists and Philippine representatives to explore new directions. Some potential topics would be the following:
 - a. Renewable and alternative energy potential in the Philippines
 - b. Demand side management
 - c. Gas industry development
 - d. Environmental aspects of energy sector development
 - e. Rural electrification trends and development strategies
 - f. Energy systems technologies
2. Study Tours - Study tours for senior DOE and other Philippine representatives to study current trends in energy sector development
3. Twinning - Establishment of twinning relationships with interested US organizations such as: USDOE, FERC, electric power utilities, gas utilities, USEA, industrial associations, NGOs and others who could play a vital support role to companion Philippine entities.

4. Infrastructure Development - Coordination of pre-feasibility studies using other funding mechanisms (e.g. PAPS) to support these energy sector development projects.

3.4 Summary

The Philippine Department of Energy has made significant strides in strengthening their organization and adapting to the changing needs of the country. USAID has the possibility to continue assistance to this vital organization and play a major role in the development of a sound and self sufficient Philippine energy sector.

It is also important to point out the unique role that USAID can play among the donor-country community and the multi-lateral development banks (MDBs) in the Philippines. USAID is consistently viewed as a prime provider of grant funded technical assistance, with few preconditions or contingencies attached. This role infuses both credibility and a high likelihood of acceptance among Filipino agencies. It is recommended that USAID seek out roles of mutual cooperation with other foreign agencies and MDBs so as to leverage available technical assistance funds, and to portray a uniform policy on technical assistance wherever possible.

APPENDIX A1

APPROVED TASK ORDERS

TASK ORDER NO. 1

**TECHNICAL ASSISTANCE TO THE PHILIPPINE DEPARTMENT OF ENERGY
USAID PCE-5743-Q-00-2074-00, DELIVERY ORDER NO. 2**

Project No.	492-0458	Title:	Resident Advisor TA
PIO/T No.	492-0458-3-00361		
Scheduled Start:	November 3, 1993	Scheduled End:	May 3, 1994
Estimated Level of Effort:	20 Weeks	Estimated Cost:	\$ 147,148
Per Approved Work Plan:	Yes		

Task Description:

Initiate the Resident Advisor activities per the approved work plan and USAID scope of work, as follows:

1. Preparation of task orders
2. Coordination and approval of task orders in-country.
3. General project management tasks, including management of task orders and short term consultants.
4. Preparation of budgets, final work plan, progress reports, etc.
5. General technical assistance to DOE/USAID staff as required.

Deliverables:

1. Approved final work plan.
2. Approved task orders.
3. General management and coordination of project activities.
4. Submission of required reports and other administrative requirements.

TECHNICAL ASSISTANCE TO THE PHILIPPINE DEPARTMENT OF ENERGY
USAID PCE-5743-Q-00-2074-00, DELIVERY ORDER NO. 2

Project No.	492-0458	Title:	NPC Privatization
PIO/T No.	492-0458-3-00361		
Scheduled Start:	December 6, 1993	Scheduled End:	June 1, 1994
Estimated Level of Effort	280 Days	Estimated Cost:	\$ 345,149
Per Approved Work Plan:	Yes		

Task Description:

The purpose of this task shall be to assist the DOE in formulating the appropriate policy for the privatization of the National Power Corporation (NPC). The contractor shall work under the direction of the Technical Working Group and the DOE Energy Planning and Monitoring Bureau. The following specific tasks are as follows:

1. Review of Privatization Options - This task will use the Price Waterhouse report as a basis and develop specific privatization options for further analysis. In addition, the privatization experience in Argentina, New Zealand, U.K., and others will be reviewed and compared to the Philippine situation, and viable options included in the analysis. Additional factors such as: pending legislation (Ozmena Bill et al), other ASEAN programs, and current economic and political considerations shall be used in the analysis. The options shall be presented in a summary report format to a session of the technical working group, and constitute the basis for subsequent tasks.
2. Establish the Criteria - Based on an analysis of current and future factors affecting the Philippine Power Sector, a criteria shall be established for ranking each privatization option and establishing the benefits and drawbacks of each. This criteria shall be applied to each option analyzed, and shall also be presented to the Technical Working Group for approval.
3. Power Development Plan - Review the current power development plan and adjust forecasts, projections, and assumptions as necessary, in particular:
 - a. Include BOT/BOO projects and other IPP projects.
 - b. Establish a baseline for available capacity
 - c. Include integrated resource planning
 - d. Compare the NPC forecasts with those of major Utilities and RECs.
 - e. Include alternative capacity options, ROO/ROL, etc.

The objective will be to arrive at a PDP that reflects near term capacity alternatives, IRP, and reconciles differences in demand projections and sustainable production.

4. Infrastructure Profile - Establish the current power sector infrastructure profile (Generation, transmission, distribution) and establish factors that will influence the selection of a privatization scenario.

5. BOT/BOO Implications - Review the current, and planned, BOT/BOO contracts and facility characteristics. The objective will be to establish the impact of these projects on alternative privatization scenarios.

6. Establish NPC Financial Viability - Review the current financial condition and establish privatization parameters (asset valuation, debt structure, etc.).

7. Regulatory Issues and Options - Review the regulatory environment and develop regulatory scenarios for each privatization scenario. In addition, identify regulatory barriers and essential preconditions to privatization, and pricing implications.

8. Institutional - Establish the institutional framework in the Philippine Power Sector necessary to support the privatization options, including the financial implications of current tax laws and import regulations.

9. Social/Political/Regional - Establish the social, political, and regional factors that will impact the privatization scenarios to be analyzed.

10. Financial Markets and Options - Investigate options for the private sector in acquiring the assets of NPC, and in obtaining the required investment capital for future power sector infrastructure projects.

11. Fuel Supply and Availability - Given the concurrent privatization activities in the fuels sector, analyze the potential impact on privatization of NPC.

12. Indigenous Resources - Expand on the PDP with respect to indigenous energy resources and the resulting impact on privatization of existing NPC facilities.

13. Profile Generation/Supply/Delivery - Present a clear and comprehensive profile of the Philippine power sector with respect to the privatization scenario, and illustrate the specific interrelationships among generation, transmission, and distribution, including RECs.

14. Legal and Institutional Factors - Prepare a comprehensive analysis of legal and institutional requirements for the privatization options, including any extraordinary requirements or impediments of a particular scenario.

15. Action Plan - Prepare an action plan of steps necessary to achieve the selected privatization option, including the specific roles and responsibilities of all parties involved and the naming of an oversight authority.

16. Policy Formulation - Using the results of the study, and with the concurrence of the Steering Committee, a DOE policy shall be developed such that DOE can act as a catalyst to bring about the selected privatization option.

Deliverables:

The deliverable of this effort shall be a comprehensive report of findings and recommendations in sufficient detail, and with sufficient back-up information, that the DOE can use this study as a basis for the formulation of specific policy to oversee the privatization of NPC. The study shall be developed, and reviewed, in various stages so that the end result is well understood and accepted by all parties. It will also be a working tool that DOE can use to modify its policy, and/or implementation plans, based on the changing conditions in the Power sector.

The consultants shall make a special effort to coordinate and involve as many parties as possible during the formulation of the study findings, and to work under the direction of the technical working group.

Staffing & Schedule:

The Privatization team will consist of the following:

Team Leader (TL): Stan Bowden, Principal

Regulatory
Advisor (RA): Ashley Brown, Consultant

Rate
Advisor (RATE): Jim Tasillo, Consultant

Economic &
Financial
Advisor (EFA): John Arnold, Consultant

Technical
Advisors (TA): Carlos Yermoli, Principal
Shishir K. Mukherjee, Manager

Power/Energy
Engineer (PE): To be named

Legal
Specialist (LS): Local subcontract, to be named

Technical
Specialist (TS): Local subcontract, to be named

Due to the significant amount of work to be accomplished in a relatively short time frame, the schedule will require until approximately June 1st to complete all tasks. The attached GANTT chart illustrates the task schedule, assignments, and expenditures. This task will require an extension of the RCG/Hagler, Bailly contract by 30 days, as provided for in the delivery order.

NPC PRIVATIZATION TA

Row #	Task Name	Start	End	Percent Complete	1993		1994							
					Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		
1	0	Jan/03/94	Jan/28/94	0			█							
2	Establish Criteria	Jan/27/94	Feb/08/94	0				█						
3	Power Development Plan	Jan/12/94	Feb/24/94	0			█	█						
4	Infrastructure Profile	Jan/12/94	Jan/31/94	0			█							
5	BOT/BOO Implications	Feb/01/94	Feb/14/94	0				█						
6	NPC Financial Viability	Feb/14/94	Mar/01/94	0					█					
7	Regulatory Issues/Options	Jan/18/94	Mar/01/94	0			█	█						
8	Institutional Factors	Feb/28/94	Mar/17/94	0					█					
9	Social/Political/Regional Factors	Mar/28/94	Apr/21/94	0						█				
10	Financial Markets & Options	Mar/02/94	Mar/21/94	0					█					
11	Fuel Supply & Availability	Apr/22/94	Apr/28/94	0							█			
12	Indigenous Resources	Apr/14/94	Apr/26/94	0							█			
13	Profile Generation/Supply/Delivery	Mar/31/94	Apr/13/94	0						█				
14	Legal and Institutional Factors	Jan/13/94	Mar/15/94	0			█	█	█					
15	Draft Report	Apr/26/94	May/09/94	0							█			
16	Final Report	May/12/94	May/25/94	0								█		
17	Action Plan	May/25/94	Jun/01/94	0									█	
18	Policy Formulation	May/25/94	Jun/01/94	0										█

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TASK ORDER NO. 3 Rev 1 12-15-93

**TECHNICAL ASSISTANCE TO THE PHILIPPINE DEPARTMENT OF ENERGY
USAID PCE-5743-Q-00-2074-00, DELIVERY ORDER NO. 2**

Project No.	492-0458	Title:	DSM/IRP Pre-Assessment
PIO/T No.	492-0458-3-00361		
Scheduled Start:	December 6, 1993	Scheduled End:	May 3, 1994
Estimated Level of Effort	75 Days	Estimated Cost:	\$ 69,324
Per Approved Work Plan:	Yes		

Task Description:

The DSM/IRP pre-assessment is designed to evaluate the current environment in the Philippine energy sector, and make recommendations for the DOE to pursue in promoting DSM/IRP. The primary output of this effort will be a priority action plan of DSM/IRP actions which the DOE can use in obtaining funding for implementing a full scale DSM/IRP assessment, and energy sector program. This pre-assessment will consist of the following activities:

1. Evaluate the energy sector institutional environment for the adoption of DSM/IRP programs. This will include: current legislation and laws, proposed legislation, regulatory mechanisms, privatization activities, DOE/NPC/PNOC/ERB functional responsibilities, the role of public and private utilities, and NEA.
2. Define the roles and responsibilities of all other donor country and IFI sponsored DSM/IRP technical assistance and loan programs, and act as a catalyst to promote coordination and interaction among the various participants. Provide institutional support to DOE as required to promote their role as coordinator of DSM/IRP assistance programs.
3. Evaluate the current power rate structures for applicable DSM/IRP conditionalities, and make recommendations for appropriate restructuring.
4. Evaluate the power sector planning functions of NPC/DOE and utilities for IRP planning applications. Included will be a review of the official PDP load forecast and supply projections.

5. Assess the capabilities and needs within the Philippines to adopt DSM/IRP programs, and make recommendations for obtaining required methodologies, models, and expertise.
6. Evaluate the proposed privatization of NPC and its affects on future DSM/IRP programs, as well as fast track BOT/BOO projects.
7. Evaluate other ongoing DSM/IRP technical assistance programs in the Philippines and make recommendations to DOE for coordination and mutually supportive actions among providers.
8. Evaluate other ASEAN DSM/IRP programs and make recommendations for adoption of similar program elements that would fit the Philippine energy sector.
9. Assemble a compendium of applicable non-ASEAN DSM/IRP programs that would have applications in the Philippines.

Deliverables:

The deliverable will be a report of findings, recommendations, and priority action plan for implementation of DSM/IRP programs in the Philippines, including funding. The document will serve as a preapproval document for proposals and negotiations to international financial institutions, and as a coordination tool for the DOE to use in managing various DSM/IRP programs in the Philippines.

Staffing and Schedule:

The DSM/IRP pre-assessment task would be staffed by the Manager of International DSM at RCG/Hagler, Bailly, Mr. David Wolcott, with assistance from selected DSM/IRP staff members. A proposed schedule is attached.

TASK ORDER NO. 4**TECHNICAL ASSISTANCE TO THE PHILIPPINE DEPARTMENT OF ENERGY
USAID PCE-5743-Q-00-2074-00, DELIVERY ORDER NO. 2**

Project No.	492-0458	Title:	Commodity Procurement
PIO/T No.	492-0458-3-00361		
Scheduled Start:	January 1, 1994	Scheduled End:	February 15, 1994
Estimated Level of Effort	N/A	Estimated Cost:	\$16,250
Per Approved Work Plan:	Yes (Exception to Delivery Order Commodities Description)		

Task Description:

This task will provide needed commodities to the Department of Energy in support of the Energy Sector Action Plan and general institutional strengthening. The original delivery order contained a commodity budget line item of \$ 75,000 for computers, fax, and other necessary modern information processing equipment. However, upon closer evaluation, the DOE feels that its computer equipment is adequate. Recent upgrades and replacements under other donor country assistance programs have provided the necessary computers and printers. Therefore, the following preliminary revised allocation of commodity funds is recommended:

1. FAX machine w/service contract

The DOE lacks modern FAX capability, relying on an outdated thermal paper FAX machine that is very slow and unreliable. The new plain paper FAX will provide reliable FAX communications with other offices and overseas agencies. The machine will save long distance charges with modern high speed digital modem technology. A three year service is included to ensure reliability, and a compliment of spare imaging cartridges is also included. Line installation cost will be covered in this task order.

2. LCD Projection Panel w/Projector

The DOE is launching an aggressive program of information dissemination within its mandate under the ESAP. However, the agency lacks the basic information display technology to conduct public forums, internal presentations, and all important presentations to coordinating government agencies. This projection system will allow DOE to present computer generated forecasts, video presentations, and develop professional presentations for outreach activities. Currently, this equipment is rented or

borrowed at great inconvenience and cost to the agency.

The remaining commodity funds (\$58,750) set aside in the delivery order item is planned to be allocated to software, yet to be specifically defined. It is anticipated that the currently approved task orders for NPC Privatization and DSM/IRP Assessment will identify appropriate software that DOE can use in its fulfilling its mission. Subsequent task orders will be submitted for software procurement as the need is identified.

Deliverables:

The deliverable under this task order will be:

1. FAX machine procured, delivered, installed w/line, commissioned, and service contract in place.
2. LCD projection panel and projector procured and delivered.

All commodity procurement will be accomplished within established USAID guidelines.

TASK ORDER NO. 5 (Revised Mar 28, 1994)

**TECHNICAL ASSISTANCE TO THE PHILIPPINE DEPARTMENT OF ENERGY
USAID PCE-5743-Q-00-2074-00, DELIVERY ORDER NO. 2**

Project No.	492-0458	Title:	Energy Information System
PIO/T No.	492-0458-3-00361		
Scheduled Start:	April 1, 1994	Scheduled End:	September 3, 1994(*)
Estimated Level of Effort	73 Days	Estimated Cost:	\$ 60,866
Per Approved Work Plan:	Yes		

(*) Note: US Study Tour processing requirements will require an extension of the delivery order completion date, which will require AID contract officer and project officer approval.

Task Description:

The purpose of this task will be to set the direction for the development of the Energy Information System.

The Department of Energy needs to establish a computerized energy sector-wide information network as a part of the Department's mandate to coordinate energy sector activities. This task will set the goal toward which the DOE can direct and define its computerization efforts within the planning horizon. DOE can draw up the energy IS and equipment structure it envisions to have based on present and long term requirements.

The strategy will be to learn from the USDOE/EIA, and a similar State Agency, their current structure, activities, manpower, computer resources, communication links, and operations. The task would also include an assessment of the technical feasibility of connecting DOE to the Internet in order to enable global access to energy-related information.

The benefits and activities envisioned under this task would be the following:

1. Identify and develop linkages of information systems, within and outside the organization, to serve both the agency's information needs and management priorities.
2. Identify critical units from which information can be generated and from which databases can be set up.

3. Prioritized development of application systems according to organizational needs and management priorities.
4. Determine hardware configuration that is most appropriate to the agency's data processing requirements within the planning horizon.
5. Identify software to be used to support information processing environment.
6. Specify data communication facilities that will be utilized in order to effect linkages among the different computer installations or facilities. This shall include the following: data security, efficiency, presence of facilities required for data transmission in areas specified.
7. Define the feasible approach to implement the earlier formulated IS strategies for the planning horizon. This will specify key policies that will govern on-going IT operations and systems development activities.
8. Specify other organizational structure for the implementation of the IT strategy. This will also specify the roles and functions of the units with regard to the implementation of specified IS development strategy.
9. Determine IT resources requirements (personnel, equipment, facilities, services, maintenance, and other operating items.)

The following two sub-tasks would comprise this effort:

1. US Study Tour and Data Base Definition

The US Department of Energy, through the Energy Information Administration (EIA) maintains a sophisticated data base of energy related information. In addition, many State Government agencies perform similar functions at the state level. The purpose of this task would be to introduce these agencies, and the respective functions, to select representatives from DOE/Philippines, and develop a preliminary action plan to use in further developing its own energy sector data base. The DOE/Philippines team would spend one week at the federal agency (DOE/EIA) and one week at the state agency. Their activities would center on the following:

- Introduction and familiarization with the EIA and State agencies, including: administrative organization, mandate, staffing, responsibilities, funding, authorities, and functional responsibilities.

- Review of outputs from these agencies: reports, formats, data presentation, user groups, and interaction with other federal and state agencies.
- Review of inputs to these agencies: data collection methodologies, frequency, cost, and identification techniques of key energy sector indices.
- Review of data processing hardware, software, and telecommunications.

The DOE/Philippines team would be accompanied by a Hagler, Bailly consultant during the entire study tour. At the conclusion of the tour, the DOE/Philippines team would be provided with a full set of documentation to use as reference materials. The team, in conjunction with Hagler Bailly consultants, would also be responsible for issuing a trip report and developing a preliminary action plan. This plan, in conjunction with the following subtask 2, would form the basis for DOE/Philippines data base development and funding appropriations.

2. Evaluation of DOE/Philippines Data Processing Requirements:

The DOE maintains an existing network based system of data collection and processing. However, this system will need to be upgraded to accommodate the ultimate database requirements, and additional telecommunications capability may be needed. In addition, the DOE would like access to the international Internet global database of energy sector information. This subtask would call for one Hagler Bailly data processing specialist to make a field trip to Manila and accomplish the following:

- Assess the existing data processing, and telecommunication, capabilities of DOE.
- Assess the additional capabilities and resources available in the Philippines.
- Develop recommendations, preliminary hardware and software specifications, budgets, schedules, and list of suppliers to upgrade the DOE energy data base data processing system.
- Establish the telecommunications interface with Internet so that the DOE will have immediate access to this global data base.

The Hagler, Bailly consultant would work directly with DOE counterparts to develop the energy data base data processing action plan.

Deliverables:

The prime deliverables will be:

1. Conduct US study tour for three (3) representatives of DOE/other agencies.
2. Develop the energy data base preliminary action plan during the US study tour.
3. Develop the data processing action plan, including budgets, schedules, hardware and software configuration(s), suppliers, etc..
4. Establish one (1) Internet work station at DOE.

Schedule:

The task would begin with the data processing field trip in early April, and continue through September 3, 1993 with the US study tour.

ESAP Reference:

This task falls under the provisions of the Energy Sector Action Plan Section 1. which denotes general organizational and institutional strengthening at DOE.

Note:

This task will require an extension of the Delivery Order completion date. In accordance with the delivery order, any contract extension beyond 30 days will require AID contract officer and project officer approval.

TASK 5 - DOE INFORMATION SYSTEM

Ro #	Task Name	Start	End	1994				
				Mar	Apr	May	Jun	Jul
1	EIS SYSTEM DEVELOPMENT	Apr/04/94	May/27/94		■			
2	Initial Field Trip	Apr/04/94	Apr/08/94		■			
3	Establish Requirements	Apr/11/94	Apr/15/94		■			
4	Technology Resources	Apr/18/94	Apr/22/94		■			
5	Internet Access	Apr/04/94	Apr/08/94		■			
6	Action Plan	Apr/25/94	Apr/29/94			■		
7	Budgets/Schedules	May/02/94	May/06/94			■		
8	Draft Report	May/09/94	May/13/94			■		
9	Review	May/16/94	May/20/94			■		
10	Final Report	May/23/94	May/27/94			■		
11	ENERGY INFORMATION SYSTEM	May/31/94	Jun/27/94				■	
12	US Study Tour	May/31/94	Jun/20/94				■	
13	DOE EIA	May/31/94	Jun/06/94				■	
14	State EIA Agency	Jun/07/94	Jun/13/94				■	
15	Develop Action Plan	Jun/14/94	Jun/20/94				■	
16	Issue Final Action Plan	Jun/21/94	Jun/27/94				■	

USAID/Office of Energy Infrastructure

Milestone ▲

Summary ■
Fixed Delay ■

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TASK ORDER NO. 6 (Revised March 28, 1994)

**TECHNICAL ASSISTANCE TO THE PHILIPPINE DEPARTMENT OF ENERGY
USAID PCE-5743-Q-00-2074-00, DELIVERY ORDER NO. 2**

Project No.	492-0458	Title:	NPC Privatization Follow-Up Support
PIO/T No.	492-0458-3-00361		
Scheduled Start:	June 1, 1994	Scheduled End:	September 30, 1994 (*)
Estimated Level of Effort	156 Days	Estimated Cost:	\$ 168,926
Per Approved Work Plan:	Yes (budget), No (schedule)		

(*) Note: The follow-up technical assistance will require an extension of the delivery order completion date, which will require AID/R&D/E&I contract officer and project officer approval.

Task Description:

The purpose of this task shall be to provide follow-up assistance the DOE in following through with the appropriate policy for the privatization of the National Power Corporation (NPC). The contractor shall work under the direction of the Technical Working Group and the DOE Energy Planning and Monitoring Bureau. The following specific tasks are as follows:

1. Following the development and presentation of the Privatization Action Plan, provide general technical follow-up assistance as may be required to clarify and further define action plan elements. This technical assistance is anticipated as the action plan receives review and comment from various Philippine agencies and concerned entities. The purpose is to enhance and strengthen DOE's promotion of the final action plan before presentation to the Congress in September.
2. Provide two workshops for Government, NAPOCOR, private utilities, REC's, and others to promote the action plan and inform the concerned sectors about the privatization activities.
3. Provide a Privatization Study Tour for high level NAPOCOR and GOP officials to observe first hand the privatization action plan elements practiced in another country (may be non-U.S.).

Deliverables:

The deliverables shall be the following:

- Follow-up technical assistance to the privatization action plan, clarification and detailed analysis of specific elements as may be required, and coordination with DOE and NAPOCOR for presentation to the Congress in September.
- Two privatization workshops in support of DOE and NAPOCOR to disseminate information about the action plan.
- Privatization Study Tour for GOP officials.

Staffing & Schedule:

The Follow-UP Privatization team will consist of the following:

Team Leader: Stan Bowden, Principal

Resident Advisor: Michael Ellis, Manager

Regulatory
Advisor: Ashley Brown, Consultant

Legal
Specialist: Local subcontract, to be named

Due to the follow-up nature of the work, this task order will require a four month extension (no cost) of the technical assistance contract to September 30, 1994.

ESAP Reference:

This task order falls under the provisions of the Energy Sector Action Plan Section 2.a which calls for the DOE to submit a privatization plan for NPC.

NPC PRIVATIZATION TA FOLLOW-UP

Row #	Task Name	Start	End	Effort (Days)	1994													
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep					
1	Review of Privatization Options	Jan/24/94	Feb/17/94	29.63		█												
2	Establish Criteria	Feb/16/94	Mar/01/94	27.88			█											
3	Power Development Plan	Jan/12/94	Feb/24/94	32.30	█	█												
4	Infrastructure Profile	Jan/12/94	Jan/31/94	25.02	█													
5	BOT/BOO Implications	Feb/10/94	Feb/24/94	15.07		█												
6	NPC Financial Viability	Feb/24/94	Mar/10/94	15.50			█											
7	Regulatory Issues/Options	Jan/27/94	Mar/10/94	48.00		█	█											
8	Institutional Factors	Mar/09/94	Mar/28/94	14.00			█											
9	Social/Political/Regional Factors	Mar/28/94	Apr/21/94	14.81				█										
10	Financial Markets & Options	Mar/11/94	Mar/30/94	16.94			█											
11	Fuel Supply & Availability	Apr/22/94	Apr/28/94	10.00				█										
12	Indigenous Resources	Apr/14/94	Apr/26/94	18.00				█										
13	Profile Generation/Supply/Delivery	Mar/31/94	Apr/13/94	20.00				█										
14	Legal and Institutional Factors	Jan/13/94	Mar/15/94	29.83	█	█	█											
15	Draft Report	Apr/26/94	May/09/94	50.00					█									
16	Final Report	May/12/94	May/25/94	30.00					█									
17	Action Plan	May/25/94	Jun/01/94	10.00						█								
18	Policy Formulation	May/25/94	Jun/01/94	25.00						█								
19	General Follow-Up	Jun/01/94	Sep/30/94	20.00							█	█	█	█	█	█	█	█
20	Workshop	Jul/11/94	Jul/22/94	72.00								█						
21	Government	Jul/11/94	Jul/15/94	36.00								█						
22	Others	Jul/18/94	Jul/22/94	36.00								█						
23	Privatization Study Tour	Aug/15/94	Aug/26/94	24.00									█					
24	DOE Final Recommendations to Go	Sep/01/94	Sep/30/94	27.98													█	

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TASK ORDER NO. 8**TECHNICAL ASSISTANCE TO THE PHILIPPINE DEPARTMENT OF ENERGY
USAID PCE-5743-Q-00-2074-00, DELIVERY ORDER NO. 2**

Project No.	492-0458	Title:	Commodity Procurement
PIO/T No.	492-0458-3-00361		
Scheduled Start:	April 15, 1994	Scheduled End:	June 1, 1994
Estimated Level of Effort	N/A	Estimated Cost:	\$58,750
Per Approved Work Plan:	Yes		

Task Description:

This task will provide needed commodities to the Department of Energy in support of the Energy Sector Action Plan and general institutional strengthening. The original delivery order contained a commodity budget line item of \$ 75,000 for computers, fax, and other necessary modern information processing equipment. However, upon closer evaluation, the DOE feels that its computer equipment is adequate. Recent upgrades and replacements under other donor country assistance programs have provided the necessary computers and printers.

Task Order No. 4 provided for \$ 16,250 in initial commodity procurement. This task order will provide for the remaining commodity budget to be allocated to the following:

<u>Item Description</u>	<u>Estimated Cost(\$)</u>
Total	\$ 58,750

Deliverables:

The deliverable under this task order will be the procurement and delivery of required commodities.

All commodity procurement will be accomplished within established USAID guidelines.

ESAP Reference:

The commodities to be procured under this task order are in support of the Energy Sector Action Plan Section A.1. which calls for general institutional support of DOE.

TASK ORDER NO. 8 SUPPLEMENT EQUIPMENT LIST

**TECHNICAL ASSISTANCE TO THE PHILIPPINE DEPARTMENT OF ENERGY
USAID PCE-5743-Q-00-2074-00, DELIVERY ORDER NO. 2**

Project No.	492-0458	Title:	Commodity Procurement
PIO/T No.	492-0458-3-00361		
Scheduled Start:	April 15, 1994	Scheduled End:	June 1, 1994
Estimated Level of Effort	N/A	Estimated Cost:	\$58,750
Per Approved Work Plan:	Yes		

This task will provide needed commodities to the Department of Energy in support of the Energy Sector Action Plan and general institutional strengthening. The original delivery order contained a commodity budget line item of \$ 75,000 for computers, fax, and other necessary modern information processing equipment. Task order No. 5 identified the need for data processing equipment hardware and software in support of the Energy Information System.

Task Order No. 4 provided for \$ 16,250 in initial commodity procurement. This task order will provide for the remaining commodity budget to be allocated to the equipment listed in Attachment A.

TASK ORDER NO. 9

**TECHNICAL ASSISTANCE TO THE PHILIPPINE DEPARTMENT OF ENERGY
USAID PCE-5743-Q-00-2074-00, DELIVERY ORDER NO. 2**

Project No.	492-0458	Title:	Training in Mini-Hydropower Engineering
PIO/T No.	492-0458-3-00361		
Scheduled Start:	June 1, 1994	Scheduled End:	August 31, 1994
Estimated Level of Effort	None	Estimated Cost:	\$ 10,000
Per Approved Work Plan:	Yes		

Task Description:

The prior energy crisis in the Philippines has emphasized the strategic importance of energy development in the country. As a consequence of this crisis, new importance has been given to the development of renewable and indigenous energy resources. Mini-hydropower has long been identified as an attractive alternative to small scale fossil fuel power plants. There is an abundance of sites, lower capital requirements, less social and environmental disruption, and protection from fuel delivery and pricing escalation.

The Department of Energy would like to promote the use of mini-hydropower throughout the country, but lacks the required expertise and knowledge. Since mini-hydropower is a dispersed and small scale power resource, it is not usually attractive to private developers and large utilities. DOE must act as a catalyst to promote the development of this important resource. In order to accomplish this mandate, it is proposed to strengthen DOE staff with a course in Mini-Hydropower Engineering conducted by the National Hydraulic Research Center, U.P. College of Engineering.

The training program would consist of four modules:

- Hydraulics (4 weeks) - Planning, analysis, and design of hydraulic structures in mini-hydropower plants. It covers basic hydraulics, design of diversion works, intake structure, conveyance system, protection works, and powerhouse components including turbine selection.
- Geotechnical Engineering (4 weeks) - Geotechnical aspects of mini-hydropower plants. It covers a review of the engineering properties of soils, rocks, geotechnical investigation, field techniques, laboratory methods, foundation

analysis and design, dam specifications, and seepage analysis.

- Hydrology (4 weeks) - Focuses on the analysis and synthesis of hydrologic parameters needed in the design of mini-hydropower plants. It covers hydrologic measurement, rainfall analysis, flow duration analysis, design flood estimation, flood routing, and sedimentation.
- Engineering Economy (4 weeks) - Economic feasibility analysis of mini-hydropower plants, including: project planning, economic analysis, supply and demand estimation, and project feasibility analysis.

Participants will be awarded a Certificate in Mini-Hydropower Engineering by the NHRC/UP.

Deliverables:

The deliverable under this task order will be the completion of the four module course in Mini-Hydropower Engineering

Schedule:

The courses would be completed over approximately a two month period.

ESAP Reference:

This task order would fall under the Energy Sector Action Plan Section D.4. which mandates the DOE to promote renewable energy programs.

TASK ORDER NO. 7**TECHNICAL ASSISTANCE TO THE PHILIPPINE DEPARTMENT OF ENERGY
USAID PCE-5743-Q-00-2074-00, DELIVERY ORDER NO. 2**

Project No.	492-0458	Title:	Gas Negotiation Technical Assistance
PIO/T No.	492-0458-3-00361		
Scheduled Start:	May 15, 1994	Scheduled End:	August 31, 1994 (*)
Estimated Level of Effort	75 Days	Estimated Cost:	\$ 92,202
Per Approved Work Plan:	Yes (budget), No (schedule)		

(*) This task order will require an extension of the delivery order completion date, which will require AID/R&D/E&I contract officer and project officer approval.

Task Description:

The purpose of this task shall be to provide technical assistance to the Gas Negotiation multi-agency negotiation committee, technical sub committee for gas supply and power demand. The technical assistance effort shall entail an evaluation of utilizing gas produced from the Malampaya/Camago field for power generation and other industrial processes.

The primary objectives of this technical assistance are:

- To review the realism of the cost of investment and operation of the field as presented by the service contractor.
- To review the realism of the gas reserve estimates of the Camago-Malampaya field.
- To identify other strategic sectors which may utilize natural gas.
- To advise the Government negotiating team on pertinent contract issues with the service contractor.
- Provide the negotiating team with comparative information on other natural gas supply contracts.

- To assist in the preparation of broad guidelines and/or policies for gas contract negotiations which can be adopted by the department.

A summary of technical assistance is presented as follows:

1. Field Operations - A review will be conducted of the information provided by DOE and the service contractor as to the cost of investment and operation of the gas field. Utilizing this information, a separate analysis will be conducted and compared to the service contractor analysis and proposed sales price. Recommendations as to the validity of the service contractor's offering will be provided to DOE.

2. Reserve Estimates - The reserve estimates of the Camago-Malampaya gas field will be reviewed and analyzed for validity. Comparisons will be made with other regional fields and accepted industry norms for reserve estimation.

3. Strategic Sectors - An analysis will be made as to other strategic industrial sectors for the Philippines which could make use of the natural gas. Preliminary estimates of offtake and equivalent economic benefits will be provided to DOE.

4. Negotiations - The consultant will advise and prepare DOE for contract negotiations as follows:

- Identify pertinent contract issues in gas negotiations of this type and assist DOE with preparing it's case.
- Provide DOE with comparative information on representative gas supply contract issues.
- Assist with the preparation of guidelines and/or policies for gas contract negotiations which can be adopted by DOE.
- Provide training and a workshop, including simulated negotiations, on gas contract negotiations.

Deliverables:

The deliverables shall be the following:

1. A report with the results of the review of cost and investment of field operations, gas reserves, and strategic sectors.

2. A report which advises the DOE on pertinent gas contract issues, representative contracts, and guidelines/policies on gas contract negotiations.
3. A training seminar and workshop on negotiating techniques.

Staffing & Schedule:

The project staffing has not been identified as yet, however, all consultants will be submitted to AID/DOE for prior approval.

ESAP Reference:

This task falls under the provisions of the Energy Sector Action Plan Section D. Upstream Operations which mandates DOE to fully promote the use of indigenous oil and gas reserves.

Notes:

1. This task will require an extension of the delivery order completion date. In accordance with the delivery order, any contract extension beyond 30 days will require AID contract officer and project officer approval.

GAS NEGOTIATION TECHNICAL ASSISTANCE

Row #	Task Name	Start	End	1994				
				May	Jun	Jul	Aug	Sep
1	Field Operations	Jun/15/94	Jun/28/94		■			
2	Reserve Estimates	Jun/29/94	Jul/13/94			■		
3	Strategic Sectors	Jul/14/94	Jul/27/94			■		
4	Negotiations	Jul/28/94	Sep/15/94				■	
5	Contract Issues	Jul/28/94	Aug/10/94				■	
6	Comparative Info	Aug/11/94	Aug/24/94				■	
7	Guidelines	Aug/25/94	Sep/08/94					■
8	Workshop	Sep/09/94	Sep/15/94					■

USAID/Office of Energy Infrastructure

Milestone ▲ Summary ■
Fixed Delay ■

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ATTACHMENT A - COMMODITY EQUIPMENT LIST

1 OmniPage Professional OCR software	\$485	\$485
Software:		
1 Pegasus Mail for DOS SMTP Gateway		\$0
Spreadsheet, Word Processing, Presentation (all Server-Based):		
20 Lotus 1-2-3 R 2.4 licenses	\$300	\$6,000
20 WordPerfect 5.1 licenses	\$180	\$3,600
3 Harvard Graphics for DOS licenses	\$350	\$1,050
2 TimeLine for DOS licenses	\$300	\$600
Accounting Software (yet to be determined)		\$0
5 FoxPro 2.5 for DOS licenses (for Database)	\$33	\$165
1 BBS software (mustange wildcat)	\$325	\$325
Virus:		
1 Central Point Anti-Virus for NetWare 100 user	\$750	\$750
Wiring:		
50 drops with 10BaseT level 3 plenum cable with RJ-45 ends	\$20	\$1,000
Note: Most wiring can be done with existing DOE employees		
Internet:		
0 1 years of Philnet connections:	\$200	\$0
0 1 years of PLDC 64kbps leased lines:	\$300	\$0
Notebook		
1 486 Notebook Computer	\$5,000	\$5,000
		\$56,773

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ATTACHMENT A - COMMODITY EQUIPMENT LIST

DESCRIPTION	PER UNI	TOTAL
1 Compaq ProSignia 486DX2/66	3850	\$3,850
2 32 MB RAM	445	\$890
2 2 GB SCSI-2 Hard Drive	\$1,625	\$3,250
1 dual-port EISA Network Interface cards 10BaseT	\$760	\$760
1 EISA Token Ring Card	\$450	\$450
1 EISA SCSI-2 Controller	\$400	\$400
Concentrators:		
4 12-PORT 10BASET HUBS	\$660	\$2,640
Network Interface Cards:		
50 10BaseT 16-bit SMC Ultra Elite NIC's	\$99	\$4,965
Network License:		
1 100 user NetWare 3.12	\$3,995	\$3,995
0 Lan WorkPlace for DOS packages	\$275	\$0
0 Chameleon TCP/IP software	\$350	\$0
1 100 user Saber Menu System	\$1,200	\$1,200
Tape Backup:		
1 HP 4 GB DAT Tape Backup	\$1,260	\$1,260
1 100 user ArcServe 4.0 for DOS	\$1,050	\$1,050
20 4 GB DAT Tapes	\$14	\$288
Internet Router		
0 External Pipeline router for TCP/IP Connection	\$4,000	\$0
Communications:		
11 US Robotics Sportster External 14.4 Modems	\$150	\$1,650
2 dual 386 Cubix Card	\$1,870	\$3,740
2 dial-up for the field, SMTP		
1 486 workstation for BBS (8 MB RAM 200 MB hard drive)	\$2,030	\$2,030
1 5 user pc/Anywhere/LAN	\$410	\$410
9 pc/Anywhere Remote	\$85	\$765
Printers:		
3 HP LaserJet 4 with JetDirect cards	\$1,850	\$5,550
1 Epson DFX-5000 with Print Server	\$1,950	\$1,950
Scanner/OCR		
1 HP ScanJet IICX with Document Feeder	\$1,445	\$1,445

APPENDIX A2

ESAP WORK PLAN

**PHILIPPINE ENERGY SECTOR ACTION PLAN (ESAP)
USAID TECHNICAL ASSISTANCE PROGRAM**

WORK PLAN

November 8, 1993

Wk

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1. Background
2. Objectives
3. Scope of Work
4. Work Plan
5. Schedule
6. Staffing

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- A. Evaluation of Technical Assistance Requests Submitted to USAID
- B. USAID Proposed Energy Sector Technical Assistance Program
- C. Philippines Energy Sector Donor Country Assisted Projects
- D. Updated Energy Sector Action Plan
- E. Resumes of Proposed Staff
- F. Trip Report for M. Ellis Planning Mission
- G. Comments to the Draft Work Plan

**PHILIPPINE ENERGY SECTOR ACTION PLAN (ESAP)
USAID TECHNICAL ASSISTANCE PROGRAM**

WORK PLAN

November 8, 1993

1.0 BACKGROUND

The USAID Technical Assistance Program is designed to support the Philippine Government, and other Philippine energy sector entities, with implementing the broad provisions of the Philippine Energy Sector Action Plan. This work plan generally follows the provisions of the ESAP plan, and places particular emphasis on the near term (six months) activities to be completed during the initial emergency phase. In addition, the plan considers other donor country aid programs in-place and is designed to compliment these related assistance activities.

2.0 OBJECTIVES

The objectives of the USAID Technical Assistance Program are contained in the USAID RFP and reiterated here:

1. Establish the priority needs of the energy sector - Identify available Philippine and foreign expertise and resources required to implement the ESAP.
2. Strengthen the overall direction and coordination of the energy sector - Tariff and regulatory policies, personnel, organization, private investments, and incentives to ensure energy sector efficiency, dependability, and growth.
3. Provide for greater private enterprise - Involvement, ownership in energy development and operation, and management, while providing for the integrity, reliability, and efficiency of the energy system as a whole.

3.0 SCOPE OF WORK

The scope of work to be provided during the interim emergency period shall generally conform to USAID guidelines, with emphasis on the following areas:

- A. Privatization and Market Liberalization

- B. Institutional Development
- C. Efficiency, Environment, and Renewables
- D. Economic Cooperation/Trade Promotion

In addition, the Technical Assistance provided under the program shall be designed to assist Philippine energy sector entities with implementation of ESAP action items and related activities.

4.0 WORK PLAN

The work plan was developed during a planning mission in Manila by the RCG/Hagler, Bailly resident advisor from August 9th through August 27th. During that time, meetings were held with key representatives of the primary energy sector agencies, DOE, and private sector entities. The foundation for development of the work plan was the ESAP and USAID proposed energy TA. In addition, the draft workplan has been updated with comments from the USAID mission in Manila. Before implementing each task under the work plan, a task order will be prepared by the RCG/Hagler, Bailly project Manager for approval by the affected agencies, USAID/Manila, and USAID Office of Energy R&D. The following are descriptions of each work plan task, expected achievements, deliverables, conformance with the ESAP and USAID proposed TA, and relationship to other donor assisted projects. A summary matrix is presented in Figure 1. The overall schedule is presented in Figure 2.

4.1 Preliminary Work Plan:

The preliminary work plan will be developed during an initial mission to Manila by the RCG/Hagler, Bailly Project Manager. Meetings will be held with key energy sector representatives, and a draft work plan issued at the conclusion of the mission. The draft work plan shall contain the following:

- A. Description of major technical tasks
- B. Illustration of the objectives, expected achievements, deliverables, conformance to the ESAP and USAID proposed TA, and compatibility with other donor assistance programs.
- C. Schedule
- D. Budget
- E. Supporting findings

USAID Technical Assistance Matrix

ACTIVITY	CLIENT(S)	TA DESCRIPTION	ACHIEVEMENTS	DELIVERABLES	DISCUSSION
Develop TA Workplan	USAID/R&D DOE	Develop 6-Month Interim Workplan	Agreed upon TA by DOE/USAID/R&D, others.	Work Plan	Requirement for USAID contract
Examine The Existing Energy Delivery/Consum Systems	All	Develop Energy Sector Profile & Recommend	Profile to Plan & Implement ES Changes	Profile Report, Recommendations, Implement Plan	Limited level-of-effort to provide a comprehensive profile of the energy sector and validate forecasts (updated 1987 WB Report)
Privatization: - Private Power	NPC/DOE/ERB	Follow-Up TA to P/W Report for Implementation Review Existing Contracts/Regs & Make Recommend Evaluate Past BOT-BOO Contracts Develop Standard ROT ITB, Contract & Evaluation Criteria Develop Standard Offer ITBs for Small Generators (e.g. mini-hydro) Develop Incentive Program for Small IPPs (incl Cogen)	Implement NPC Privatization Plan of Contract & Regulatory Reform Lessons Learned Efficient ROT Implementation Process Efficient Addition of Small Generators Addition of Small IPPS	Specific Recomm & Follow-Up as Required Report, analysis, recommend, & implement plan Report, Eval, Recommendations. Std. Contract, ITB, Criteria Std Contract, I/FB, Criteria Incentive Pgm Design & Recommendations	Continuing TA for NPC privatization. Establish a baseline of contractual and regulatory environment, and recommend changes. Improve BOT - BOO process by evaluating past performance. Improve and speed up ROT implementation thru std methods. Improve and speed up addition of small generation capacity. Increase the number of small IPPs through incentive programs.
Institutional Development: - NPC	NPC/DOE/ERB	Develop Std Rate Adjustment Process	Uniform System of Rate Setting	Uniform System Recommendation, Training, and Methodologies	NPC/DOE/ERB need a uniform system of power rate adjustments

Figure 1.

ACTIVITY	CLIENT(S)	TA DESCRIPTION	ACHIEVEMENTS	DELIVERABLES	DISCUSSION
	NPC/DOE/ERB	Develop RORB Methodology	Standard RORB Methodology	Methodology, training, and systems	ERB WP TA may overlap with this TA.
	NPC/DOE/ERB	Develop FOREX and fuel adj formula	Standard Methodology	Methodology, training, and Systems	ERB WP TA may overlap with this TA
	NPC/DOE/EMB	Timely Start-Up of Fast Track Projects	Fast track Approval Sys	Research process, recomm, implement plan.	Need fast track approval system for BOT-BOO-ROT development projects
	NPC/DOE/EMB	Application of Electric Rates	Evaluate cost of demand charges to NPC	Evaluation and Recommendation	Need to evaluate and revise demand component of electric rates.
- EMB/DENR	EMB/DENR/DOE/NPC	Define Social Acceptance Criteria for Energy Proj	Evaluation Methodology	Establish Methodology	EMB needs strengthening in this area.
	EMB/DENR	Develop Energy Proj Approval Guidelines	Efficient Approval Process	Develop Guidelines	EMB needs support with guidelines for specific technologies/projects.
	EMB/DENR	Expand Monitoring System	Efficient Monitoring	Procure Equip and Training	EMB's ability to spot monitor is very limited.
	EMB/DENR/NPC/DOE	Establish NPC Enve Office	Enhance EIA aproval process by having EMB staff at NPC	Recommendation and Implementation plan	This will enhance the approval process of energy development projects
- DOE	DOE/NPC/PUs	Develop IPP Accreditation	Efficient IPP Approval Process	Report & Methodology	Accreditation has been transferred to DOE, need efficient approval process
	DOE	Organizational & Management Strengthening	Efficient & Proactive Agency	Study & Recommendations & Implement Asst	Organizational study of DOE functions, capabilities, and recommendations to strengthen agency capability to meet its mandate.

ACTIVITY	CLIENT(S)	TA DESCRIPTION	ACHIEVEMENTS	DELIVERABLES	DISCUSSION
	DOE	Energy Sector Planning	Strengthened Capability & Methods for Ener Sec Planning	TA, training, methods, tools	Continuation of energy sector profile and initial planning work.
	DOE	Training Needs Assessment	Training Action Plan	Assessment, Plan, & recomm	DOE needs a comprehensive assessment of training needs and an action plan to obtain funding.
Efficiency Environment, & Renewables	DOE/NPC/PUs ERB	DSM/IRP Program Assessment & Pilot Pgm Dsn	DSM/IRP Assess Pilot Pgm Design & Coordinate with other DSM programs	Report, Program Design	This activity will perform an initial assessment of DSM/IRP activities in the RP, and design a pilot program.
	DOE/NPC/PUs PNOC	Energy Effic Standards	Implement Effic Standards - Power and Fuels	Evaluation & Draft Standards	Evaluate required standards for electrical and fuels efficiency standards, issue draft stndrds.
	DENR/EMB/NPC/DOE	Fast-Track EIA Approval Process for Power Projects	Efficient Apprvl Process	Analysis & Recommendations	Evaluate existing process and recommend fast-track EIA approval.
	DOE	Institutionalize TTEM	Available TTEM Funds for Enercon Projects	TA to recommend process for TTEM implementation	TA to assist DOE with implementing the TTEM fund.
Economic Cooperation & Trade Promo	All	Trade Promotion Eval & Plan	Plan of RP Energy Trade Promotion	Evaluation & Implement Plan	TA to evaluate US-RP energy trade promotion, develop action plan.
	DOE/NPC/PUs	Energy Tech Promotion	Adoption of Advanced Energy Technologies	TA to Introduce Technologies	e.g. clean coal technology, others.
Training	DOE	High Level Energy Tng Pgm	Enhance Skills of Energy Staff	TA to Conduct Train Program	Organization and sponsorship of training program for high-level DOE officials that are new to the energy sector.
	All	Specific Tng Programs	Support TA	Training Programs	Training activities in support of specific TA activities.
Information Dissemination	DOE	Design Info Dissem: Pgms	Enhance DOE Info Dissem	TA & Infor Dissem Activities	TA to design effective information dissemination program for DOE, specific activities as required

USAID ESAP TA SCHEDULE OF ACTIVITIES

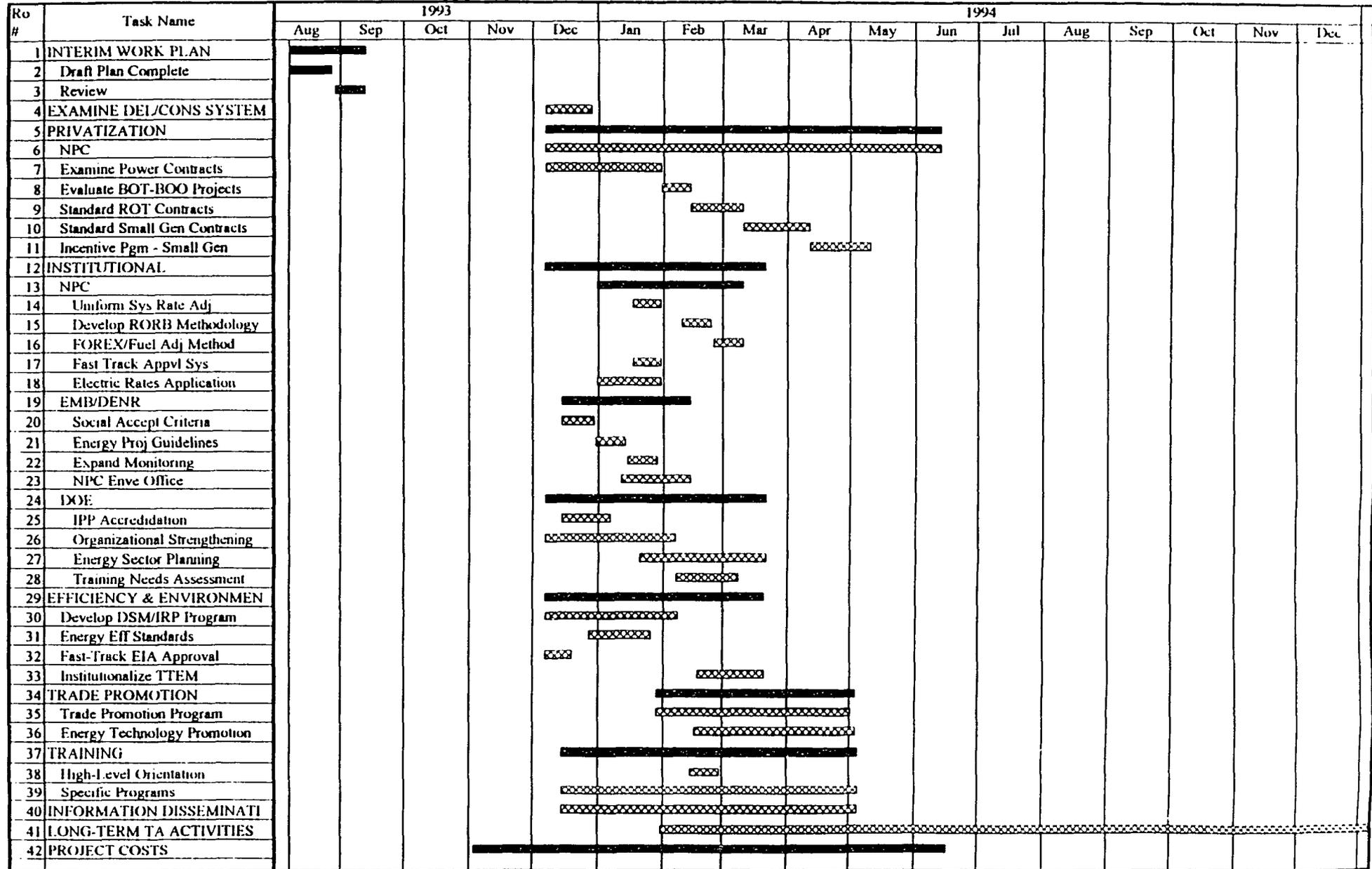


Figure 2.

4.2 Examine Existing Energy Delivery and Consumption Systems:

Description - There have been a considerable number of studies done in all areas of the Philippine energy sector on how to optimally structure the various entities that comprise the sector. The ESAP itself contains the basic framework of a substantially privatized energy sector, with action items generally laid out for all the major players. However, an overall plan for coordinating the energy sector elements is needed. This task will focus on developing an energy sector profile utilizing the results of previously completed sub-sector studies and investigations, including the 1987 World Bank Philippine Energy Sector Report.

Objective - The objective of this task will be to develop a profile of the entire Philippine energy sector. An analysis will be presented and recommendations for short, medium, and long term actions on the part of each sub-sector will be included. The profile will be a working tool for the DOE and sub-sector entities to use in planning and implementing the provisions of the ESAP, and in generally coordinating the move to privatization in the energy sector.

Expected Achievements - The energy sector profile report shall enable each sub-sector to better understand and coordinate with other sub-sectors under the broad direction of the DOE.

Deliverables - The deliverable under this task shall be the energy sector profile report and supporting documentation.

Conformance - This task conforms to both the ESAP and USAID proposed TA in supporting the DOE in its role as a central Philippine agency for planning the development of the energy sector and coordinating privatization activities. By utilizing the results of other studies and investigations, the level-of-effort will be moderate and the task will be coordinated with other donor assisted programs.

4.3 Privatization and Market Liberalization:

Description - Privatization and market liberalization of the Philippine energy sector are major steps for the country. In the power sector, there has been good progress toward privatization as illustrated by the following:

- IPP generators are now on-line with the first BOT power plants completed. Additional IPP generation under various BOT-BTO schemes form the basis of projected additional capacity.
- NPC is seriously looking at privatization under several scenarios.
- The RECs are being revamped, consolidated, or restructured to be financially viable with minimum GOP support.

- Private utilities are moving toward self generation alternatives.
- Private generators utilizing renewable energy technologies are being encouraged.

In the petroleum sector, the GOP has announced the privatization of PETRON by year end, and the full privatization of all PNOOC subsidiaries is in the planning and execution stage. All of these actions represent a positive and definitive move to market liberalization of the energy sector.

The following TA is recommended:

Private Power:

- Follow-up technical assistance to NPC/DOE on implementing the recommendations of the Price-Waterhouse privatization study, including the development of a privatization strategy.
- Examine existing contracts and regulations for energy/power generation, transmission, and distribution systems.
- Evaluation of past BOT contracts to determine what actions need to be taken to ensure sustainable production after transfer, what changes need to be made to future contracts, and an analysis of other contracting options (BTO, BOO, etc.)
- Develop standard ITB's for ROT schemes, performance guidelines, and contracting guidelines.
- Develop standard offer ITB's and contracts for small generators: mini-hydro, small scale cogeneration, industrial cogeneration, etc.
- Develop incentive programs for small generators.

Objective - The primary objective of this TA will be to support Philippine energy sector entities with privatization activities, and to assist wherever possible in implementing these activities. It is expected that much of this TA will be used in identifying barriers to privatization, providing alternatives and recommendations, and assisting with implementing privatization activities to overcome these barriers.

Expected Achievements - The expected achievement under this TA will be the continuing progress in privatization and gains in market liberalization.

Deliverables - The deliverables will be unique to each task, but will generally consist of: consultancies in the Philippines, reports and studies of findings, recommended action and implementation plans, and follow-up technical assistance as required.

Conformance - The tasks to be completed under this TA conform to the ESAP and USAID proposed TA. In addition, there will be considerable coordination required with other USAID and donor country assisted programs.

4.4 Institutional Development:

Description - The reorganization of various Philippine energy agencies and companies under the new DOE, and the ongoing privatization process, has created a need for considerable institutional development and strengthening. This need will be greatest in the DOE and ERB which now have additional responsibilities. The following TA for institutional development is recommended:

NPC

- Develop a standard rate adjustment process that is accepted by NPC, ERB, and DOE.
- Develop a standard RORB methodology.
- Develop uniform method of FOREX and fuel adjustments
- Review and recommend enhancements to the fast-track evaluation and approval process of energy development projects.
- Evaluate the current demand charge element of electric rates and recommend restructuring alternatives.

EMB/DENR

- Define social acceptance criteria and evaluation methodology for energy development projects.
- Develop energy project approval guidelines for specific technologies.
- Expand monitoring capability.
- Establish an environmental compliance office at NPC.

DOE

- Develop IPP accreditation methodology.
- Organizational analysis and recommendations on organizational design and institutional strengthening, and specific TA to achieve organizational restructuring, including a training needs assessment.
- Specific technical assistance in those areas which will likely be transferred to, or assumed by, DOE under privatization, e.g.:
 1. National power development planning
 2. Integrated resource planning
 3. Environmental planning
- Energy sector planning strengthening, including training on energy planning software and implementation of same in the DOE planning department.

Objective - The objective of this TA shall be to strengthen and provide guidance on institutional development for the Philippine DOE and related energy organizations. The TA shall be designed to support private sector participation and institutional strengthening under a privatization environment.

Expected Achievements - This TA will achieve the strengthening of various energy entities so that privatization and development of the energy sector can proceed in an expeditious and well planned manner. The DOE and other agencies will be prepared to guide, regulate, and create free market incentives for energy sector development.

Deliverables - The deliverables will be unique to each task, but will generally consist of: consultancies in the Philippines, reports and studies of findings, recommended action and implementation plans, and follow-up technical assistance as required.

Conformance - The tasks to be completed under this TA conform to the ESAP and USAID proposed TA. In addition, there will be considerable coordination required with other USAID and donor country assisted programs.

4.5 Efficiency, Environment, & Renewables:

Description - Energy efficiency offers great promise in the Philippines to reduce demand and increase the utilization efficiency of primary energy and power. There have been several programs in the past which have demonstrated the potential of energy efficiency, and these should be continued and expanded. Likewise, renewable energy has long been an under utilized

resource in the Philippines, and its potential developed as an energy source. Environmental considerations are becoming a higher priority in the course of energy development in the Philippines, and a balance needs to be maintained between the country's energy demands and environmental protection. The following TA is recommended to support each of these areas:

Energy Efficiency

- Perform an assessment of DSM/IRP potential in the Philippines and design a pilot program and training activities, in coordination with other ongoing programs.
- Develop energy efficiency standards for all sectors.
- Institutionalize the TTEM fund and provide TA to re-start the program.

Environment

- Develop fast-track approval process among all concerned agencies for energy development projects.

Objective - The objective of this TA will be to strengthen the impact of energy efficiency and environmental considerations on the general energy sector development. While conventional energy production, distribution, and planning receive the most attention, these areas are an important part of the overall energy sector development as well.

Expected Achievements - The expected achievements resulting from this TA are the following:

- Energy Efficiency - Increased gains in efficiency through application of efficiency standards, promotion and demonstration via TTEM Fund, and the initiation of DSM/IRP activities.
- Environment - Implementation of an efficient and effective fast-track approval process for energy development projects.

Deliverables - The deliverables will be unique to each task, but will generally consist of: consultancies in the Philippines, reports and studies of findings, recommended action and implementation plans, and follow-up technical assistance as required.

Conformance - The tasks to be completed under this TA conform to the ESAP and USAID proposed TA. In addition, there will be considerable coordination required with other USAID and donor country assisted programs.

4.6 Economic Cooperation & Trade Promotion:

Description - The opportunities for US business in the Philippine energy sector are significant. While the Philippines may represent a small market from a global perspective, it is well placed in Southeast Asia to establish a market base and introduce US energy products and services. This TA would be designed to assess the market for US products and services, identify the barriers to market development, and develop a plan to attract US business to the Philippine market. Concurrently, it would make recommendations to the GOP on market liberalization and development of mutually attractive trade arrangements with US business.

Objective - The objective would be to increase the level of economic cooperation and trade promotion in the energy sector between the US and RP.

Expected Achievements - It is expected that an increased level of business activity would result from this TA, which would benefit the general development of the energy sector through access to BAT (best available technologies) and US energy development firms.

Deliverables - The deliverables will generally consist of: consultancies in the Philippines, reports and studies of findings, recommended action and implementation plans, and follow-up technical assistance as required. In addition, there will be direct coordination with US business and trade promotion organizations (e.g. the US-ASEAN Council for Business and Technology)

Conformance - The tasks to be completed under this TA conform to the ESAP and USAID proposed TA. In addition, there will be considerable coordination required with other USAID and donor country assisted programs.

4.7 Training

Description - The proposed program of technical assistance contains a provision for training in support of the general TA activities. This training has been identified as follows:

- To support the other TA activities through training and development activities.
- To provide a training program for high level DOE officials in energy sector development and privatization.

In addition, training materials will be provided as needed.

Objective - The objective of providing training is increase the awareness and capability of DOE staff in general energy sector development and privatization, and to enhance the DOE's staff capability in specific technical areas.

Expected Achievements - This task is expected to conduct training programs and supply training

Expected Achievements - This task is expected to conduct training programs and supply training materials as required to support the overall program.

Conformance - The tasks to be completed under this TA conform to the ESAP and USAID proposed TA. In addition, there will be considerable coordination required with other USAID and donor country assisted programs.

4.8 Information Dissemination:

Description - The DOE and other energy agencies are planning increased levels of public information dissemination activities. There is a need for professional advice and assistance in organizing these activities, and in the production of high quality materials. This TA would assess the need for information dissemination, develop a plan of information dissemination activities, and provide assistance with the production of high quality materials.

Objective - The objective of this TA would be to enhance and strengthen the DOE's capabilities for effective information dissemination activities.

Expected Achievements - The TA would result in a more effective information dissemination program that will communicate to all interested parties the key issues facing the DOE, and the country's energy sector.

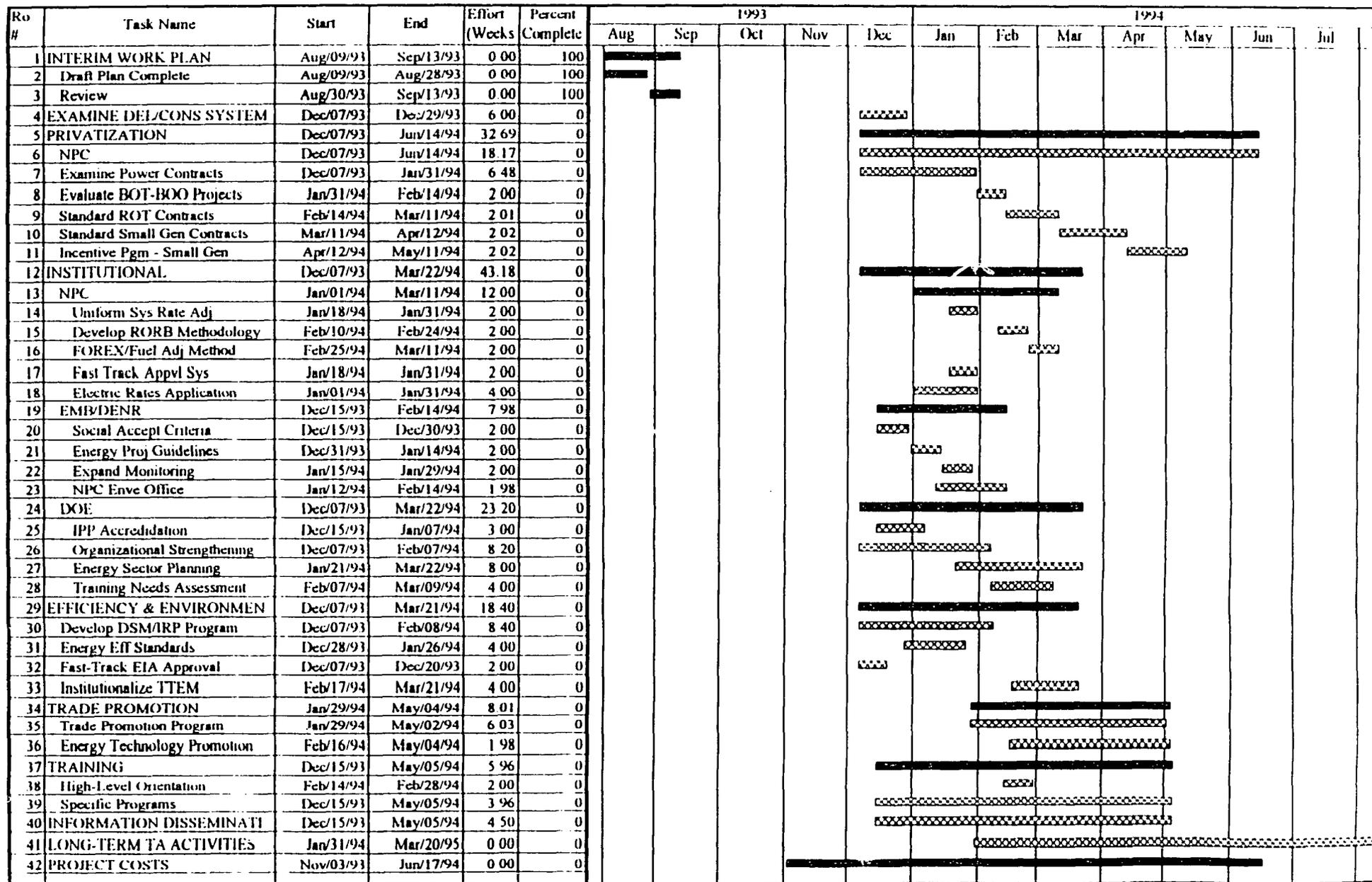
Deliverables - The TA will provide the DOE with an analysis of options for effective information dissemination activities, an implementation plan, and a limited budget for production of high quality materials.

Conformance - The activities under this TA are not specifically itemized under the ESAP or the USAID proposed TA, however, information dissemination is an important of the overall institutional strengthening at DOE.

5.0 SCHEDULE

The schedule of project activities, and associated level of effort, is illustrated in Figure 3. In order to mobilize the team and complete the tasks on a fast track basis, we are planning to work 6-day field weeks. Some adjustments in the proposed schedule may be necessary due to the number of Philippine and American holidays that fall in November and December.

USAID ESAP TA LEVEL OF EFFORT



USAID Office of Energy Infrastructure

Figure 3.

6.0 STAFFING

The following personnel are recommended for this project:

Project Manager, Michael Ellis - Mr. Ellis was the resident advisor in the Philippines for two years under the USAID Technology Transfer for Energy Management Project. He has a solid background in all aspects of energy sector development, petroleum, and project management. In addition, Mr. Ellis is thoroughly familiar with the Philippines and the USAID Mission.

Deputy Project Manager, Thomas Tuschak - Dr. Tuschak has over twenty years experience in energy policy development, and a strong background in the petroleum sector as well. Dr. Tuschak has prior International experience with USAID in Hungary and Jamaica, and with CIDA in Thailand.

Short-Term Advisors - The following short term advisors are offered in accordance with the general staffing guidelines contained in the RFP:

Power and Energy - We are recommending the following staff in the areas noted:

Privatization, John Arnold - Mr. Arnold specializes in the areas of energy and transport. He has worked for IBRD, USAID, ESCAP, ADB and various government agencies. He has focused on privatization and was a participant in the recent World Bank mission to evaluate privatization prospects for the development of Subic Bay.

EIAs, William Meade - Mr. Meade has a broad background in environmental issues and technologies as they pertain to the power sector. He has recently participated in several Philippine projects, including environmental impact assessment for the USAID IEMP project.

Trade Promotion, Suzanne Smith - Ms. Smith is Manager with Hagler, Bailly who specializes in a wide array of energy trade and business development activities. Her recent experience on the USAID IEMP project focused on market development and business opportunity assessment for environmental technologies in the Philippines.

Organization, Dr. Suilin Ling - Dr. Ling is a recognized advisor to the National Regulatory Research Institute on power sector restructuring, privatization, and regulatory reforms. He also has prior USAID experience in many developing countries, including the Philippines.

Rates & Contracts, James Tasillo - Mr. Tasillo has over 22 years of experience advising gas and electric utilities in the rate regulation area. He has worked directly for several major US Utilities in creating practical and competitive tariffs and related business strategies.

Home Office Support - Home office support will be provided by various members on the EEP project team, depending on the nature of support and the timing. In all cases, the field personnel will be supported by qualified home office staff.

Appendix A

**Evaluation of Technical Assistance
Requests Submitted to USAID**

USAID Technical Assistance Requests - Evaluation

USAID Technical Assistance Requests - Description	Agency	Recommendation
Study to Develop a new organizational structure and a functional description of same within the DOE mandate.	ERB/DOE \$500,000	Include in the DOE organizational study
Setting up of a functional system in the Min - Hydroelectric Power Development Division - Field Equipment - Training	DOE \$42,000	Defer to long term contractor after the DOE organizational study has been completed. Equipment not budgeted for interim contract.
Institutional Strengthening of Energy/Environment Capabilities within DOE.	DOE	include in interim contract.
Study on the Privatization of NPC into Three Major Subsidiaries.	NPC/DOE	Include in follow-on TA to the Price Waterhouse Study.
Industrial Process Instrumentation and Control Expert.	DOE 6 Month TA	This TA requests 6 months of foreign TA to assist FATL in I&C equipment and training. Defer to long term contractor for evaluation.
Privatization Plan Philippine Power Sector	DOE \$400,000	Include in follow-on TA to the Price Waterhouse Study
Development of Guidelines for the Sale and/or Merger of RECs	DOE/NEA \$400,000	In-progress by NEA with assistance from NRECA. No additional TA required.
Study on the Future of Nuclear Power in the Philippines	DOE/PNRI \$400,000	Delete, potential support from US DOE?
Evaluation of Mini-Hydro Projects & Potentials	DOE \$250,000	Defer to long term contract or PAPS
Development of a Philippine Hydropower Master Plan	DOE \$600,000	Defer to long term contract or PAPS
Geothermal Energy Promotion Project	DOE \$250,000	Defer to long term contract
Assessing the Direction of the Philippine Private Power Pgm	DOE 8 Month TA	Include in follow-on TA to the Price Waterhouse Study
Preconditions and Economic Implications of Deregulating the Oil Industry	DOE/PNOC	Include in follow-up TA to the K&M study.
Technical Aid for DOE in Preparation for Deregulating the Oil Industry	DOE/PNOC	Include in follow-up TA to the K&M study.
Petroleum Import/Export Liberalization	DOE/PNOC	Include in follow-up TA to the K&M study.
Technical training for NPC's Finance Group: - Privatization - Rate Setting/Formulation - RORB - Project Feasibility Studies	NPC \$5,000/person	Include in follow-on TA to the Price Waterhouse Study

AID Technical Assistance Requests - Evaluation

USAID Technical Assistance Requests - Description	Agency	Recommendation
Feasibility Studies:		
Mini-Hydro South Cotabato	NEA P1,162,000	Delete. PAPS or other Feasibility Study Mechanisms
Wind Turbine Small Islands	NPC \$120,000	.
Del Gallego Geothermal	PNOC \$800,000	.
Iuzon Coal A' Project	NPC \$690,000	.
Magangan/Sipaka Hydro	NPC \$1,178,330	.
Magano Hydro	NPC \$1,555,930	.
Magano-Malongan, et.al. Hydro	NPC 1,212,750	.
Malantuanan/Sinabagan Hydro	NPC \$965,425	.
Musig Hydro	NPC \$1,502,000	.
Iuzon Grid Transmission	NPC \$1,153,900	.
Technical Assistance on the Development of Evaluation Criteria for Purchased Power Agreements and ERB's Capability in Evaluating Rates For Purchased Power	ERB/DOE	Most of this request id being covered by the World Bank Energy Sector Loan. ERB has released a ITB for the work. Some follow-up TA may be provided under this program.
Environmental Training for the National Power Corporation	NPC	Include in either interim contract or long term contract.
Development Survey in preparation of a Master Plan for Coal Utilization	DOE P20,863,034	Defer to long term contract.
Development of a Philippine Geothermal Resource Mgmt System	DOE P67,420,00	Defer evaluation to long-term contract
Experimental Mining by Sub-Level Caving	DOE \$500,000	Delete. seek other funding mechanisms.
Drilling Test of the Lignite Deposit in Isabela Cagayan Valley	DOE P10,000,000	Delete. seek other funding mechanisms.
Privatization of PETRON	PNOC 12 Months TA	Not necessary. privatization in-progress.
Privatization of EDC	PNOC 2 Months TA	Include in interim or long-term TA.
Privatization of PNOC Tanker Subsidiaries	PNOC 2 Weeks TA	Delete. complete.
Pre-Feasibility Study for the Proposed Philippine Petrochemical Complex Project	PNOC	Delete. major infrastructure project.

Appendix B

**USAID Proposed Energy Sector
Technical Assistance Program**

Table 1: Proposed Energy TA -- USAID/Philippines

ACTIVITY	CLIENT(S)	PERIOD OF PERFORMANCE	FOCUS	COMMENTS
1 Privatization - Private Power	DOE NPC	March '93 - Dec '94	- Eval./Expand BOT program; contracts, etc. - NPC privatization	- Long-term contractor Energy Advisor supervises, coordinates short-term TA - Possible R&D parallel contracting support
- PNOC Asset Privatization	DOE PNOC	Feb' '93 - Dec '94 (pucd 12/93)	- Sale of Petron, Tanker co., Geothermal svcs co.	- USAID/DOE Privatization Project preparatory work underway for Petron, Tanker Co. - Energy Dev't Co. next
- Oil Decontrol	DOE PNOC	Feb '93-- Dec '94	- Implem. price dereg - Import/export liberal.	- Follow up K&M Fuel Price Structure study - Advisor supervises
2 Institution Devt. - Resident Advisor	DOE	May '93-- Dec '95	Senior level expert advice; pvt power; legislation; DOE org;	- Coordinates TA program and provides support to DOE Secretary
- Regulatory Development	DOE/ ERB	April '93 -- Dec '94	- Authorities of ERB - Energy pricing meth.	- U.S. Public Utility Commission expertise - Advisor supervises
- Environmental Streamlining	DOE DENR	May '93-- March '94	- Improvement of permitting/planning	- Tap Environmental Improvement Program tech. resources (possible parallel financing w/AID/W) - Coordinates w/ region
- Rural Electrification	NEA RECs	thru Dec '95	- Master planning, computerization, trg.	- USAID Rural Electrification Project - Long-term contractor is providing assistance
- Training	DOE	thru Dec '95	- Various skills	- Coordinates with R&D Energy Training Project
3 Efficiency - Efficiency/DSM Planning	NPC	June '93-- Dec '94	- Demand-Side Mgt TA for power sector	- Top resources of new R&D project (poss. parallel financing)
4 Econ/Trade Promo - Coal Technology	DOE Pvt Sector	??	- State-of-art combustion, drying eqpmt, - Trade missions	- Link w/ planned clean coal initiatives for region - Tap R&D and Asia Environmental Program resources
- Study Tours	GOP	July '93; Sept '93	- Sector issues - U.S. trade potential	- Tour needs careful design - Tap GOP and R&D funds

Table 2. Stand Alone Activities

<u>ACTIVITY</u>	<u>OUTPUTS/LINKAGES</u>
<p>1. Project Feasibility Studies</p> <p>Specific studies for private sector energy infrastructure projects to be funded under existing Pre Investment Fund, Philippine Assistance Program Support, AID/Washington and Trade and Development Agency programs.</p>	<p>Energy infrastructure related studies approved on a case by case basis for specific private investments (BOT, BOO) energy project opportunities.</p>
<p>2. Renewable Energy</p> <p>The Philippines provides a timely opportunity for an activity in renewable energy. The prospects for development of renewable energy in the Philippines have improved dramatically in the past several months with the creation of the new Department of Energy (DCE, Dec. '92) and Cabinet approval of an aggressive reform-oriented Energy Sector Action Plan. Recent Presidential directives also require allocation of P500M (approx. dol. 20 million) in GOP resources for renewable energy to achieve a 50 MW target by 1996.</p>	<p>USAID is proposing TA and capital for renewable energy through AID/W earmark funds as well as from other private sector interests, to achieve 50MW national target.</p> <p>A Mission request for \$5 million for this activity is pending.</p>

Table 3: Proposed Energy TA -- Outputs and Link to ESAP

ACTIVITY	OUTPUTS	LINK TO ENERGY SECTOR ACTION PLAN
1 Privatization - Private Power	- Private O&M contracts for Calaca 1, Malaya plants, Dec '93 - NPC privatization plan, implement. assistance, thru '94 - Std. offer/solic. docs for small generators, Sept '93	- A. <u>General 2) Privatization</u> , a) <u>NPC/Power Sector</u> : NPC privatization; BOT assistance for coal plants; Selective plant privatization, Standard offer for small power plants, esp. hydro
- PNOC Asset Privatization	- Patron privatization plan, June '93; implement. assistance - Privatization plan for Tanker, Geotherm. subsides., Sept '93; implement. assistance to follow, thru (?) '94	- A.2) <u>Privatization</u> b) <u>PNOC</u> : Privatization strategies & implementation for Patron, other subsidiaries
- Oil Decontrol	- Oil price decontrol study (K&M), March '93; implement. rece? - Other outputs depend on legislation, accelerated progress	- A.3) <u>Oil Industry Deregulation</u> Price and industry decontrol; amendments to OPSF law, etc.
2 Institution Devt. - Resident Advisor	- Tech, econ & legislation assessments for pvt power, DOE - Scopes and supervision of short-term TA	- Coordinates USAID short-term TA related to ESAP
- Regulatory Development	- Evaluation of PPAs, Sept '93 - Standard guidelines for BOT/BOO program, Dec '93	- A.4) <u>Single Price Reg. Body for Utilities</u> - A.5) <u>More Efficient Approval System for Energy Projects</u> - B. <u>Power Sector 3) Rate Restructuring/Direct Connection</u>
- Environmental Streamlining	- Analysis of improved permitting/planning/grading, Oct '93	- A.5) <u>More Efficient Approval System for Energy Projects</u> Work w/ DENR/RDC on approval requirements
- Rural Electrification	- Existing TA outputs: NEA/REC planning, computerization, training thru '95	- A.2) <u>Privatization</u> , b) <u>NEA/RECs</u> : Guidelines for sale/merger, etc.
- Training	- Completed professional training, various skills, '93-'95	- e.g., A.2), B.2), B.3) Energy and Env training id'd in ESAP and scopes from agencies
3 Efficiency - Efficiency/DSM Planning	- Demand-Side Mgt action plan for power sector, Dec '93 - TA to implement time-of-day rates, load mgt, etc	- B.6) <u>Energy Eff'cy Stds</u> ; C. <u>Downstream Op'ns 3) En'ly Conserv.</u> , Indus. process eff'cy, other TA expanded beyond ESAP activities
4 Econ/Trade Promo - Coal Technology	- Completed trade missions	- Overall goal of improving environmental performance of coal power plants
- Study Tours	- U.S. and Philippine training and promotion tours	- Training components id'd in ESAP

Appendix C

**Philippines Energy Sector
Donor Country Assisted Projects**

Philippines Donor Country Assisted Projects

PROJECT	DONOR COUNTRY	GOP AGENCY	DESCRIPTION
RP - Manne Seismic Survey Project	Australia	DOE	Financial and technical assistance to the GOP in evaluating offshore geophysical data to better understand offshore hydrocarbon potential. Ongoing - P 10,072,000
Industrial Energy Management Phase II	UNDP	DOE	Enhance DOE capability in conducting detailed energy systems analysis, develop computerized energy database, and establish a FATL. Ongoing - P 36,781,000
National Use Of Energy Project	Germany	DOE	Enhance energy management services to the industrial sector by DOE staff and through other energy programs. Ongoing - P 7,531,000
Industrial Combined Heat and Power Systems Devel	Sweden	DOE	Evaluate the potential of combined heat and power (CHP) technologies in industry and demonstration projects. Ongoing - P 51,072,000
Photovoltaic Pumping Sys Introduction	Germany (GTZ)	DOE	Demonstration project for techno-economic viability of installing 15-20 units of photovoltaic water pumping systems in rural areas. Ongoing - P 471,772,000
VB Energy Sector Loan & TA	WB	DOE ERB	Institutional strengthening of DOE through training and organizational improvement. Institutional strengthening of ERB through training, review of regulatory framework for IPP, evaluation of power purchase contracts, develop criteria for PPCs, study efficiency of existing power plants and develop efficiency standards, review generation mix, and recommend appropriate IPP development program for the Philippines.
Mindanao Energy Company	Private Consultant	NPC	Study to determine the feasibility of establishing a separate private power service company for Mindanao.
Privatization Strategy for NOC Subsidiaries	Salomon Bros.	PNOC	Study to finalize the strategy for PNOC to divest and private its subsidiaries.
Training in Privatization	CALTEX SHELL	Refiners & Distributors	Training for company staff on privatization of the Philippine petroleum sector.
NOC Training Needs Assessment & Institutional Strengthening	SGV	PNOC	Study to determine PNOC's needs for training and institutional strengthening under privatization.
Develop Guidelines for EMB/DENR approval of energy projects.	Australia	EMB/DENR	TA to EMB/DENR in developing guidelines for the approval of power/energy related projects and technologies.
Demand Side Management Workshop	WB	ERB	WB sponsored workshop on Demand Side Management for ERB staff.
Sucut 1, 4 Power Plant Assessment	USAID	NPC	Assess the rehabilitation work at the Sucat 1 and Sucat 4 power plants.
Philippine Assistance Program Support (PAPS)	USAID	All	Multisectoral assistance program for infrastructure projects.
Technical Support to Renewable Energy	USAID	DOE	Three year TA to DOE for the ESAP program, and 3.75 Million in support of the REPP program.

Philippines Donor Country Assisted Projects

PROJECT	DONOR COUNTRY	GOV AGENCY	DESCRIPTION
Private Sector Pre-investment Fund (PIF)	USAID	All	Grants for prefeasibility and feasibility studies for investment projects.
Rural Electrification Project	USAID	NEA	Broad program of TA to rehabilitate the Philippines Rural Electrification Sector. coordinated with WB and OECF.
Other: PSED Project BEST Project AID/W Training	USAID	All	Private Sector Energy Development Biomass Energy Systems and Technology Project Ongoing training for Philippine Nationals
Power Systems Planning	ADB	NPC/DOE	ADB sponsored TA to assist the power planning department with load forecasting. Also includes an initial DSM assessment.

Appendix D

Updated Energy Sector Action Plan

Updated Energy Sector Action Plan (ESAP)

ISSUE	ACTION	AGENCY	STATUS	Technical Assistance	RELATED PROGRAMS					
A General/Institute										
1 Energy Sector Coordination	Certify Urgency of Legislation	President/DOE	Done	None	None					
	Formalize DOE Organization	DOE	Done	Develop Power Sector Privatization Strategy and Implementation Plan	World Bank TA					
				Information Dissemination	None					
				Organizational Improvements	World Bank TA					
				TA to develop IPP accreditation methodology	None					
				Energy Sector Planning	World Bank TA					
Training Needs Assessment	None									
2. Privatization	Congressional Policy Statement	ECC/President	Done - DOE Law	None	None					
a. NPC/Power Sector	Complete OEA Study	OEA - P/W	Done - Study Issued	None	None					
	Submit Private Plan based on Study Recommendations	DOE/NPC Sep 93	In-Progress Mindanao Study Complete	Follow-Up TA to P/W Report	Mindanao Study					
	Approve Plan	Cabinet Mar 94	None	None	None					
	Continue BOT for New Projects - Short List - Evaluate - Award	NPC/DOE Jun 93 Oct 93 Dec 93	Done In-Progress Future	None - Possible review of evaluation	None					
						Selective Private for Calaca I and Malaya Operations. - ITB - Award - Sale	NPC Sep 93 Dec 93 1995	In-Progress Future Future	Assist with ITB and evaluation	None
									Develop std ROT contracts and ITB/evaluation methodology	None
	Std offer for indigenous gen (hydro, etc.)	NPC Jun 93	In-Progress	Develop offer and accreditation methodology	None					
				Develop small scale cogen buy-back agreements	PAPs					
				Incentive pgm for indigenous generation and buy-back agreements	None					

dated Energy Sector Action Plan (ESAP)

SUE	ACTION	AGENCY	STATUS	Technical Assistance	RELATED PROGRAMS
b. PNOC	Decentralization	PNOC/Feb 93	Done	None	None
	Privatize Petron (Decision)	Jun 93	Done	None	None
	Finalize Private Strategy for Subsidiaries	Sep 93	In-Progress	EDC Privatization & Power Generation Plan	Salomon Study CALTEX/Shell Seminars
	Cabinet Approval	Mar 94	Future	None	None
	Begin the Privatization Plan	Jun 94	Future	Implementation Activities Training Needs Assessment Organizational Strengthening	None SGV Study SGV Study
c. NEA RECs	Develop guidelines for sale/merger of RECs	Sep 93	In-Progress	None	AID REA Project IIE Contract
	Request for NEA Capitalization	Sep 93	Future	None	AID REA Project
Oil Industry Deregulation	Congressional Policy Stmt	ECC/President Jan 93	Done - DOE Law	None	None
	Complete ERB Energy Pricing Study	ERB Jun 93	Done - K&M	Follow-Up TA Implementation	ERB WB TA
	Complete Industry Cost Structure Study	DOE/K&M Aug 93	Done	Follow-Up TA Implementation	ERB WB TA
	Presidential Endorsement of OPSF Law	DOE/ERB Sep 93	In-Progress	None	None
	Set Oil Industry Maximum ROR	ERB/Oil Co Sep 93	Done - 10%	TA for non-crude RORB acting	None
	Submit program of oil price decontrol and other dereg act	DOE 1996	Future	TA to develop program	None
	Cabinet Approval	1996	Future	None	None
	Presidential Endorsement of ERB Charter	1996	Future	None	None
	Deregulate Oil Dealerships	1996	Future	TA to develop plan of dereg	None
	Remove inter-fuel subsidies	1996	Future	TA to study & submit recomb	None
	Bill rationalizing tariff tax of petroleum prices	1996	Future	Develop bill provisions	None
	Presidential Endorsement of Draft Bill	1996	Future	None	None
Petroleum Import/Export Liberal Schedule	1996	Future	TA to develop schedule	None	

Updated Energy Sector Action Plan (ESAP)

ISSUE	ACTION	AGENCY	STATUS	Technical Assistance	RELATED PROGRAMS
4 Single-Price Regulatory Body for Utilities	Executive Endorsement	President ERB	Done	Develop uniform methodology for rate adjustment submissions	WB TA
				Training on rate setting/evaluation	WB TA
				Coordination scheme for ERB/Energy Cos	WB TA
5 Efficient Approval System for Energy Projects	Presidential Directive	President Nov 92	Done	None	None
	Agreement for DENR/RDC for approval time and action	DENR/RDC Jun 93	In-Progress	TA to develop guidelines	EMP Project Australian Asst Project
	Agree to Approve Power Projects on a Program basis	NPC/NEDA Jun 93	In-Progress	None	None
	NPC to develop std BOT agreements for plant technologies	NPC/NEDA Sep 93	Future	TA to review past BOT contracts and recommend changes	None
	Approval of std contracts	NEDA/ICC	Future	None	None
B. POWER SECTOR:					
1 Availability and reliability of supply	Ensure timely start-up of fast track projects	NPC/DOE Oct 93	In-Progress	Organizational and procedural TA	WB TA Programs
	Ensure timely implementation of PDP	NPC/DOE	Ongoing	Same	Same
	Submit plan to rehabilitate or retire ageing plants	NPC Dec 93	In-Progress	TA to develop plan	Bechtel Study
	Approve plan and allocate funds for TA	NPC Jan 94	Future	TA to assist with approval	None
	Adopt plan	NPC Jun 94	Future	Implementation TA	None
2. NPC's Financial Viability	Public Infor Dissem Pgm	NPC Dec 92	Done	None	None
	Decision on RORB Methodology	ERB Sep 93	In-Progress	TA to develop methodology	WB TA
	Resolution on NPC fuel tax exempt cases	NPC May 93	Pending	None	None
	Develop automatic FOREX adjustment formula	NPC May 93	In-Progress	TA to develop FOREX formula	WP TA
	Implement rate adjustments to meet covenants	NPC Dec 92	Done	None	None

dated Energy Sector Action Plan (ESAP)

SUE	ACTION	AGENCY	STATUS	Technical Assistance	RELATED PROGRAMS
	Annual proj of rates, investment, financial regs	NPC Annual	In-Progress	TA to develop methodology	None
	Propose level of govt equity infusion to NPC	NPC Annual/Mar	In-Progress	TA to support proposal	None
	Submit Proposal to NPC	DBM Annual/Jun	In-Progress	None	None
	Executive support of Bill	ECC/DOE	Done	None	None
	Operational Efficiency Improvement Study	NPC/WB Dec 93	In-Progress	Follow-Up TA	WB Study
	Implement Study Recommendations	NPC Jun 94	Future	Follow-Up TA	None
Rate Restructuring/Direct Connection	Complete National Consultation	NPC Aug 93	In-Progress	None	None
	Implement Rate Restructuring	NPC/Others Dec 93	In-Progress	TA to Support Rate Restructuring Methodology	WB Program
BNPP Operation	Complete negotiations with Westinghouse	PC-BNPP Dec 92	In-Progress	TA to Assist with Conversion Options	Other consultants Other Proposals Legal issues
	Decision on BNPP Operation	Cabinet Jun 93	Future	None	None
Improve Electricity Efficiency	Set dist loss limits recovered thru tariffs	NEA/ERB/ECC ongoing	In-Progress	TA to set stds for losses	None
	Presidential Endorsement of Anti-Pilferage Bill	ECC Mar 93	Done	None	None
				Design DSM/IRP Program	WB DSM Workshop ADB Assistance?
				Re-Start TTEM Pgm & solicit private ESCOs	None
ENERCON Legislation	None				
Energy Efficiency Standards	Finalize Standards	DOE Jun 94	In-Progress	TA to develop standards	None
				Petroleum Efficiency	None
DOWNSTREAM OPS					
Refinery Expansion	Price Adjustments	ERB May 93	In-Progress	TA to develop std acting sys	WB TA
	PNOC Expansion Plans	PNOC/DOE Sep 93	In-Progress	Refinery Characterization	None
				Supply Cost Determination	None
				Pandacan Terminal Relocation Study	None

Updated Energy Sector Action Plan (ESAP)

ISSUE	ACTION	AGENCY	STATUS	Technical Assistance	RELATED PROGRAMS
				Supply Line Optimization	None
				Review BOT-BOO Projects	None
2. Coal Import Liberalization	Implement Financial/TA Support Pgm	DOE Dec 93	In-Progress	None	None
	Reduce Tariff and Eliminate Volume Restrict	DOE/ERB/NEDA Jun 94	In-Progress	None	None
3. Institutional Energy Conserv	Executive Endorsement	President	Done - DOE Law	None	None
	Refile separate bill for energy conservation	DOE, Congress Jun 93	Future	TA to re-start TTEM	None
	Presidential Endorsement	DOE/President Sep 93	Future	None	None
D. UPSTREAM OPS					
1. Geothermal Law/Private Sector Participation	Presidential Endorsement	DOE/PNOC Jun 93	Pending	None	None
2. Improved Incentives for Oil/Gas Explor	Presidential Endorsement	DOE/OP Jun 93	In-Progress	Incentives Study & Recomm	None
3. Continue Exploration Programs	Attract more oil exploration companies	DOE Dec 93	In-Progress	Incentives Study & Recomm	None
4. Promote Renewable Energy Pgms	Intensify R&D	DOST-PCIERD/DOE PNOC-ERDC ongoing	ongoing	TA to explore renewable opportunities	USAID REA Project PAPS Others
	Promote alternative energy systems	DOE/NEA ongoing	ongoing	TA to explore alternative energy oppor	USAID REA Project PAPS Others

Appendix E

Resumes of Proposed Staff

THIS SECTION IS OMITTED IN THIS COPY

Aug 13 Fri	AM	DOE - Meeting with Undersecretary Salazar on DOE priorities for Power sector TA.
	AM	DOE - Attended and participated in public hearing on proposed Energy Sector Action Plan for Power Sector.
	PM	PETRON - Attended and participated in public hearing on proposed Energy Sector Action Plan for the Petroleum Sector.
	PM	DOE - Wrap-up review of week's activities with DOE staff. Set work plan for next week.
Aug 14 Sat	AM	Continued work on ESAP work plan, budget, task descriptions, etc.. Met with David Gambell to review potential in-country assistance requirements.
Aug 16 Mon	AM	NPC - ESAP TA review Mr. Danny Cantiller
Aug 17 Tue	AM	PNOC/PETRON - ESAP TA review Ms. Wilma Rodriguez (Petron), Mr. Erudito Recio (PNOC), Mr. Miguel Angeles (Petron).
	PM	NEA - ESAP TA review Ms. Nelia Irorota and NEA staff.
Aug 18 Wed	AM	EMB/DENR - ESAP TA review Ms. Clarissa Areda and EMB staff.
	PM	ENMAP - ESAP review with Greg Gonzales
	PM	MERALCO - ESAP TA review with Mr. Rodolfo N. Quetua.
Aug 19 Thr	AM	ERB - ESAP TA review with Ms. Marietta Larracas and ERB staff.
	PM	COMFAC - Review of ESCO opportunities with COMFAC staff.
Aug 20 Fri	AM PM	DOE - Review of program progress.
Aug 21 Sat	AM	Continued work on ESAP work plan, budget, task descriptions, etc..
Aug 23 Mon	AM	USAID - Review of progress to date and review of proposal submitted to R&D.

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**PHILIPPINE ENERGY SECTOR ACTION PLAN (ESAP)
USAID TECHNICAL ASSISTANCE PROGRAM**

TRIP REPORT

August 27, 1993

A mission was conducted to the Philippines during the period August 8th through August 28th by the RCG/Hagler, Bailly project manager for the USAID Philippine ESAP technical support project. The purpose of the mission was to develop the work plan for the 6 month interim technical assistance program.

Activities:

The mission concentrated on meeting with USAID and key Philippine government agencies to review potential technical assistance activities in support of the Philippine ESAP. The following organizations were visited:

- USAID/Manila OCP
- Energy Regulatory Board
- Department of Energy
- Energy Management Bureau/DENR
- National Power Corporation
- COMFAC (private ESCO)
- US/ASEAN Council
- Philippine National Oil Company
- National Electrification Administration
- Energy Management Association of the Philippines
- Manila Electric Company

In addition, various reports and background materials were reviewed, including the Energy Law, energy sector restructuring studies, and other energy sector donor country assistance programs. This information was compiled to update the status of technical assistance needed to support the ESAP. A recommended program of USAID technical assistance was then developed.

Deliverables:

The following deliverables were submitted to the USAID mission in Manila:

1. Trip Report
2. Draft Interim Work Plan

ESAP Technical Assistance Project
Work Plan Development Trip

August 8th thru 28th

List of Reference Documents Reviewed

1. Philippine Energy Sector Action Plan - DOE, November 17, 1992
2. Republic Act No. 7638 An Act Creating the Department of Energy, Rationalizing the Organization and Functions of Government Agencies Related to Energy, and for Other Purposes - Act of December 9, 1992.
3. Department of Energy Powers and Functions - DOE publication (including organization chart and functional descriptions).
4. Philippine Energy Conservation Program - DOE policy statement.
5. USAID/Philippines Plan for Energy Assistance to the Philippines 1993-1995 - USAID Planning Document (including proposed Energy Sector TA matrix).
6. Technical Assistance on the Development of the Energy Regulatory Board's Capability in the Regulation of Rates for Purchased Power from Independent Power Generators - ERB Terms of Reference under the WB Energy Sector Loan.
7. Privatization of Hydropower - Follow-up Project Trade Mission Report, National Hydropower Association, June 1993.
8. Technical Assistance on the Development of the Applicable Methodology to Compute for the Rate Levels of Electric Cooperatives - ERB terms of reference, 1993.
9. Procedure for the Issuance of Environmental Compliance Certificate for Development Projects - EMB/DENR procedures for approval of fast-track energy development projects.
10. Cost Structure and Transfer Pricing Study for the Philippine Petroleum Industry - K&M Engineering Report, July 9, 1993.
11. Study on Privatization Options for the Philippine Power Sector - Price Waterhouse report, September 30, 1992.
12. Private Power Development in the Philippines - Bechtel report prepared under ETIP, July 1992.

ESAP Technical Assistance Project
Work Plan Development Trip

August 8th thru 27th

Meeting Schedule

<u>Date</u>		<u>Activity</u>
Aug 8	PM	Arrived Manila
Aug 9 Mon	AM	USAID - Meeting with Alex Sundermann and Ken Luephang to review the planned activities for the trip.
	AM	USAID - Meeting with OCP and Alberto Sabadell for a general review of R&D support of the program.
	PM	USAID - Collected and reviewed various reports, background material, etc.
Aug 10 Tue	AM	USAID - Met with Ken Luephang to review specific details of program implementation, USAID guidelines, etc. Collected additional reports, etc.
	PM	DOE - Meeting with Liza Andres (Director, Energy Planning & Monitoring Bureau), Aida Pujanes (Assistant Director), Ken Luephang (USAID/Manila), and Alberto Sabadell (AID/R&D). Alberto introduced myself and explained the purpose of the program and the initial field trip. Follow-on discussion concerning implementation details with DOE staff.
Aug 11 Wed	AM	DOE - Initial meetings with DOE staff, introduction to organization, reviewed Energy Law, DOE Charter, etc.
	PM	DOE/USAID - Additional meetings and collection of background information.
Aug 12 Thr	AM	DOE - Meetings with Planing Division staff, Assistant Secretary Salcedo, Undersecretary Salazar, ERD staff. Developed initial budget revisions and meeting schedule for other organizations.
	PM	DOE - Meeting with Undersecretary Bomasang and US-ASEAN representative Phil Gielczyk on the October US trade mission and high level Philippine energy delegation.

Appendix F

Trip Report for M. Ellis Planning Mission

Aug 24 Tue	AM	DOE - Continuing work on draft work plan.
	PM	NAPACOR - Meeting with NAPACOR president Francisco Viray on ESAP TA.
Aug 25 Wed	AM	Continued work on ESAP work plan, budget, task descriptions, etc.
	PM	DOE Meetings on ESAP
Aug 26 Thr	AM	DOE Meetings
	PM	Continued work on ESAP work plan, budget, task descriptions, etc.
Aug 27 Fri	AM	DOE - Review meeting with Secretary Lazaro, DOE Staff, and USAID staff on draft interim work plan.
	PM	DOE - Meeting with Mr. Jose Ramas of DOE/NPC planning department to review the functions of the special planning task force and potential ADB funded DSM TA.
	PM	USAID - Debriefing and drop off trip report.
Aug 28	AM	Depart for USA

Future Activities:

Upon execution of the buy-in contract, and receipt of comments to the draft interim work plan, RCG/Hagler, Bailly will proceed to implement the work plan and begin the program of short-term technical assistance.

13. Donor Country Assistance Projects - DOE planning document.
14. World Bank Power Transmission and Rehabilitation Project - Report
15. DOE Technical Assistance Requests - USAID documents
16. Power Plant Rehabilitation Study - Bechtel Report, 1991
17. Technical Assistance Requests (Energy Sector) - USAID Files
18. Evaluation of Power Plant Operation - Bechtel study for the Malaya 1 and 2, Batanges, and Mak-Ban 1 thru 6 power plants, January 1992.
19. Comments and Recommendations on the Draft Bid Document for a 300MW Bataan Combined cycle Power Project - Bechtel study, October 1990
20. ADB Evaluation Reports for the Hopewell Power Project, Batanges Power Corporation, and Meralco Distribution Project - ADB Reports 1992-1993

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Appendix G

Comments to the Draft Work Plan

USAID Technical Assistance Matrix - Comments to the Draft Plan

ACTIVITY	TA DESCRIPTION	USAID	DOE	NPC	ADB	RECOMMENDATION
Develop TA Workplan	Develop 6-Month Interim Workplan	OK, remove manhours from interim budget.	OK	OK	OK	OK, remove manhours from interim budget
Examine The Existing Energy Delivery/Consum Systems	Develop Energy Sector Profile & Recommend	OK, reduce level of effort to three weeks	OK LOE - 3 WK	OK	OK	OK, reduced level of effort
Examine The Existing Energy/ Power Contracts & Regulations	Review Existing Contracts/Regs & Make Reccomend	OK, include in privatization	OK LOE - 6 WK	OK, establish a reference price system	OK	OK, include in privatization and consider reference price sys
Privatization:						
- Private Power	Follow-Up TA to P/W Report for Implementation	OK, increase level of effort here	OK LOE - 20 WK	OK, but need to review PW report other strategies first.	OK, include the following additional TA: - NPC tariffs need to include marginal costs - Restructure utility tariffs - Include IPPs in automatic rate adjustment process - Develop wheeling price setting methodology - Develop NPC/Utility contracts	OK, increased level of effort and include: - ADB items - Review of privatization strategies
	Evaluate Past BOT-BOO Contracts	OK	OK	OK		
	Develop Standard ROT ITB, Contract & Evaluation Criteria	OK, include ROL	OK	OK		
	Develop Standard Offer ITBs for Small Generators (e.g. mini-hydro)	OK	OK	OK		
	Develop Incentive Program for Small IPPs (incl Cogen)	OK	OK	OK		
- Petroleum	Follow-Up TA to K&M Report for Implementation	Delete	Focus on oil industry deregulation LOE - 6 WK	OK	OK	Delete, consider for Phase II

ACTIVITY	TA DESCRIPTION	USAID	DOE	NPC	ADB	RECOMMENDATION
	EDC Privatization Plan	Delete	Delete	OK	OK	Delete, maybe include in Phase II
- NEA	Develop Guidelines	Delete	OK	OK	OK	Delete
Institutional Development:						
- NPC	Develop Std Rate Adjustment Process	OK, include rate adjustment for demand charges	OK	OK	OK	OK, include rate adjustment for demand charges
	Develop RORB Methodology	OK	OK	OK	OK	OK
	Develop FOREX and fuel adj formula	OK	OK	OK	OK	OK
	Timely Start-Up of Fast Track Projects	OK	OK	OK	OK	OK
- PNOG	Refinery Characterization TA	Delete	Delete	OK	OK	Delete, defer to Phase II
	Supply Cost Determination	Delete	Delete	OK	OK	Delete, defer to Phase II
	Training Needs Assessment	Delete, defer to Phase II	OK LOE - 3 WK	OK	OK	Delete, defer to Phase II
	Organizational Strengthening	Delete, defer to Phase II	OK LOE - 3 WK	OK	OK	Delete, defer to Phase II
- ERB	TA for REC Rate Setting Methodology (incl losses)	Delete	OK	OK	OK	Delete

USAID Technical Assistance Matrix – Comments to the Draft Plan

ACTIVITY	TA DESCRIPTION	USAID	DOE	NPC	ADB	RECOMMENDATION
	Asset Valuation for NPC	Delete	OK	OK	OK	Delete
	Non – Crude RORB Methodology	Delete	OK	OK	OK	Delete
- EMB/DENR	Define Social Acceptance Criteria for Energy Proj	OK, include the establishment of an EMB rep at NPC	OK LOE – 2 WK	OK	OK	OK, include the NPC environmental office
	Develop Energy Proj Approval Guidelines	OK	OK LOE – 2 WK	OK, need to address specific Philippine conditions	OK	OK, address specific Philippine conditions
	Expand Monitoring System	OK	OK LOE – 2 WK	OK	OK	OK
- NEA	None	OK	OK	OK	OK	OK
- DOE	Develop IPP Accreditation	OK	OK LOE – 15 WK TOTAL	OK	OK	OK
	Organizational & Management Strengthening	OK	OK	OK	OK	OK
	Energy Sector Planning	OK	OK	OK	OK	OK
	Training Needs Assessment	OK	OK	OK	OK	OK

ACTIVITY	TA DESCRIPTION	USAID	DOE	NPC	ADB	RECOMMENDATION
Efficiency Environment, & Renewables	DSM/IRP Program Assesment & Pilot Pgm Dsn	reduce level of effort by 4 weeks	OK LOE - 16 WK TOTAL	OK	OK	OK, reduce level of effort.
	Energy Effcy Standards	OK	OK	OK	OK	OK
	Fast-Track EIA Approval Process for Power Projects	OK	OK	OK	OK	OK
	Institutionalize TTEM	OK	OK	OK	OK	OK
	Promote Renew Energy Pgms	Delete	OK	OK	OK	Delete
	Specific Renew Program Asst	Delete	OK	OK	OK	Delete
Economic Cooperation & Trade Promo	US-ASEAN Energy Mission	OK	OK LOE - 9 WK TOTAL	OK	OK	Delete, funding not available.
	Trade Promotion Eval & Plan	OK	OK	OK	OK	OK
	Energy Tech Promotion	OK	OK	OK	OK	OK
Training	High Level Energy Tng Pgm	OK	OK LOE - 2 WK	OK	OK	OK
	Specific Tng Programs	OK	OK	OK	OK	OK

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