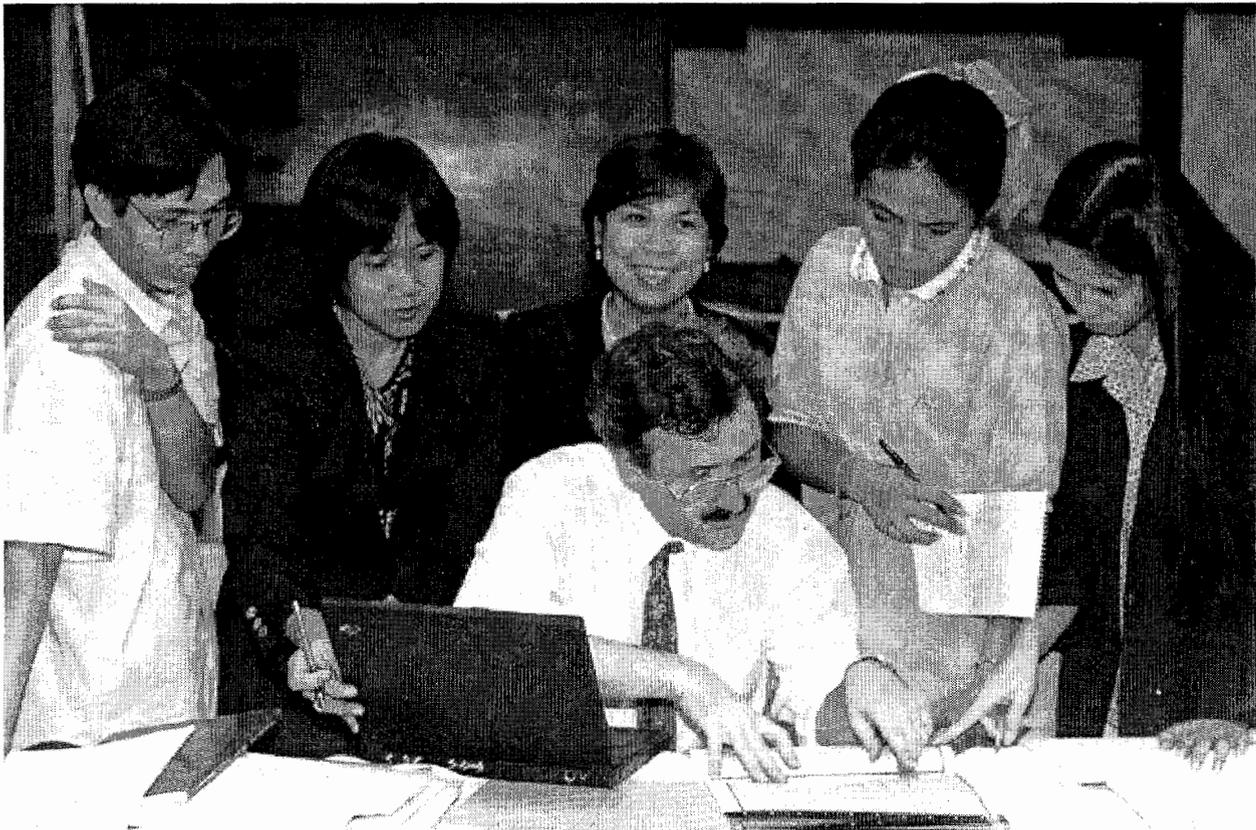


PD-ABQ-078

Participating Agencies Service Agreement (PASA)
between the
U.S. Department of Energy
and the
U.S. Agency for International Development
on behalf of the
Republic of the Philippines
(AID492-0432-P-ER-6079-00)

PHILIPPINE PASA REPORT

November 1997



U.S. Department of Energy
Office of Policy and International Affairs
Washington, DC 20585

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Department of Energy

Washington, DC 20585

November 28, 1997

Dear Colleague:

It is my pleasure to transmit to you the final report of the first Participating Agency Service Agreement (PASA) between the U.S. Department of Energy (DOE) and the U.S. Agency for International Development (USAID) to provide technical assistance in energy to the Republic of the Philippines. Implementation of this PASA broke new ground in DOE's collaborative relationship with the Philippines' Department of Energy (PDOE) and USAID. We hope it will serve as a model for future cooperation.

The fundamental goal for the PASA was to promote sustainable energy development in an environmentally acceptable manner that will enhance the quality of life for the citizens of the Republic of the Philippines. Among its most concrete outcomes was an agreement between the PDOE and DOE's Energy Information Administration (EIA) on energy information exchanges, and work on electric power sector restructuring and natural gas policy development and implementation.

This report documents the PASA's activities and provides an overview of its accomplishments. As you read it, you will see that there is more work to be done. We plan to continue our dialogue with USAID and the PDOE as energy and environmental issues become increasingly important and inter-related in the years to come.

Sincerely,

A handwritten signature in black ink, appearing to read "David J. Jhirad".

Dr. David J. Jhirad
Deputy Assistant Secretary for International
Energy Policy, Trade and Investment



B

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Cover Photo: Arthur Rypinski of the U.S. Energy Information Administration (EIA) assists staff of the Philippine Department of Energy (PDOE) in estimating green-house emissions on a personal computer using a methodology developed by EIA. Throughout the PASA program there were numerous instances of Philippine and U.S. experts sitting down and working together in the aftermath of a workshop, as depicted here, to follow-up on the day's discussions. (Photo by PDOE staff)

FINAL REPORT

PARTICIPATING AGENCY SERVICE AGREEMENT BETWEEN THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT AND THE U.S. DEPARTMENT OF ENERGY

I. Background

On October 8, 1996, the U.S. Department of Energy (DOE) and the U.S. Agency for International Development (USAID) signed a one-year Participating Agency Service Agreement (PASA) to provide technical assistance in support of the Philippine's sustainable energy development program. This \$150,000 PASA was a burden-sharing arrangement wherein USAID provided funding for air fare, per-diem, and miscellaneous expenses for DOE experts to travel to the Philippines to provide technical assistance, and the DOE covered the salaries and benefits of these experts at no cost to USAID. As the first time the USDOE and USAID have partnered together in a PASA agreement in the Philippines, it has proven to be a model to build upon for future collaboration.

The primary Philippine counterpart for this cooperation is the Philippine Department of Energy (PDOE). The PDOE was a full partner throughout this effort, especially as a decision-maker identifying what priority topics it wanted the PASA to focus on and as a facilitator to ensure that workshops, seminars and other training activities went smoothly. In addition to the PDOE, a number of other Philippine energy and environmental-related government agencies participated in the implementation of this PASA, as well as a small group of senior Philippine lawmakers, various Philippine state-energy companies, and U.S. and Philippine private companies and trade associations. Thus, the scope of the PASA's impact was considerably broader than just benefitting the PDOE, and its effectiveness was enhanced by the involvement of the Philippine energy community.

The fundamental goal of this PASA was to promote sustainable energy development in an environmentally acceptable manner that will enhance the quality of life for the citizens of the Republic of the Philippines. Fulfillment of this goal included technical assistance in the development and implementation of energy sector reforms in the Philippines to promote the efficiency of the energy industry in fueling economic growth and prosperity. Training of Philippine experts, especially in the area of energy information systems and new technologies, was an integral feature of this approach. Another element in this effort has been to provide Philippine policy makers and law-makers with information regarding the experiences of other countries (including, but not limited to the U.S.) for them to use in developing public policies. This PASA has also served to stimulate the introduction of new technologies as well as the development of policy, legal, and regulatory incentives to promote innovation and private investment in the Philippines' energy sector.

The PASA Agreement provided for the establishment a Technical Working Committee (TWC) composed of representatives from USAID/Manila and PDOE to prepare and review statements of work for specific tasks undertaken pursuant to the PASA. The TWC functioned well during the PASA, serving as a vehicle to enable the PDOE to advise USAID and DOE of changes in its priorities for PASA implementation. The fact that the PDOE points-of-contact on the TWC were senior PDOE officials meant that their guidance was authoritative. Being senior officials with enormous responsibilities also meant these officials were very busy. Their willingness to meet with USAID and DOE experts in the midst of their tight schedules is yet another reason why the PASA was successful.

This extra effort by PDOE officials--their dedication, friendliness and gracious hospitality to visiting DOE experts--served to make implementation of the PASA a positive experience for all those involved. The relationships that have developed out of this team effort provide a solid base for future cooperation, and DOE extends its grateful appreciation to all of its Philippine friends for their collaboration and assistance.

From the outset, this PASA was designed to be flexible so that it could adjust to changing requirements for technical assistance and, as described later, this feature contributed significantly to the PASA's outcomes. For example, the original PASA Agreement identified six areas for technical assistance, but it was decided early in the period of performance that it would be best to focus on a few priority areas, and then build the program from there. The original six areas agreed upon for technical assistance were:

1. Power Sector Restructuring Implementation
2. Gas Policy Developments and Implementation
3. PDOE Information Systems
4. Support to PDOE Energy Environment Action Plan
5. Clean Coal Technology
6. Strategic Energy Planning and Pricing Studies

The first step in implementing the PASA was to send a four person DOE team to Manila on December 9-14, 1996, on a program definition mission. Based upon the guidance of the TWC prior to their arrival in Manila, this DOE team focused on three areas of technical assistance: natural gas regulation, clean coal technology, and PDOE energy information systems.

The PASA Team produced a Proposed Work Plan for implementation of the PASA. However, a series of events relating to the evolving nature of the Philippine energy scene subsequently intervened which resulted in significant adjustments in the Workplan's implementation, i.e., the emphasis on natural gas work was reduced due to the legislative situation in the Philippines, and the clean coal technology segment was subsumed into a broader effort which, in effect, was a combination of the original "power sector restructuring implementation" and "PDOE energy environment action plan" components. Thus, with the exception of the energy information systems area, the PASA ended up emphasizing topics different than those initially envisioned by the program definition team's Proposed Work Plan.

The PASA's methodology did not change however. As prescribed in the PASA agreement, workshops and seminars were relied upon as the primary vehicles for providing technical assistance. One-on-one interaction was also used, particularly in the energy information systems area for which training on computer-based analytical tools was a key component.

There follows a summary of each of the three main areas in which the DOE provided technical assistance under the PASA.

II. Power Sector Restructuring Implementation

The DOE developed and provided technical assistance and training resources to the Government of the Philippines and other electricity sector participants regarding electricity sector privatization and restructuring and options for incorporating environmental requirements into restructuring activities. The major goal of this effort was to support efforts by the Government of the Philippines and its electricity sector to privatize and restructure the Philippine electricity sector in order to improve its economic efficiency, attract private investment from both domestic and foreign sources, lower costs to consumers, improve system reliability, and reduce environmental impacts of electricity production and use. To help achieve these goals, the Philippine Congress is considering legislative proposals in the Senate and House of Representatives. As a consequence, representatives for the Philippine Congress were very interested in participating in DOE-led activities and acquiring information on U.S. and other nation's electricity sector privatization and restructuring efforts, and on related activities to incorporate environmental objectives into the restructuring process.

In relation to this activity, a DOE expert traveled to San Francisco, California on July 13-16, 1997, to accompany a delegation from the Philippine Congress, Department of Energy and National Electrification Administration to participate in discussions on the State of California's activities to restructure its electricity sector and address related environmental issues. This trip included discussions with the California Public Utilities Commission, the California Energy Commission, Lawrence Berkeley Laboratory, PG&E Energy Center, and the Independent Energy Producers Association. Following these meetings, the Philippine Delegation traveled to Atlanta Georgia and to Washington, DC. In Washington, the DOE provided briefings to the delegation on U. S. electricity restructuring activities, clean energy and renewable energy technologies, and data collection and energy modeling activities.

The major activity undertaken in relation to the DOE technical support effort was development and convening of a workshop to address options for incorporating environmental policies and emissions reduction procedures into electricity sector restructuring activities in the Philippines. This workshop was held at MERALCO headquarters in Manila on August 20-22, 1997, and was attended by a broad representation of the Philippine electricity sector, both public and private entities. Attendees at the workshop included representatives from the:

- Philippine Department of Energy (PDOE)
- Philippine Energy Regulatory Board (ERB)
- Philippine Department of Environment and Natural Resources (DENR)
- National Power Corporation (NPC)
- Philippine National Electrification Administration (NEA)
- Philippine National Economic Development Agency (NEDA)
- Philippine Senate and House of Representatives
- Manila Electric Company (MERALCO)
- Philippine Electric Owners Association
- Philippine Rural Electric Cooperative Association, Inc
- Philippine Independent Power Producers Association
- Asian Development Bank
- United Nations Development Program
- Cebu Electric Cooperative

The U.S. team of expert presenters included representatives from USDOE, the Federal Energy Regulatory Commission (FERC), the National Renewable Energy Laboratory (NREL), and the U.S. Environmental Protection Agency (EPA). (See Annex for individual listings.)

Major issues addressed during the first two days of the workshop included (1) basic economic principles of an emissions trading system; (2) overview of development, implementation and operation of the U.S. allowance trading system; (3) a federal regulator's perspective on allowance trading within a restructured electricity industry; (4) a legal perspective on legislative and regulatory issues related to electricity restructuring; (5) a market approach to addressing environmental impacts associated with electricity restructuring; (6) impacts of emissions trading on fossil fuel generating plants; (7) impacts and opportunities for renewable energy technologies; and (8) impacts and opportunities for energy efficiency and conservation technologies.

The final day of the workshop involved concurrent breakout sessions to discuss in more detail the policy and technical issues raised during the first two days of the workshop. In these sessions, workshop participants formed small discussion groups to address these issues. These discussions were designed to identify approaches for incorporating environmental requirements in electricity restructuring; such as integrated resource planning (IRP), portfolio standards and carbon-based trading options, application of energy technologies to achieve restructuring and environmental goals, market structure issues, competitive power generation and power pooling, emissions trading and monitoring options. The groups also discussed opportunities for possible future cooperation and technical assistance by USAID and DOE.

Following this workshop, and pending passage of national legislation to address electricity sector issues, a delegation of representatives from the Philippine Congress and Energy Regulatory Board traveled to London, England and Oslo, Norway on September 23-25, 1997, to acquire additional information on options for electricity power pools and spot markets as methods for implementing electricity sector restructuring and improving the economic and environmental performance of the

industry. In coordination with USAID, a DOE expert accompanied the Philippine delegation on this trip. Major topics addressed included; in London, an overview of the regulatory structure and operation of the England and Wales electricity sector and power pool and restructuring of the United Kingdom natural gas sector and; in Oslo, an overview of the operation and functions of the Nordic Power Pool by the CEO of NordPool, and a presentation on market operation and regulation of the Norwegian electricity sector by Norway's Director of Electricity Regulation. Major topics discussed included development and implementation of the power pool and spot market for electricity, regulatory oversight, compatibility of a spot market with bilateral trades for electricity, role of power marketers and brokers, and impacts on prices and system reliability.

In summary, the PASA has provided an opportunity for the DOE and experts from other U.S. government agencies to cooperate with the PDOE and other Philippine electricity sector participants on issues relating to electricity sector privatization and restructuring. These consultations included exchanges with Philippine policy makers and lawmakers on the regulatory and restructuring experiences of the United States and other foreign countries in order to provide the broadest knowledge base possible to those Philippine officials entrusted with the responsibility for determining the future of the Philippine energy sector in general, and the power sector in particular. The DOE is available to provide assistance under the auspices of a follow-up PASA to PDOE and other agencies in implementing reforms for the electricity sector as and when new legislation is passed by the Philippine Congress.

III. Natural Gas Policy Development and Implementation

During the December 1996 Program Definition Mission, extensive talks were held between DOE and senior PDOE officials (and other government and private sector groups) concerning the development of downstream regulations for the emerging natural gas market in the Philippines. While draft regulations had previously been prepared for the PDOE by an outside consultant, it became clear that two preliminary issues would have to be resolved before regulations could be finalized. First, under existing statutes, the PDOE did not have the legal authority necessary to issue -- and legitimize -- natural gas regulations. Second, it was not clear which agency in the Philippines should be responsible for implementing any natural gas regulations.

Consequently, a Proposed Action Plan was prepared in December 1996 during the Program Definition mission to resolve these preliminary issues and then to address the substance of the proposed regulations. This Proposed Action Plan for natural gas was agreed to by PDOE, DOE, and USAID, but remains unfinished.

In accordance with the Action Plan, on December 17, 1996, DOE submitted to PDOE, by facsimile, proposed draft natural gas statutory provisions which would give the PDOE the authority to develop and issue regulations governing the natural gas sector. The proposed provisions prepared by DOE could have been included in legislation pending in the Philippines but developments in Manila, such as adjustments in the PDOE's legislative strategy to separate the power and gas sector restructuring bills, resulted in only certain excerpts (e.g., eminent domain

for pipelines) being inserted in the pending legislation. As of this writing, this legislation has not yet been passed by the Philippine Congress.

The DOE stands ready to continue to provide technical assistance to the PDOE on natural gas regulation and reform, and recognizes that the PDOE must await the outcome of the current pending legislation before defining to the DOE what the next steps should be in this cooperation. The DOE believes that once appropriate natural gas legislation is enacted, the next step would be for technical assistance in the drafting of Implementing Rules and Regulations (IRR).

IV. Energy Information Systems

In 1997 the Energy Information Administration (EIA) organized and conducted two one-week long training sessions consisting of a series of seminars with the PDOE. The first seminar held June 16-20, 1997, in Manila focused on information technology, including the development of energy information systems and information dissemination systems, including Internet technologies. This seminar concluded with the signing of a "Energy Data Exchange Agreement" between the EIA and the PDOE.

The second seminar held September 15-19, 1997, in Manila covered energy analysis and forecasting issues, including 15 formal lectures on the world energy outlook, modeling competitive markets for electricity, the role of financial analysis in energy policy analysis, short-term energy forecasting, and the reporting and estimation of greenhouse gas emissions. (See Annex for the seminar curriculums, and text of the Agreement.)

Up to 50 PDOE personnel attended each of these training sessions which also included the development of a compact disk providing documentation of all of the training seminars. Numerous hand-outs were distributed during all of these sessions, and in follow-up to the seminars there has also been electronic dialogue across the Pacific on the Internet as the session participants have continued to correspond on pertinent topics in the field of energy information systems.

This series of seminars has several specific benefits, including:

- The PDOE and EIA agreed to establish a joint U.S.-Philippine energy data exchange web site;
- The EIA was able to provide assistance in estimating forecast emissions of greenhouse gases for PDOE's next Energy Plan update;
- The EIA provided technical assistance on energy modeling strategies for PDOE's energy analysts, and;

- The EIA prepared a compact disk (CDROM) containing all of the presentation materials and ancillary spreadsheets used in presenting the seminars.

In addition, the EIA hosted a visit to Washington, D.C. by Ms. Teresita M. Borra, Director of PDOE's Energy Planning and Monitoring Bureau, on May 19-20, 1997. Another significant event was the signing of an Energy Data Exchange Agreement between EIA and PDOE paves the way for future collaboration, hopefully in conjunction with another USAID-PDOE-DOE PASA, which could include:

- Further implementation of the PDOE-EIA Energy Data Exchange Agreement, including setting up a joint PDOE-EIA data exchange web site;
- Seminars on other topics of interest to PDOE (and within the expertise of EIA), including energy information systems and dissemination techniques;
- Procurement of PCS (funded by USAID) for PDOE, and;
- Training, technical assistance, and/or collaborative projects relating to energy information systems, energy modeling, and emissions estimation.

Any future activities can be jointly developed through meetings between EIA, USAID and PDOE officials to assess various energy data and analysis issues.

V. Conclusions and Recommendations

The accomplishments of this PASA fall into several categories, including (1) promoting cost-effective inter-agency cooperation within the U.S. Government, (2) promoting international inter-agency cooperation among DOE, USAID, and the PDOE, and, last but not least, (3) enhancing the knowledge and technical capabilities of the PDOE and other Philippine agencies to develop and implement effective energy policies and programs.

In terms of the third category, i.e., working with the PDOE and other Philippine agencies, the PASA has:

- Provided the PDOE and other participants in its electricity market information and training on electricity sector privatization, regulatory, and restructuring issues;
- Provided the PDOE and others with options for incorporating environmental requirements into restructuring activities, including the passage of power sector legislation;
- Provided the PDOE and others with information and technical assistance regarding the development of a legal and regulatory framework for the Philippines' nascent natural gas

sector, with the aim of facilitating the development of indigenous gas resources and the establishment of an economically efficient domestic gas market and environmentally-friendly infrastructure;

- Provided the PDOE and others with technical assistance to strengthen the PDOE's information collection, analysis, and dissemination capabilities, as well its capacity for energy and environmental modeling and forecasting;
- Assisted the PDOE and others in working with new technologies for energy information systems, including the use of electronic media and the Internet, and;
- Developed new working relationships and friendships among U.S. and Philippine experts and policy makers that will enable informal consultation and collaboration on key issues beyond the life of the PASA.

It is envisioned that these broad accomplishments listed above will contribute to the Philippines' effort to develop its energy sector on an environmentally sustainable basis and to attract foreign investors who can provide the necessary capital to help finance the country's future economic growth. However, more work needs to be done in each of the subject areas where the PASA has provided technical assistance.

Under the terms of the PASA Agreement, this report is required to make "recommendations regarding unfinished work and/or program continuation...". In terms of the three broad areas of technical assistance provided under the PASA over the past year, the effort in "natural gas policy development and implementation" remains unfinished due to special circumstances while the accomplishments in the areas of "power sector restructuring implementation" and "energy information systems" have achieved sufficient progress to justify program continuation.

In the natural gas area, unfinished work includes:

- Technical support in drafting comprehensive natural gas legislation;
- Technical support in the drafting IRR to such legislation;
- Workshop on Operations of the Natural Gas Pipeline Industry;
- Workshop on Operations of the Natural Gas Distribution Industry, and;
- Workshop on Contract Negotiations Throughout the Natural Gas Production and Distribution Network.

Continuation of technical assistance in the power sector restructuring implementation area is dependent in part upon whether or not power sector restructuring legislation is enacted in the

Philippines, and, if so, the content of this legislation. In either case, the DOE is in a position to respond to a broad range of PDOE needs for technical assistance under existing or new legislative guidelines. For example, if legislation is passed, the DOE could provide technical assistance in developing IRR with respect to restructuring and privatization of the electric power sector, energy efficiency, renewable energy, and rationalization of the transmission and distribution sector. Last, but not least, as part of its commitment to the restructuring of the Philippine power sector, in November 1997 the DOE provided an expert to develop a schedule and, with funding from USAID, accompany the President of the Philippine Senate to electricity restructuring briefings in San Francisco, California.

Continuation of technical assistance in the area of energy information systems has already been affirmed by both governments as symbolized by the signing of the Energy Data Exchange Agreement between EIA and the PDOE. The DOE and EIA believe that cooperation implementing the terms of this agreement should involve USAID as well, preferably in the form of a new PASA to provide financial support. Possible future cooperation includes setting up a joint PDOE-EIA data exchange web site, more seminars on energy information systems and dissemination techniques, the procurement of personal computers (PCs) by EIA for PDOE using USAID funding, and other forms of training, technical assistance and collaborative projects.

In addition to the above subject areas, the DOE and its network of scientific laboratories have strong technical capacity in the area of clean coal technology, energy efficiency, renewable energy, and other disciplines for which it is prepared to provide technical assistance if USAID elects to enter into a follow-up PASA.

The DOE's continued involvement in the PASA would be consistent with several of DOE's major domestic and international strategic goals and objectives listed in DOE's Strategic Plan (September, 1997). These strategic goals and objectives include:

- "The Department of Energy and its partners promote secure, competitive, and environmentally responsible energy systems that serve the needs of the public."
- "Ensure that a competitive electricity generation industry is in place that can deliver adequate and affordable supplies with reduced environmental impact."
- "Support U.S. energy, environmental, and economic interests in global markets."
- "Develop policies, programs, and information to facilitate energy sector reductions in greenhouse gas emissions."
- "Cooperate with foreign governments and international institutions to develop open energy markets, and facilitate the adoption and export of clean, safe, and efficient energy technologies and energy services."

- "Carry out information collection, analysis, and research that will facilitate development of informed positions on long-term energy supply and use of alternatives."

- "Develop and expand public access to energy data, forecasts, analyses, and educational materials."

Given that the PASA's activities have furthered a variety of DOE's strategic goals, the DOE would welcome the opportunity to continue its relationship with the PDOE and USAID in the form of future PASAs to perform similar tasks. The USAID, and especially Dr. Cindy Lowry who manages this program for USAID in Manila, has proven to be an excellent sponsor and partner for this program, and DOE hopes this collaboration can continue as part of the broader context of U.S. government policy to carry out an integrated program of technical assistance and cooperative programs with the Republic of the Philippines.

Implementation of this PASA has not been an end to itself, but rather it is one chapter in the ongoing effort by USAID, as well as DOE, to work with PDOE and other Philippine energy-related organizations to promote economic, energy and environmental prosperity for the Philippines. Looking to the future, the full benefits of the PASA's accomplishments can best be realized if this effort is continued.

Annexes

1. Workshop on "Options for the Establishment of an Emissions Trading System in the Context of Power Sector Restructuring and Privatization", August 20-22, 1997.
2. Workshop on "Information Technology", June 16-20, 1997.
3. Workshop on "Energy Analysis and Forecasting", September 15-19, 1997.
4. U.S. DOE-PDOE Energy Data Exchange Agreement.
5. Letter from the Philippine Department of Energy Approving PASA Report

ANNEXES

Listing of U.S.-Based Experts Participating in PASA-Funded Programs

A. Workshop on "Options for the Establishment of an Emissions Trading System in the Context of Power Sector Restructuring and Privatization"

(August 20-22, 1997, Manila)

1. Russell Profozich, Economist, Office of Policy and International Affairs, DOE.
2. Richard O'Neill, Chief Economist and Director of the Office of Economic Policy, Federal Energy Regulatory Commission (FERC)
3. William Maroney, Data and Financial Analyst of the Office of Economic Policy, FERC
4. Robert LaCount, Environmental Protection Specialist, Acid Rain Division, U.S. Environmental Protection Agency
5. Gary Nakarado, Technical Director, Utility Programs, National Renewable Energy Laboratory (NREL)
6. Douglas Arent, Senior Project Coordinator, NREL
7. Robert Rabben, Assistant General Council for Legislation, Office of General Counsel, DOE
8. Elmer Holt, Senior Economist, Office of Policy and International Affairs, DOE
9. Theodore Atwood, Manager for International Projects and Finance, Office of Coal and Power Systems, DOE
10. Tom Sperl, Special Assistant, Office of Policy and International Affairs, DOE

B. Seminars on Energy Information Needs, Web Site Design, and Energy Information Collection Procedures, June 16-20, 1997, Manila.

1. Cal Kilgore, Director, Office of Energy Markets and End Use, U.S. Energy Information Administration (EIA)
2. Mark Rodekahr, Director, Energy Markets and Contingency Information Division, EIA
3. Michael Griffey, Chief, Data Systems and Support Branch, EIA
4. Jim Knaub, Mathematical Statistician, EIA

C. Workshop on Energy Data and Forecasting, September 15-19, 1997, Manila.

1. Arthur Anderson, Director, Energy Demand and Integration Division, EIA
2. Art Rypinski, Economist, Energy Demand and Integration Division, EIA
3. Robert Eynon, Chief, Nuclear and Electricity Analysis Branch, EIA
4. David Costello, Team Leader for Short-Term Energy Forecasting, EIA
5. Jon Rasmussen, Economist, Office of Energy Markets and End Use, EIA

AGENDA

Options for the Establishment of an Emissions Trading System in the Context of Power Sector Restructuring and Privatization Meralco Headquarters, Ortigas, Manila

Wednesday, August 20, 1997 (Day One of Workshop)

1st Plenary Session: The U.S. Emissions Trading System: Basic Principles and Elements (Mini-Theater, Main Building)

- 9:00 am to 9:20 am Key Note Address by the Honorable Antonio G.M. LaVina
Philippine Department of Environment & Natural Resources
Undersecretary for Legal and Legislative Affairs and Attached Agencies
- 9:20 am to 9:30 am Introductions/Opening Remarks by Cynthia A. Lowry, Ph.D.
U.S. Agency for International Development (USAID), Office of Environment
- 9:30 am to 10:45 am Basic Economic Principles of an Emissions Trading System
Elmer Holt, U.S. Department of Energy (USDOE),
Senior Economist, Policy Office
- 10:45 am to 11:00 am Coffee Break
- 11:00 am to 12:30 pm Overview of Development, Implementation and Operation of the U.S. Allowance
Trading System, Robert LaCount, U.S. Environmental Protection Agency,
Environmental Protection Specialist

12:30 pm to 2:00 pm Lunch

2nd Plenary Session: Regulatory and Legal Aspects of the U.S. Allowance Trading System (Mini-Theater, Main Building)

- 2:00 pm to 3:15 pm Perspective of a Federal Regulator: Allowance Trading Within a Restructured
Electricity Industry, Richard O'Neill, Director/Chief Economist, Office of Economic Policy,
U.S. Federal Energy Regulatory Commission (FERC)
- 3:15 pm to 3:30 pm Coffee Break
- 3:30 pm to 5:00 pm Legislative and Regulatory Issues: A Legal Perspective
Robert Rabben, USDOE, Assistant General Counsel for Legislation,
Office of General Counsel

Thursday, August 21 (Day Two of Workshop)

3rd Plenary Session: Legal Issues and Fossil Fuel Technology Impacts and Opportunities (Mini-Theater, Technical Services Building)

- 9:30 am to 11:00 am Electricity Restructuring and Environmental Impacts: A Market Approach
William Meroney, Director, Data and Analysis Staff, Office of Economic Policy, U.S.
FERC

11:00 am to 11:15 am Coffee Break

11:15 am to 12:30 pm Impacts of Emissions Trading on Fossil Fuel Generating Plants: Case Studies
Theodore (Ted) Atwood, Manager for International Projects and Finance,
USDOE, Office of Coal & Power Systems

12:30 pm to 2:00 pm Lunch

4th Plenary Session: Impacts and Opportunities for Renewable and Energy Efficiency Technologies (Mini-Theater, Technical Services Building)

2:00 pm to 3:15 pm Impacts and Opportunities for Renewable Energy Technologies
Douglas Arent, Senior Project Coordinator, National Renewable Energy Laboratory (NREL)

3:15 pm to 3:30 pm Coffee Break

3:30 pm to 5:00 pm Impacts and Opportunities for Energy Efficiency and Conservation Technologies, Gary Nakarado, Technical Director, Utility Programs, NREL

**Friday, August 22 (Day Three of Workshop)
Workshop Concurrent Breakout Sessions**

The USDOE presenters and the audience will each break up into two groups ("Policy" and "Technical") to informally discuss electricity restructuring and environmental issues. Major outcomes from these round table discussions are: (1) to identify issues regarding Philippine electricity sector restructuring needing to be addressed in the short-term; and, (2) identify options to address these issues, including opportunities for cooperation between the Philippine electricity sector and the USAID and USDOE.

Concurrent Breakout Session 1: (14th floor, Main Building)

9:00 am to 10:15 am DOE Policy Group (1) meets with Participant Technical Group (B);
and DOE Technical Group (2) meets with Participant Policy Group (A).

10:15 am to 10:30 am Coffee Break

10:30 am to 11:45 pm Breakout session continues.

11:45 pm to 1:00 pm Lunch

Concurrent Breakout Session 2: (14th floor Main Building)

1:00 pm to 2:15 pm DOE Policy Group (1) meets with Participant Policy Group (A)
and DOE Technical Group (2) meets with Participant Technical Group (B).

2:15 pm to 2:30 pm Coffee Break

2:30 pm to 3:30 pm Breakout session continues.

3:30 pm to 4:00 pm **Wrap-Up:** The chair from each of the sessions will summarize the major issues discussed in the breakout sessions, including issues identified as needing to be addressed in the short-term and opportunities for future cooperation.

Proposed Energy Information Administration (EIA) Work Plan:
Energy Information Needs Overview and Web Site Design/Energy Information Collection
Procedures (June 16-20)(4 Travelers)
Team Leaders: M.Rodekohr/Mike Griffey
ph: 202 586-1130 , X9601

Date	Time	Attendees	Presenter	Topic
6/16	9-10:30a	All EIA & PDOE, Cindy Lowry	Rodekohr/PDOE/Cindy Lowry	Welcome and Introduction
	10:30-11:30a	Kilgore/Rodekohr	Rodekohr	Overview of U.S. Energy Economy
	1:30-2:30P	Kilgore/Rodekohr	Rodekohr	Information Needs of Executive Branch Policy Makers
	2:30-3:30p	Kilgore/Rodekohr	Rodekohr	Overview of U.S. Energy Data Systems
	3:30-4:30p	Kilgore/Rodekohr	Kilgore	Information Needs of Legislative Branch Policy Makers
6/17	9:00-12:30p	Griffey/Knaub	Knaub	Statistical Sampling Techniques including a discussion of software
	1:30-2:30p	Kilgore/Rodekohr	Rodekohr	Overall Web Site Organization
	2:30-4:30p	Kilgore/Rodekohr	Kilgore	Designing and Building Web Based Information Systems(1)
6/18	9-11:00a	Kilgore/Rodekohr	Kilgore	U.S. Energy Policy Changes over the last 20 years--the role of information.

Date	Time	Attendees	Presenter	Topic
6/18	11:00-12:30p	Kilgore/Rodekohr	Rodekohr	Alternative Forms of Data Presentation with a emphasis on user needs
6/18	1:00-5:00p	Griffey/Knaub	Griffey	Statistical Frame Development including procedures to insure accuracy
6/19	9-12p	Kilgore/Rodekohr	Kilgore	Designing and Building Web Based Information Systems(2)
6/19	1:00-4:00p	Kilgore/Rodekohr (concurrent session)	Rodekohr	Producing Compact Disks: A Overview of the Process and EIA's Experience
6/19	1:30-5:00p	Griffey/Knaub (concurrent session)	Knaub	Data Validation Techniques--including automated quality control
6/20	9:00-12:30p	Griffey/Knaub (concurrent session)	Griffey	Methods for insuring Confidentiality--including security and suppression
6/20	1:30-3:00p	All Available (Rodekohr & Kilgore will not be present)	Griffey/PDOE/ C.Lowry	Session Wrap Up

WORKSHOP ON ENERGY DATA AND FORECASTING
September 15-19, 1997

Monday, September 15th

- 9:30 - 11:45 am: Dr. Arthur Andersen: "International Energy Forecasting: Lessons Learned from the *International Energy Outlook*."
- 1:30- 2:30 pm Arthur Rypinski, "Global Climate Change and Energy Policy"
- 2:45 - 4:15 pm Dr. Arthur Andersen, "Developing Enterprise-level Financial and environmental reporting programs: lessons learned from the Voluntary Reporting of Greenhouse Gases Program"

Tuesday, September 16th

- 8:30 - 10:30 am Dr. Jon A. Rasmussen "Purposes & Design of Enterprise-Level Financial Reporting Systems"
- 10:30 am 12: 00 pm Dr. Jon A. Rasmussen "Cost versus Value in Energy Production"
- 1:30 pm - 2:45 pm Dr. Jon A. Rasmussen "The Use and Abuse of Financial Information"
- 3:00 pm - 4:00 pm Robert Eynon, "Modeling the Electricity Sector in the National Energy Modeling System"

Wednesday, September 17th

- 8:30 - 10:30 am Robert Eynon, "Modeling Electricity Prices, Electricity Supply and Interfuel Competition in a Competitive Deregulated Electricity Sector,"
- 10:30 - 12 pm Arthur Rypinski, "Estimating Emissions of Greenhouse Gases: Carbon Dioxide"
- 1:30 - 2:45 pm Arthur Rypinski, "Estimating Greenhouse Gas Emissions: Other Gases"
- 3:00 pm - 4:00 pm Arthur Rypinski, "Estimating Emissions Consequences of Energy Projects"

- 8:30 -10am David Costello, "Introduction to EIA's Short Term Energy Forecasting System: Structure, System Flow, Model Characteristics, Products and Applications"
- 10:30-12pm David Costello, "Short-Term Energy Modeling Exercise: Conceptualization, Estimation, Simulation, Diagnosis and Evaluation"
- 3-3:30pm David Costello, "Toward a Short-Term Energy Forecasting System for the Philippines: with examples from actual Philippines data (if possible)"
- 3:45-4:30pm David Costello, "Software Issues in Modeling, Forecasting and Presentation"

Friday, September 19th.

The team will be available to the Philippine Department of Energy for informal consultations, follow-up small group workshops (if desirable), any necessary courtesy calls, or alternative dates for rescheduling of the presentations listed above.

At the conclusion of the first set of seminars a "Energy Data Exchange Agreement" was signed by the Energy Information Administration and the PDOE. A copy of this agreement appears below.

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MEMORANDUM OF AGREEMENT

BETWEEN

THE DEPARTMENT OF ENERGY
OF THE UNITED STATES OF AMERICA

AND

THE DEPARTMENT OF ENERGY
OF THE REPUBLIC OF THE PHILIPPINES

FOR
THE EXCHANGE OF ENERGY INFORMATION

PREAMBLE

WHEREAS, the Department of Energy of the United States of America and the Department of Energy of the Philippines (hereinafter referred to as the "Participants") recognize their mutual interest in consulting and exchanging readily available energy statistics and other energy market information;

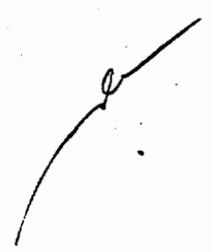
WHEREAS, the Participants desire to improve information technology processes; and

WHEREAS, the Participants seek broader dissemination of available energy information;

NOW, THEREFORE, for and in consideration of the foregoing premises and undertaking, the Participants hereby mutually agree as follows:

ARTICLE 1 OBJECTIVE AND IMPLEMENTATION

The overall objective of cooperation under this Memorandum of Agreement (hereinafter referred to as "Agreement") is to establish, on the basis of equality and mutual benefit of the Participants, a reasonably balanced exchange of energy information to complement existing energy statistics and other energy market information. The Energy Information Administration, an independent agency under the U.S. DOE, will represent the U.S. DOE in performing activities under this Agreement.



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ARTICLE 2
AREAS OF COOPERATION

Areas of energy data and information exchange may include the following:

- 2.1 Annual energy market statistics (production, imports, exports, stocks, bunkers, transformation, demand, prices, and other data) for petroleum, natural gas, coal, electricity, fuelwood, and other forms of energy;
- 2.2 Other related data and information concerning fuel characteristics, fossil fuel heat values, refining capacity, reserves, and other energy information;
- 2.3 Information concerning statistics methods, analytic techniques, and system documentation;
- 2.4 Information about electronic information dissemination; and
- 2.5 Other areas as mutually agreed to by the Participants in writing.

ARTICLE 3
FORMS OF COOPERATION

The forms of cooperation undertaken by the Participants in the areas specified in Article 2 may include the following:

- 3.1 Assignment of personnel for agreed periods of time in order to participate in analysis, design, and other activities conducted in research centers, laboratories, universities, and other facilities and enterprises of each Participant, or of associated organizations in accordance with Article 5;
- 3.2 Organization of workshops and meetings; and
- 3.3 Conducting other forms of cooperation, as the Participants mutually agree in writing.

ARTICLE 4
MANAGEMENT

- 4.1 The Participants are to establish a Working Group. Each Participant is to designate a Co-Chair for the Working Group. The Co-Chairs are to coordinate plans for the overall management of cooperative activities under this Agreement. The Working Group is to meet as needed in the United States and in the Philippines, alternately, to evaluate the status of cooperation under this Agreement. This evaluation should include a review of achievements, problems, and effectiveness of activities under this Agreement. The Co-Chairs are to also consider and approve future program opportunities with a view to maximizing the mutual benefits of this cooperation.

- 4.2 Each Co-Chair is to designate a technical advisor to serve as the point-of-contact for the daily supervision of activities under this Agreement.
- 4.3 Each Co-Chair may appoint technical coordinators to manage specific cooperative tasks initiated under this Agreement and to establish and maintain working contacts at the staff level.
- 4.4 Meetings of the Working Group or selected members from the Working Group will be held upon joint agreement of the Co-Chairs.
- 4.5 The agendas for all meetings will be determined and agreed jointly by the Co-Chairs. Minutes are to be signed immediately after each meeting.
- 4.6 Working Group members will be responsible for their own travel and lodging expenses. The Participant hosting the Working Group meeting will pay the costs for arrangements associated with the meeting, unless the Participants agree otherwise in writing.

ARTICLE 5 *ASSIGNMENT OF PERSONNEL*

- 5.1 Whenever a personnel assignment is contemplated under this Agreement, each Participant shall ensure that qualified personnel are selected.
- 5.2 Each assignment is to be pursuant to a separate written personnel assignment arrangement between the Participants.
- 5.3 Each Participant is expected to be responsible for the salaries, insurance, and allowances to be paid to its personnel, or to its contractors.
- 5.4 Each Participant is expected to pay for the travel and living expenses of its personnel, or of its contractors, unless the Participants agree otherwise in writing.
- 5.5 The host establishment is expected to do its best to arrange for suitable accommodations for the assigned personnel and their families on a mutually agreeable, reciprocal basis.
- 5.6 Each Participant is expected to provide appropriate assistance to the assigned personnel (and their families) with respect to administrative travel formalities.
- 5.7 The assigned personnel are expected to conform to rules of work and safety regulations in force at the host establishment, or as set forth in the personnel assignment arrangement.

ARTICLE 6 *WARRANTY*

The Participants understand that information transmitted by one Participant to the other Participant under this Agreement is expected to be accurate to the best knowledge and belief of

the transmitting Participant, but the transmitting Participant does not warrant the suitability of the information transmitted for any particular use or application by the receiving Participant or by any third party.

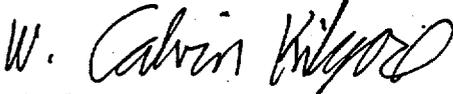
ARTICLE 7
GENERAL PROVISIONS

- 7.1 The participants understand that collaboration under this Agreement shall be in accordance with applicable laws and regulations of the respective countries. It is understood that the ability of each Participant to carry out activities under this Agreement is subject to the availability of appropriated funds.
- 7.2 No proprietary information shall be exchanged.
- 7.3 Except when otherwise mutually agreed in writing, all costs resulting from the implementation of this Agreement are to be borne by the Participant that incurs them.
- 7.4 Any disputes arising out of the interpretation or implementation of this Agreement shall be settled amicably by consultation or negotiation between the Participants.
- 7.5 Nothing in this Agreement is intended to affect other arrangements for cooperation between the Participants or any other agreements between the Participants in existence on the effective date of this Agreement.
- 7.6 Cooperation under this Agreement will commence upon signature by the Participants and will continue for five years. The participants may, at the end of the five year period, extend this Agreement for an additional five year period by an exchange of letters.

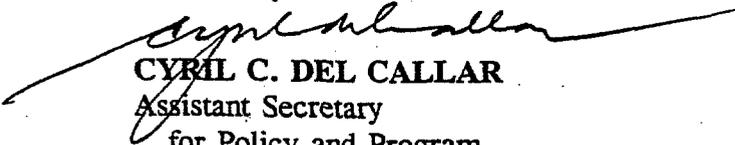
IN WITNESS WHEREOF, the duly authorized representatives of the Participants have signed this Memorandum of Agreement.

Done at Fort Bonifacio, Taguig, Metro Manila, Philippines on this 19th day of June 1997 in two originals in the English language.

**FOR THE DEPARTMENT OF ENERGY
THE UNITED STATES OF AMERICA**


MR. CALVIN KILGORE
Chief, Energy Markets and Contingency
Information Division
Energy Information Administration

**FOR THE DEPARTMENT OF ENERGY
THE REPUBLIC OF THE PHILIPPINES**


CYRIL C. DEL CALLAR
Assistant Secretary
for Policy and Program

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37-12-12 : 13:43 :

REPT. TO HANOVER



Republic of the Philippines
DEPARTMENT OF ENERGY

To: T. Custer
115006
202 586 6188
Fr. C. Lowry

16 December 1997

Dr. Cynthia Lowry
USAID-Environment
Ramon Magsaysay Building
Roxas Boulevard
Manila

Dear Dr. Lowry:

In response to your request for comments on the Philippine "PASA" Draft Report, we are pleased to inform you that the report is acceptable to us and we fully endorse its finalization.

As reported, the PASA has facilitated the provision of necessary funding and technical assistance in addressing three critical issues in the Philippine energy sector, namely: (a) power sector restructuring; (b) natural gas policy development and implementation; and (c) energy information systems. In view of the successful implementation of the PASA, we would welcome the undertaking of a similar collaboration in the future.

Thank you and best regards.

Very truly yours,


CYRIL C. DEL CALLAR
Undersecretary

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