



47831

**Status of Ongoing ESMAP Activities
as of December 31, 1998**

March 1999

**JOINT UNDP/WORLD BANK
ENERGY SECTOR MANAGEMENT ASSISTANCE PROGRAMME
(ESMAP)**

FOREWORD

This report presents the *Status of Ongoing Activities* for all current ESMAP projects as of the period ending December 31, 1998. Its circulation to donors and other interested parties has changed from a quarterly to a semi-annual basis.

The main section of the report contains individual project summaries, arranged by country in alphabetical order, on all project proposals that are approved by ESMAP management. New projects initiated in CY1998 follow the Logical Framework Approach, and the status for these projects are presented in a newly-designed form entitled "Project Implementation Form" (PIF). This report also presents a new form for completed projects, the "Implementation Completion Report" (ICR). The progress, completion and achievements of ESMAP projects are presented when all project activities have been completed, including the production of a final Blue Cover report, Activity Completion Report (ACR), etc. Therefore, as compared to previous reports, this report contains three types of forms which discloses the implementation progress (or completion) of all ESMAP projects.

Further information on each activity listed can be obtained from Room F8K-276, 1818 H Street, N.W., Washington, DC 20433, U.S.A.; telephone (202) 473-3272; fax (202) 522-3018.

ESMAP
Washington, D.C.

ABBREVIATIONS AND ACRONYMS

AIB	Activity Initiation Brief. An AIB is prepared for all ESMAP activities. This is a detailed document providing the background, objectives, principal tasks, rationale for the project, reporting requirements, schedule of activities, and budget. This document is sent to the donors and is used as the basis for funding.
ECP	ESMAP Country Paper
ICB	Initiating Country Brief
White Cover Report	This is the first draft of a report on an ESMAP task. This report is for internal review within the program.
Yellow Cover Report	This is the second draft of a report on an ESMAP task. This report includes comments received from the World Bank Regional Office concerned and other interested parties.
Green Cover Report	This report is used as the basis for discussion with the government. An ESMAP Activity is considered completed upon the completion of the Green Cover report.
Blue Cover Report	This report is the final report on an ESMAP activity; it becomes a public document.
Core Fund	This consists of unrestricted contributions in support of ESMAP to respond quickly to the emerging needs of the recipients and to tackle high priority work more expeditiously. Core funding provides some of the flexibility necessary for administering the Programme.

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^{a/} Reached Green Cover stage (or equivalent) this issue.

^{b/} Reached Green Cover stage (or equivalent) in the prior progress report.

^{c/} This project included for the first time in this issue.

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^{a/} Reached Green Cover stage (or equivalent) this issue.

^{b/} Reached Green Cover stage (or equivalent) in the prior progress report.

^{c/} This project included for the first time in this issue.

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^{b/} Reached Green Cover stage (or equivalent) in the prior progress report.

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a/ Reached Green Cover stage (or equivalent) this issue.

b/ Reached Green Cover stage (or equivalent) in the prior progress report.

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	AFRICA
Activity Name	AFRICA GAS INITIATIVE - PHASE I
Theme	INTERNATIONAL ENERGY TRADE
Project Code	3AFRUN055 - 3A-UE-36747
Origin of Funds	CORE, BELGIUM, PAKISTAN CTF, NORWAY CTF, BELGIUM CTF, FRANCE, WORLD BANK,
Source of Funds Code	TF023705, TF023891, TF023893, TF032928, TF031136, TF032241, UN006680, BB
Task Manager(s)	MOURAD BELGUEDJ

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation	White Cover	Yellow Cover	Green Cover	Blue Cover
Brief 3/94	10/96	n.a.	3/98 *	12/99

* Ivory Coast Principles and Options for Regulating Natural Gas Report in French.

This project does not follow the standard ESMAP White, Yellow, Green and Blue Cover Reports. Once a report is finalized on a country, it is sent to the Government concerned for follow-up into a project. As of now, consultants' reports and our project ideas, have been sent to the Governments of Angola, Congo, Cameroon and Gabon. Angola is proceeding with the recommendations, to materialize them into an Industrial Park Development Project. Cameroon is also following suit, with the proposed Gas Code which is under final Government review, prior to being enacted into law. Two energy companies are investigating the Douala basin gas potential. Ivory Coast, added at the Region's request, is reviewing their Country report and our proposed institutional and regulatory framework for safe and sound gas development in Abidjan. Congo was close to materialize into a project (with the promise of a PPF from the Region) to recover gas from the Kitina oil field, to extract LPGs and produce electricity in the Pointe Noire industrial zone, when the civil war erupted. It has been on hold since, despite one attempt by the new Government to put it back on track.

2. Objectives:

- (a) The study reviews undeveloped gas discoveries and flared gas in Sub-Saharan Africa, (SSA) and identifies those which are economically viable for implementation.
- (b) Stage II prepares pre-feasibility studies for gas reserves identified in (a) above, which are then translated into project ideas to be proposed to the concerned Governments and the private sector for implementation.

3. Principal Tasks:

Undertake a screening review of all undeveloped gas reserves in SSA and potential gas markets for each of them. Prepare preliminary cost estimates for gas development, evaluate economic viability, identify structures worth investigating in depth and determine/promote pilot projects worth developing.

- (a) Prepare a pre-feasibility study for each viable field/project.
- (b) Identify market potential to match, with proven reserves for future development, in sequence, and propose suitable project idea to the Government for review prior to submission to private sector interests for development.

4. Summary of Current Project Status, Issues and Actions

- (a) Angola is determined to move ahead with the Futila energy intensive Industrial Park Project, based on flare-gas recovery, from Cabinda offshore fields. Phase I of the feasibility study has been reviewed by Bank staff from the Oil and Gas Unit and the Africa Region and by the Government of Angola.
- (b) *The Government has approved in September 1998, funding of Phase II of the project i.e., basic engineering and land plan use for which the selected consulting firm, IDP of the US, fielded a multidisciplinary team in October 1998. A joint steering committee meeting was held at the end of their mission on October 26-27 in Luanda with all concerned. A formal Press Conference by the Government officially launched the project and started promoting it with the Private Sector. The World Bank is expected to support with Trust Fund money the preparation Environmental Impact Assessment. The Project is moving ahead as per the Government's wish to see the first group of tenant occupancy by November 1999. Consultant TORs for environmental impact study have been prepared and funding is now sought to finance this portion of the work during 1999.*
- (c) *In Cameroon, the new Gas Code has been integrated in the Draft Petroleum Code of 1998, submitted for review by the Bank in December 1998, by the Government.*
- (d) In Congo Brazzaville, the development of associated gas from AGIP's Kitina Field, to be started in 1998 and linked with the development of the Lichendjili gas and condensate field at a later stage, has been accepted by the Region and a PPF should be prepared for the project. This will enable Congo to produce LPG for the local market and an IPP to generate power in Pointe Noire, when the privatization of the power sector is completed. Delay in implementation is expected, due to the ongoing political unrest in the country.
- (e) *Recently, the Government contacted the Bank to send a full set of documents to the new Minister of Energy, as his offices were ransacked during the latest civil unrest. This set of documents has served as a basis for discussion with Private Sector firms (El-Paso Energy International) interested in returning to Congo and developing Gas, LPG, NGLs and power generation in the Pointe Noire area, as suggested by the ESMAP study. Discussions by the Bank will resume when the Bank's Region clears business is resumed with the new authorities, in charge in Brazzaville.*
- (f) Gabon has requested ESMAP's support to evaluate the country's gas reserves and determine development costs of the off-shore Owendo basin gas fields to supply gas for convertible power generation capacity in Libreville and Port Gentil. Two private operators have approached the

Bank in early 1998 to review the ESMAP study findings and are opening discussions with the authorities in Libreville.

- (g) *We are still awaiting reaction from the authorities or the interested companies, on potential gas conversion of existing power Plant and gas development of new capacity, following a successful privatization of the power sector in 1997, under IFC's auspices.*
- (h) In Ivory Coast, the institutional framework (Gas Code), and gas pricing studies to promote industrial use of natural gas in Abidjan have been completed. Consultants investigated existing legal framework and pricing mechanisms and proposed sound remedial actions. Reports following review by IENOG and comments by the Region and the Ivoirian authorities are expected during the first quarter of 1998. Findings and recommendations have been integrated into the Green Cover Report sent to the Government for review and preparation of the future Gas Code.
- (i) *Due to a major reorganization of the whole energy sector, Petroci has been restructured and Sector privatization (SIR) is going at a fast pace, the government did not find the time to disseminate the work but still wants to hold a seminar on this issue as soon as feasible. LPG production is growing and gas is being substituted to liquid fuels in the industrial sector, starting with SIR refinery, thus their need for an appropriate regulatory framework, which the Bank can help set up. This can be done under the second part of the project.*
- (j) *Results and outputs will be determined on a case by case basis.*
- (i) *Angola is ongoing and our task now is to secure funding for the EIA for the Futila Park and the output will be the IEA Report and clearance for the Park construction to go ahead.*
- (ii) *Cameroon will very likely integrate the draft Gas Code we prepared, into the broader "Petroleum Code" presently under our review. The project can be then closed for Cameroon.*
- (iii) *Congo must remain on hold for the time being, as the war ravaged country will need all its gas resource during the re-construction phase, which will make this project very vital then.*
- (iv) *Gabon is still ongoing, as the report sent to the authorities may still generate private sector interest for gas-to-power new capacity or conversion of existing thermal plants.*
- (v) *Ivory Coast Gas Code and Gas Pricing Study have been completed and delivered into the green cover report sent to the Government. The ongoing privatization of the whole energy sector, where gas and LPG are earmarked to play a vital role, will require some follow-up work which will be identified upon the completion of the ongoing SIR refinery privatization and sector reform.*

5. Site Visit Dates:

Last

Next

6. Expected Project Completion Date (when all project activities are expected to be completed):

Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Costs</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D-A-C
ESMAP				
<i>of which:</i>				
Trust Funds	601,522	567,821	549,869	51,653
World Bank	62,100	62,100	62,100	0
Others	104,459	101,632	101,632	2,827
Total	768,081	731,553	713,601	54,480

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	AFRICA
Activity Name	COMMERCIALIZATION OF MARGINAL GAS FIELDS
Theme	SECTOR REFORM/ENERGY EFFICIENCY
Project Code	3A-UE-48501
Origin of Funds	CORE, NORWAY O&G TF, UNITED KINGDOM CTF
Source of Funds Code	TF022256, TF020778, TF034884
Task Manager(s)	ERIC DAFFERN

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
2/97	10/97	n.a.	n.a.	10/98

2. Objectives:

The objective is to identify ways of commercializing gas fields that are both too small for LNG and are too far away from conventional fuel markets.

3. Principal Tasks:

- (a) Review potential petrochemical plants that could make an exportable product, e.g., ammonia, liquid fuels, etc.
- (b) Review mining and other mineral uses of gas.
- (c) Identify the parameters in which these gas uses may be viable; and
- (d) Recommend possible projects for follow-up and potential private sector interest.

4. Summary of Current Project Status, Issues and Actions:

The project has been completed and the project is now closed. The report has been widely disseminated and presented to the Bank Thematic Group. The work was fully successful and has made an important contribution to our knowledge, to our client countries and to other

recipients of the report. Principal lesson learned was the difficulty of a single consultant addressing cutting edge issues.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of:** 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	42,000	36,189	36,189	5,811
World Bank	0	0	0	0
Others	109,467	109,467	109,467	0
Total	151,467	145,656	145,656	5,811

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	AFRICA
Activity Name	FORUM ON DOWNSTREAM PETROLEUM
Theme	SECTOR REFORM
Project Code	3A-UE-48502
Origin of Funds	CORE
Source of Funds Code	TF021271, BB
Task Manager(s)	ERIC DAFFERN

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
2/97	n.a.	n.a.	n.a.	3/99

2. Objectives:

- (a) To present papers and research on key issues in the downstream petroleum sector in Africa.
- (b) To promote a dialogue between African countries and companies on key issues.
- (c) To recommend possible solutions.

3. Principal Tasks:

- (a) To prepare papers to improve practices related to the safety of road transportation of petroleum products, petroleum procurement, petroleum specifications and other subjects.
- (b) To organize a workshop for discussion of the papers.
- (c) To disseminate the papers and appropriate recommendations.

4. Summary of Current Project Status, Issues and Actions:

- (a) Consultants have *completed the work for the 1998 forum and the forum was successfully held in May 1998. Thirty attendees represented energy ministries and national oil companies in about twenty African countries, and about twenty attendees represented international oil companies. The outcome of the workshop was that the countries are better able to establish their petroleum policies. The international companies promised to lead the action on safety issues.*
- (b) *Proceedings are being written up for dissemination to participants. A complete draft has been prepared and is being reviewed.*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of: 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D-A-C
ESMAP				
<i>of which:</i>				
Trust Funds	50,912	54,096	54,096	-3,184
World Bank				0
Others				0
Total	50,912	54,096	54,096	-3,184

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	AFRICA
Activity Name	GAS TRAINING
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	3A-UE-42097
Origin of Funds	CORE, NORWAY OIL AND GAS TRUST FUND
Source of Funds Code	TF023895, TF020779
Task Manager(s)	WILLIAM PORTER/ERIC DAFFERN

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (Final)
2/97	n.a.	n.a.	n.a.	n.a.

2. Objectives:

- (a) To train African decision makers on commercialization of natural gas.

3. Principal Tasks:

- (a) Preparation of papers on African gas issues.
- (b) Workshop took place in June 1997.

4. Summary of Current Project Status, Issues and Actions:

- (a) Workshop took place in Nairobi on June 23-26, 1997, with representation from 13 countries in attendance.
- (b) *Conference organizer (Petrad) has failed to supply an acceptable summary of the proceedings. There had to be a number of economics in the costs as a result of a squeeze in the cofinancing from the Norwegian Trust Fund (problem of moving exchange rates) and money available for Petrad was fully used up. The means of dissemination need to be revisited.*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of: 12/31/98**

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	43,000	31,530	31,530	11,470
World Bank	0	0	0	0
Others	230,000	230,000	230,000	0
Total	273,000	261,530	261,530	11,470

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	AFRICA
Activity Name	IMPROVING EFFICIENCY OF PETROLEUM PROCUREMENT AND DISSEMINATION
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	3AFRUN054- 3A-UE-36746
Origin of Funds	CORE and WORLD BANK
Source of Funds Code	TF23892, and BB
Task Manager(s)	MOURAD BELGUEDJ/ THUVARA NAYAR

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR *
3/94	n.a.	n.a.	n.a.	06/99

*A completion report, with a translation into French, will be issued as a final Project output by end of June 1999. This project does not follow standard white to blue cover procedure.

2. Objectives:

To train the operational staff of African oil importing countries on implementing international competitive bidding (ICB) procedures, for the procurement of crude and petroleum products, as a means of reducing costs, improving security and transparency, and obtaining other benefits.

3. Principal Tasks:

- (a) Review of recent petroleum procurement procedures in selected countries.
- (b) Discuss with key suppliers possible changes in procurement practices.
- (c) Seek the views of importing countries on their experience.
- (d) Recommend changes.
- (e) Prepare a seminar to train operational staff members on the revised ICB procedures.

4. Summary of Current Project Status, Issues and Actions:

The final document used for Petroleum Procurement will be translated into French for Training and dissemination purposes. The English version approved and printed by LEG/OP in a trial edition, is already in circulation and has been sent to interested parties in various Governments and National and International Oil Companies. The English and French versions of the Document and Conference proceedings will constitute the final Project output.

This project is almost completed, pending fund availability for translating the Procurement document into French, for training and dissemination purposes in French-speaking Africa.

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	100,000	73,674	73,674	26,326
World Bank	48,000	48,000	48,000	0
Others	0	0	0	0
Total	148,000	121,674	121,674	26,326

8. Agreements Reached during Review Meeting:

The balance of funds will be used for training and dissemination of best practice on Procurement methods in Sub-Saharan Africa.

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	AFRICA
Activity Name	LPG OPTIONS PHASE I
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	3A-UE-45187
Source of Funds	NETHERLANDS, CORE, WORLD BANK
Source of Funds Code	TF022185, TF024631, TF22256, BB
Task Manager	MOURAD BELGUEDJ

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
10/96	n.a.	n.a.	n.a.	3/99

A Data collection and Fact Finding Mission Report has been issued. Conference proceedings will be issued as a Completion Report for this first phase. This work does not follow standard ESMAP stages (white-to-blue cover).

2. Objectives:

- (a) Review, in coordination with Governments and industry members, existing facilities and arrangements for production, bulk transportation, storage, handling, bottling, and marketing of LPG in West Africa.
- (b) Prepare recommendations for the least cost option to increase LPG use in the area which will reduce the use of wood fuel and consequent deforestation.

4. Summary of Current Project Status, Issues and Actions:

A presentation was made during the Workshop in Johannesburg, on Petroleum Products for Development in May 1998. The proceedings are in preparation to be circulated to all concerned by end of 1st quarter 1999.

Phase One is now over with the White Cover. The intention here is to continue phase II, taking Abidjan (Cote D'Ivoire) as the main focal point for development, as LPG growth there has outpaced historical trends in the whole region and even world averages (15% p.a.). LPG is now produced in large volumes in the region, from new oil and gas fields coming on streams now. This work will require additional funds and has the full support of the Ivoirian authorities, requesting Bank's help in enticing the private sector to develop Abidjan as the "Rotterdam of Africa" for petroleum products trade and mostly for LPG trade. The objectives are to (a) resolve policy related issues and to create an enabling environment for private sector involvement and (b) plan suitable infrastructure facilities for importation, storage, handling and distribution of bulk LPG. Budget is being prepared separately for this work under a new ESMAP project to be presented in 1999.

Completion Report including Mission conclusions and recommendations and Conference proceeding will constitute the final Product of this work. ESMAP management has indicated that seed money is available to prepare a request follow-up work, provided the framework for hydrocarbon in the Africa Region is established.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D = A - C
ESMAP				
<i>of which:</i>				
Trust Funds	108,665	111,533	111,533	-2,868
World Bank				0
Others	17,000	17,000	17,000	0
Total	125,665	128,533	128,533	-2,868

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	AFRICA
Activity Name	PETROLEUM TRANSPORTATION CORRIDORS
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	3A-UE-48500
Origin of Funds	CORE, NETHERLANDS
Source of Funds Code	TF022256, TF022185
Task Manager(s)	RAUF SCHWIMBECK

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
3/97	9/99	11/99	2/00	6/00

2. Objectives:

- (a) The study will review transport of petroleum in most SSA African countries (Angola, Botswana, Zambia, South Africa, Namibia, Zimbabwe and Congo) and identify lower cost modes of transport.
- (b) The study will recommend African countries in which a more detailed examination of oil transport systems is required.

3. Principal Tasks:

- (a) Screening exercise to show present costs and potential savings.
- (b) Detailed review of priority countries.

4. Summary of Current Project Status, Issues and Actions:

- (a) First stage of screening exercise completed. It needs better data before moving on to second stage.

- (b) A questionnaire on fuel prices and transport nodes was prepared and circulated to SSA countries with modest result. A new questionnaire was prepared to obtain required information from industry and was circulated also with modest results.
- (c) A consultant will be hired to collect more accurate data in other above listed countries.
- (d) Due to civil unrest in Angola and neighboring countries, the hiring of the consultant has been delayed.
- (e) The transport corridors for Ethiopia will be included in the effort to improve energy efficiency.
- (f) Preliminary report expected to be completed *second semester 1999*.

5. Site Visit Dates:

Last

Next

6. Expected Project Completion Date (when all project activities are expected to be completed):

Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of: 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	150,000	90,329	84,719	65,281
World Bank	0	0	0	0
Others	0	0	0	0
Total	150,000	90,329	84,719	65,281

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	AFRICA
Activity Name	PRODUCT SPECIFICATION STANDARDIZATION
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	3A-UE-45286
Origin of Funds	CORE, NETHERLANDS, PORTUGAL CTF
Source of Funds Code	TF022185, TF023895, TF034324
Task Manager(s)	THUVARA NAYAR/MOURAD BELGUEDJ

1. Report Preparation Stages:

A completion Report, including Workshop Proceeding is being prepared and should be available by end 1st. Q 1999.

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
7/96	7/97	11/97	3/98	3/99

2. Objectives:

Standardization of petroleum product specifications in Africa to obtain efficiency in fuel use, reduce environmental pollution, and reduce cost of importation, storage and inland transportation/ distribution.

3. Principal Tasks:

Conduct a detailed review of existing practices through consultant studies and prepare recommendations to achieve the objectives which will be presented to representatives of Government, State Oil Companies and International Oil Marketing Companies, for generating consensus in implementation of the recommendations.

4. Summary of Current Project Status, Issues and Actions:

- (a) Consultant visited selected countries in the Eastern Region and submitted a preliminary report which was reviewed by the project team. A revised version was approved in August 1997. Consultant thereafter visited the Western Africa Region and submitted a consolidated green cover report in March 1998, which included conclusions and recommendations for both the regions. The dissemination seminar to review the

recommendations for implementation with concerned Governments and industry members was held in *Johannesburg in May 1998 and was perceived by Governments and Industry alike, as a very pragmatic and comprehensive analysis of existing issues and bottlenecks. A follow up was unanimously requested to implement the recommendations for different petroleum products (Gasoline, diesel fuel oil and LPG), addressing the issues on a country by country basis, within regional supply/entry points.*

- (b) *Follow-up activities will include field training, implementation and monitoring of the findings and recommendations made during the Johannesburg to (i) identify the Regions to be covered by this work and (ii) prepare programs for implementation on a regional basis. We propose to follow-up, as suggested during the conference, with technical and commercial training Seminars, with representatives from selected Land-locked and Gateway countries and Oil Companies, to prepare specific programs for specifications, rationalizing imports, storage, transport and quality control at designated Regional entry points.*
- (c) *The work program of these meeting would include:*
 - (i) *Identifying standardized specifications for each product imported in the Region;*
 - (ii) *Ensuring durable quality control at entry points(Agreement on an independent laboratory for different countries in the Region);*
 - (iii) *Ensuring equal access for all operators to storage and handling facilities at standardized throughput tariffs;*
 - (iv) *identification of environmental and safety standards to be followed by all; and*
 - (v) *Modifications and additions required for existing infrastructure facilities.*
- (d) *The remaining funds in the existing budget as indicated in (item 7) are already earmarked for final settlement of outstanding payments. Additional funds will be necessary to undertake the follow-up work, as indicated above, which will ensure appropriate implementation of all the findings and recommendations. New proposals will be made to ESMAP for the follow-up work.*
- (e) *A completion Report including Workshop proceeding is being finalized for output by the end of March, 1999. Funds for follow-up (Field training, implementation and monitoring) work will be sought from ESMAP under new proposal in 1999.*

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of: 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	80,000	52,141	52,141	27,859
World Bank	0	0	0	0
Others	147,500	145,702	140,441	7,059
Total	227,500	197,843	192,582	34,918

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	AFRICA
Activity Name	REGIONAL ELECTRICITY DEMAND MANAGEMENT TA PHASE II
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	3A-UE-44440
Origin of Funds	SWEDEN
Source of Funds Code	UN007055
Task Manager(s)	PIERRE SAVARY

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR
01/15/96	11/30/97	n.a.	n.a.	03/30/99

2. Objectives:

To identify and support capacity building initiatives in three African countries (Ghana, Kenya, Tanzania) to design and apply demand management measures in the electric power sector. The primary aim is to foster cooperation among utilities, energy agencies, and end-user associations to integrate load management and end-use efficiency improvement measures in order to improve overall performance and utilization of electricity services and infrastructure in the respective countries. Another key objective is to facilitate exchange of information among the countries on the "lessons of experience" in this field. The activity builds on recently completed and/or ongoing ESMAP energy efficiency activities in Ghana, Kenya, and Tanzania.

3. Principal Tasks:

- (a) Preparation of a Four Part Video Documentary on "Ghana's Electricity Demand Management Initiative". The documentary, which would highlight key players, policy reforms, and activities that are part of the initiative in Ghana, would be disseminated to counterparts in other African countries.
- (b) Training and capacity building support to the Kenya Association of Manufacturers (KAM) to perform "Electricity Load Management Audits" for up to 40 industries and commercial enterprises

in Kenya. The activities include training of two Kenyan energy professionals in the audit techniques, and formulation of plan of action for implementation of a follow-up pilot project in collaboration with the Kenya Power and Light Company.

- (c) Training Workshop to be field at Arusha, Tanzania, involving key experts from Ghana, Kenya, and Tanzania to exchange information on “good practice” on the design and implementation of electricity demand management strategies. The Workshop would also include an on-the-job tutorial on “good practice” for conducting electricity load management audits for industrial and commercial enterprises, and on the experience of leasing as a cost recovery mechanism in the Ghana initiative.
- (d) Pilot Studies in Ghana and/or Kenya to ascertain the feasibility of establishing End-User Associations to promote end-use energy management in the industrial and commercial sectors. The counterparts for the proposed studies may include the Private Enterprise Foundation, Ghana, and the Kenya Association of Manufacturers (KAM). The NGO, Alliance to Save Energy, may collaborate with ESMAP on this exercise.
- (e) Preparation of proposals for extending activities to two or three other African countries.

4. Summary of Current Project Status, Issues and Actions:

- (a) The video was replaced by leaflets about the Ghanaian experience on power factor management, time of day tariffs and meters, integrated energy management. These leaflets illustrate energy efficiency in the Ghanaian industry. They were distributed in energy efficiency events in Tanzania, Kenya, and Ghana.
- (b) KAM hired two professionals to perform 40 audits in large industries around Nairobi and Mombassa. Because the quality of their reports was not satisfactory, an ESMAP mission provided them with on site training and support. The quality of the consultants' work has now improved. Apart from its training activities, the mission also became aware of numerous initiatives that the Kenyan industries have taken to conserve energy, because they are under the pressure of continuous electricity shortages. However, these initiatives are not fully efficient because their implementation or the associated operating practices are inadequate. This demonstrates that a market exists for a basic energy efficiency assistance to large customers. This activity should now be developed on a commercial basis to reach self sustainability.
- (c) A DSM training workshop was held in Arusha (Tanzania). Tanzanian and Ghanaian nationals from government agencies and public utilities, and private consultants attended the workshop. ESMAP and international consultants delivered methodological presentations. They also helped the participants conduct an energy audit in a tyre factory. The results of the audit were presented to the factory management, which expressed strong interest and commitment TANESCO should be able to avail itself of this preparation to develop a pilot DSM implementation project with this company.
- (d) The Alliance to Save Energy, a US NGO, provided a report about the opportunity to establish an associated counterpart agency in Ghana to promote end-use energy management. Further contacts are ongoing with Ghanaian consultants to pave the way towards the creation of this autonomous agency.
- (e) Based on the outcome of the above activities, ESMAP is now preparing a project to involve the private sector of various English speaking African Countries in Energy Conservation. This

project will include the selection of local businesses to start energy efficiency services, the appointment of an international organization to back-up the local businesses, and the networking of the actors.

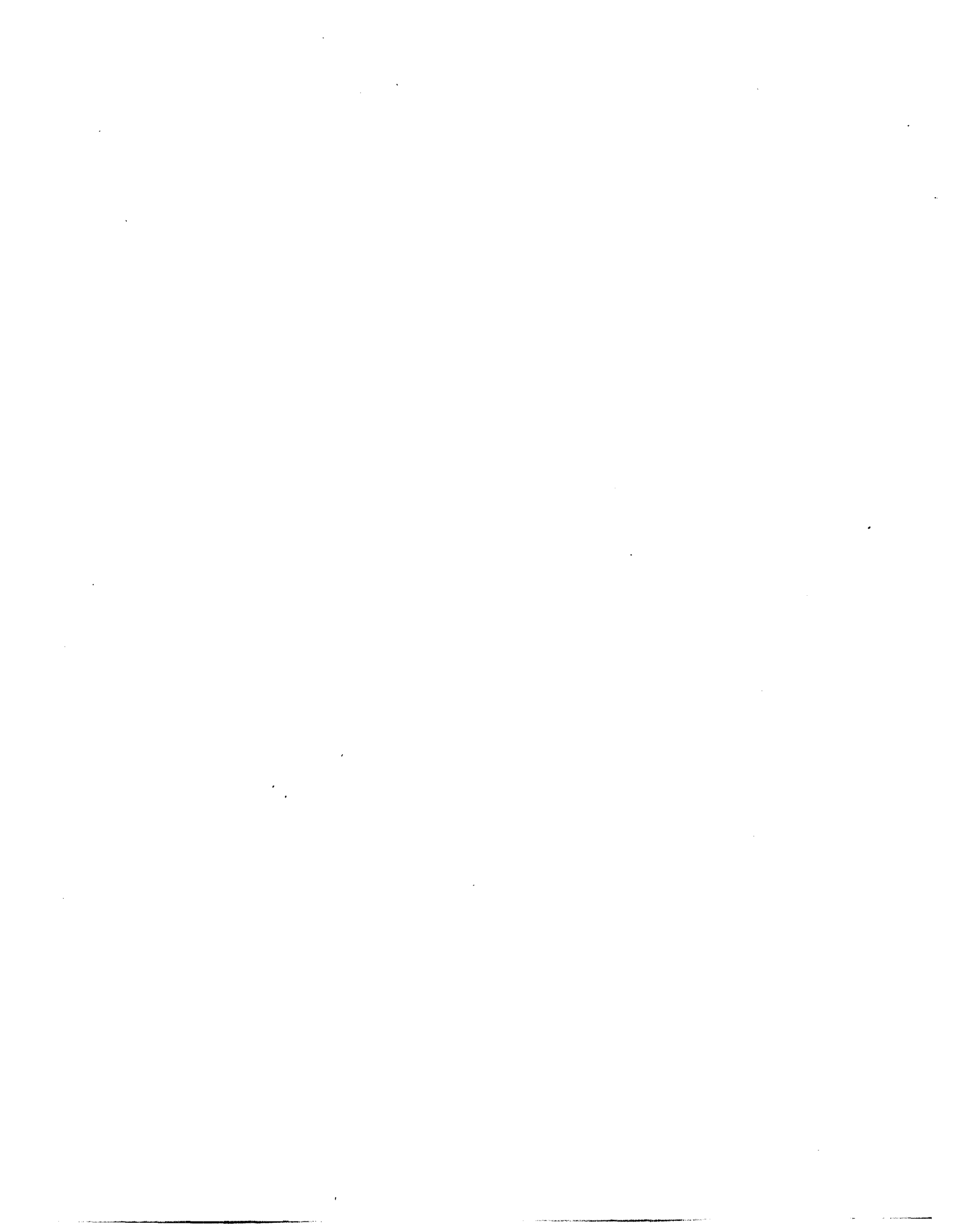
- (f) ESMAP sponsored a workshop in Nairobi in September 1997 to present examples of ESCO-type activities in Zambia. As a result, a Zambian Esco company is now in the process of contracting with several industries and hotels in Kenya.
- (g) The activity completion report *has been prepared and is being reviewed by EMTES for publication.*

5. **Site Visit Dates:** Last Next

6. **Project Completion Date** (all project activities completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	100,000	101,823	101,823	(1,823)
Others	0	0	0	0
Total	100,000	101,823	101,823	(1,823)



ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	AFRICA
Activity Name	WEST AFRICA SOLAR PROJECT
Theme	RENEWABLE ENERGY
Project Code	F4-UE-39834
Origin of Funds	FRANCE
Source of Funds Code	UN006680
Task Manager(s)	WILLEM FLOOR

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	PCR (final)
04/30/95	n.a.	n.a.	n.a.	03/30/99

2. Objectives:

To assist governments of West and Central African regions to formulate economically viable solar projects.

3. Principal Tasks:

- (i) Assessment of the market for PV systems;
- (ii) Identification of institutional development, pricing and financing arrangements necessary to promote the use of PV systems;
- (iii) Analysis of the current and potential local capability to meet market potential;
- (iv) Development of pre-investment studies for selected countries.

4. Summary of Current Project Status, Issues and Actions:

Discussions with Bank operational divisions on the selection of countries to ensure likely project implementation have taken place. Work in Cameroon, Guinea, Burkina Faso, Mali and Niger *have been completed and it is expected that project designs for the first two mentioned will result in investment projects.* Project designs developed for Benin, Cape Verde and Togo

have been appraised for inclusion in the Bank energy projects. *A project completion report was completed in October 1998, while a separate Lessons Learned Paper is currently being written which was finalized by the end of December 1998. It is intended to discuss this latter paper in a separate workshop.*

5. Site Visit Dates:

Last

Next

6. Project Completion Date (all project activities completed):

Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	360,000	335,683	332,168	27,832
Others	0	0	0	0
Total	360,000	335,683	332,168	27,832

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	BOLIVIA
Activity Name	ASSISTING REGULATORY AGENCIES FOLLOWING THE CAPITALIZATION OF THE NAT'L OIL COMPANY
Theme	SECTOR REFORM AND RESTRUCTURING
Project Code	BO-UE-50522
Origin of Funds	CANADA, CORE
Source of Funds Code	TF020308, TF024631
Task Manager(s)	CHAKIB KHELIL

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
1/97	n.a.	n.a.	n.a.	n.a.

Only reports to be produced are those provided by the consultants directly to the counterpart units for which they are providing assistance to under their terms of reference. Their work is reviewed by the task manager for quality control.

2. Objectives:

Assistance to:

- (a) The Environmental Unit (EU) of the Secretariat of Energy (SE) to catch up on a backlog of assessments;
- (b) The National Direction of Hydrocarbons (DNC) of the SE to enforce technical and safety regulations;
- (c) The Superintendency of Hydrocarbons (SUPHY) of the Multisectorial Regulatory Agency (SIRESE) to enforce economic regulations for gas transmission and distribution;
- (d) The Ministry of Finance to set up a tax collection coordinating unit for the hydrocarbon sector; and
- (e) YPFB petroleum data center to complete data center.

3. Principal Tasks:

Assistance by specialized experts in environment (a), safety and technical regulations, in economic regulations of gas transmission and distribution (b), coordination of tax collection in the hydrocarbon sector (c), and petroleum data storage and retrieval center (d) for periods extending over one month.

4. Summary of Current Project Status, Issues and Actions:

- (a) Assistance to the Ministry of Finance has been identified. An expert (Mr. Hinman), on auditing of petroleum firms has been hired. His first mission was completed in mid July 1997. Another consultant, John Peter Andrews of Trinidadian nationality was hired under credit 2762-BO and visited La Paz in September 98. An expert from Revenue of Canada , Mr. Shelton is being hired and may visit La Paz November 6, 1998 to discuss the organization , staffing and systems of the fiscalization unit which has been formally set up in August 1998.
- (b) Assistance to YPF petroleum data center. An expert (Mr. Fraser), on optical disk systems went to Santa Cruz in July 1997. Another expert (Ms. Madill), on PPDM has been working in Santa Cruz since October 1997. Mr Fraser has provided additional support in July 1998.
- (c) Assistance to EU. An expert (Mr. Leo Bouckhout), assisted the environmental unit in NSE since August 1997. Another expert , Mr Wallace , has provided assistance in field supervision of drilling in July 1998. Mr. Leo Bouckhout is conducting a study on delays in environmental regulations enforcement .
- (d) Assistance to NSE. Instead of a safety regulatory specialist who is no longer needed, CIDA agreed to hire experts in regulations of oil operations in indigenous people areas. Two experts (Mr. Dan O'Rourke and Mr. Joseph Zarate) have had their contracts extended to complete the work. Both the indigenous people and the Industry have agreed to their draft regulations. The two consultants were in the field in December 1997 to attend the technical committee review of the regulations.
- (e) Assistance to SIRESE. ***The Superintendent of Hydrocarbons has agreed to hire Mr. John Harbert in April 1998 to assist in enforcing safety and technical regulations of the Bolivia/Brazil Pipeline. Mr. John Harbert has provided assistance in September 1998 and then in October-November 1998. Another consultant, Mr. Robert Pleasant was hired under Credit 2762-BO to carry out a study on pipeline transit fees.***
- (f) There will be no completion report. Consultants reports are provided directly to the various entities. A final status report will be submitted to CIDA following their format. The remaining funds will be used for extension of consultant contract and hiring a new consultant. Funds will be completely ***disbursed by December 31, 1998. The reasons for delays were : postponement of work by John Harbert following postponement of audit contract for Bolivia/Brazil pipeline and difficulty in identifying expertise in auditing of oil companies. Revenue de Canada has accepted to provide assistance recently in October 1998.***

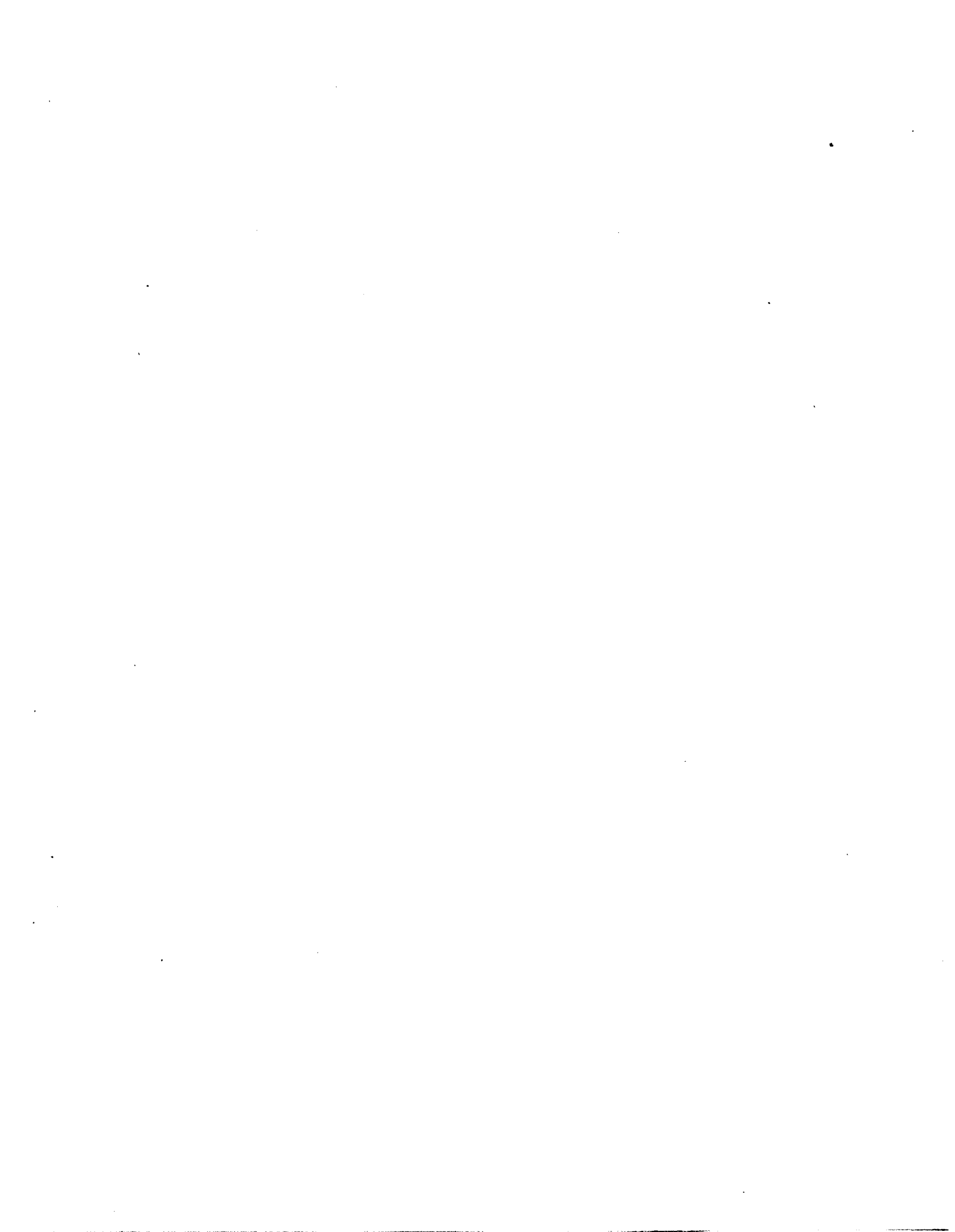
5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of: 12/31/98**

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	388,210	387,019	373,273	14,937
World Bank	0	0	0	0
Others	0	0	0	0
Total	388,210	387,019	373,273	14,937

* Additional core funding added to cover exchange rate loss of \$23,110.





PROJECT IMPLEMENTATION FORM

Region: LCR	Country: BOLIVIA
Project Title:	COUNTRY PROGRAMME PHASE II
Theme:	RURAL ENERGY & ENERGY EFFICIENCY
Project No. (Product ID Code):	BO-UE-56929
Origin of Funds:	NETHERLANDS
Source of Funds Code:	TF022187
Project Manager:	WILLEM FLOOR
Organizational Unit:	EMTEG

1. Development Objective	
Development Objective	Key Indicator
Assist the government in developing and executing a policy framework and its regulation in the field of Energy Efficiency and Rural Energy	Government has formulated policy framework and its related regulations and institutions

2. Expected Outputs	
Outputs	Key Indicator
<p>[a] execution of 25 demonstration projects that show the economic and institutional viability of comprehensive and sustainable solutions that facilitate the rural population's access to modern energy as well as for urban industry.</p> <p>[b] operational government institutions that are able to formulate policies and regulations, to monitor their execution, to evaluate and adjust them, if need be.</p> <p>[c] operational private sector support institutions that promote rural electrification (RE) and energy efficiency (EE)</p>	<p>[a-1] execution of 12 energy efficiency projects (industry 15%; power: 10%; and services: 15% savings). [a-2] 5 solar drying projects (30% less losses); [a-3] 3 rural electrification projects; [a-4] privatization of 5 rural elec. coops.</p> <p>[b-1] establishment of a rural energy unit within the ministry; [b-2] formulation of technical regulation and standards; [b-3] development of an energy database.</p> <p>[c-1] establishment of an energy efficiency center; [c-2] establishment rural electrification center; [c-3] training centers operational to train rural public and private sector staff as well as rural users; [c-4] establishment of a financing mechanism for RE and EE</p>

3. Implementation Progress: (State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)

Component	Start	End
Creation Center for Energy Efficiency (CPEE)	2/98	12/98
Creation Center for Rural Electrification Promotion (CFP)	2/98	7/98
Creation of information system for RE	2/98	2/99

4. Expected Dates for:	Original	Revised
(State the reasons for any revision in Item 5 below)		
Project Completion (all project activities completed):	12/2000	
Project Closing (all financial transactions executed):	02/2001	

5. Summary of Current Project Status, Issues and Actions: (please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)

[a] preparatory work for the execution of 5 demonstration projects has almost been finalized. Execution is expected to start early 1999 with commercial financing. [b] within the ministry a rural unit is operational, and preparation of regulations and standards is underway. The regulation for the energy database has been completed and is partially operational. [c] support institutions for RE and EE are operational, and curriculum for training centers is being finalized. Work on the financing mechanism has started. The Government has formulated a national electrification program (PRONER) and is actively preparing its implementation.

6. Site Visit Dates:	Last	08/98	Next	02/99
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7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Funds Received	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D	E=B-C
ESMAP					
of which:					
Trust Funds	1,614,883	494,475	283,610	199,865	294,610
World Bank	0		0	0	0
Others	0		0	0	0
Total	1,614,883	494,475	283,610	199,865	294,610

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	BOLIVIA
Activity Name	ENERGY EFFICIENCY AND ENVIRONMENT
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	BO-UE-34782 (6BOLUN029)
Origin of Funds	NETHERLANDS/CORE
Source of Funds Code	TF022186/TF023706
Task Manager(s)	WILLEM FLOOR

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	PCR (final)
03/15/94	n.a.	n.a.	n.a.	3/99

*White Cover Report

2. Objectives:

- (i) Assist Secretary of Energy (SNE) to evaluate energy consumption patterns and barriers to energy conservation and to identify potential for conservation.
- (ii) Assist SNE to evaluate impact of energy production transformation and consumption on the environment, and legal and institutional requirements to ensure an environmentally sound energy sector.
- (iii) Outline an energy efficiency strategy.

3. Principal Tasks:

- (i) Identifying energy consumption patterns in the economy, the potential for energy conservation, and existing imperfections in the functioning of the Bolivian energy markets which create barriers to implement energy conservation measures.
- (ii) Evaluating the impact of introducing market-related incentives for energy conservation on the behavior of energy consumers.
- (iii) Assisting in the design and implementation of autonomous and adequately funded institutions to promote economically justified energy efficiency programs and to disseminate results.

- (iv) Evaluating the structure to improve the flow of finance for energy efficiency projects by strengthening the ability of financial intermediaries to process energy efficiency projects, and developing new, essentially private sector sources of finance and energy efficiency services.
- (v) Ensuring closer integration of energy efficiency measures into the energy investment process.

4. Summary of Current Project Status, Issues and Actions:

- (i) A diagnostic mission (including international and local consultants) took place in April 1995. An intermediate report was issued which outlines the elements of an energy efficiency strategy, identifies some areas for demonstration projects, and recommends a work program for a parallel DGIS-funded project, the orientation phase of an energy efficiency institute.
- (ii) To improve the sustainability of the project, especially the participation of the private sector, contacts with the industrial sector were established during the first quarter of 1996. This facilitated close cooperation among the Santa Cruz Chamber of Industry and Commerce (CAINCO) and several industries in Santa Cruz and the ESMAP project. Several of those industries will participate in energy audits which will lead into several energy efficiency pilot programs such as an Energy Monitoring and Targeting (M&T) Program (see iv). Also, cooperation between the Peruvian energy agency, Cenergia, and the ESMAP project has been established.
- (iii) A seminar was organized in Santa Cruz in June 1996 to discuss experience with industrial energy efficiency programs in several Latin American and their relevance for Bolivia. During the seminar the proposed National Energy Efficiency Strategy and the action plan for the first phase of the M&T program were presented.
- (iv) Several companies were selected or volunteered for participation in industrial energy efficiency audits which were conducted in November/December 1996 by a team consisting of Cenergia of Peru, Energy Consultaria of Brazil and local consultants, who received on the job training. On the basis of the audits Energy Consultaria/March Consultants have prepared the work program for the next phases of the M&T program (Workshops and training sessions for industry personnel as well as several local consultants; instrumentation and software installation, data gathering and analysis; preparation of a report outlining the opportunities for energy efficiency improvements and their economic feasibility), which will start under the second phase of the ESMAP program. Several industries have declared their interest in participating in the M&T program and in financing part of the hardware and the TA.
- (v) A study of the design of an Energy Efficiency Center which would provide technical assistance and intermediation of services for energy efficiency was carried out by a team of local and international consultants. It is the basis for an application of the Chamber of Commerce and Industry and the Federation of Private Employers to the Dutch Embassy for funding of the activity.
- (vi) The results of the ESMAP project with special emphasis on items (iv) and (v) were the focus of a workshop held in Santa Cruz on February 4-5, 1997.

- (vii) *A combined project completion report including Bolivia Energy Strategy for Rural Sector has been completed in February 1998 and was sent again for clearance to the Bank's Regional Office in August 1998. The task manager will follow-up with the Bank's Regional Office to obtain the clearance. Upon their approval, the report will be sent to the government for their comments and approval.*

5. Site Visit Dates:

Last

Next

6. Project Completion Date (when all project activities are expected to be completed):

Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	405,931	376,022	376,022	29,909
Others	0	0	0	0
Total	405,931	376,022	376,022	29,909



ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	BOLIVIA
Activity Name	ENERGY STRATEGY FOR RURAL SECTOR
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	BO-UE-36724 (6BOLUN030)
Origin of Funds	NETHERLANDS
Source of Funds Code	TF022186
Task Manager(s)	WILLEM FLOOR

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	PCR (final)
09/16/94	n.a.	n.a.	n.a.	03/30/99

**White Cover report*

2. Objectives:

Develop a sustainable market driven rural energy program over a three-year period.

3. Principal Tasks:

- (i) Institutionalization of DIFER.
- (ii) Development of a financing mechanism for rural energy projects.
- (iii) Promotion of cost effective rural energy projects.
- (iv) Development of a training and T.A. program.

4. Summary of Current Project Status, Issues and Actions:

- (i) An action program with performance indicators has been agreed upon. Staff have been hired and activities have progressed as planned during the first year. A national rural electrification plan has been developed. In the second year, a training program for municipalities and prefectures will be executed and a financing mechanism for rural energy activities will be developed. Also, activities in the use of biomass will be started. A major rural electrification project (\$110 million), both with conventional and renewable energy system is being prepared. A \$20 million micro-hydro project has been prepared of which phase one (\$5 million) is being financed by the Inter-American

Development Bank (IDB). The preparatory activities to design an action plan for rural energy services other than rural electrification, with special emphasis on the use of biomass has been finalized. A follow-up national program has been developed and is being implemented.

- (ii) *A combined project completion report including Bolivia Energy Efficiency and Environment Project has been prepared and was sent for clearance to the Bank's Regional Office in August 1998. The task manager will follow-up with the Bank's Regional Office to obtain the clearance. Upon their approval, the report will be sent to the government for their comments and approval.*

5. Site Visit Dates:

Last

Next

6. Project Completion Date (when all project activities are expected to be completed):

Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	330,000	338,309	338,309	(8,309)
Others				0
Total	330,000	338,309	338,309	(8,309)



PROJECT IMPLEMENTATION FORM

Region: LCR	Country: BOLIVIA
Project Title:	NATIONAL BIOMASS PROGRAMME
Theme:	RURAL AND HOUSEHOLD ENERGY
Project No. (Product ID Code):	BO-UE-56928
Origin of Funds:	NETHERLANDS/NETHERLANDS/DENMARK
Source of Funds Code:	TF022188/TF035681/TF036853
Project Manager:	WILLEM FLOOR
Organizational Unit:	EMTEG

1. Development Objective	
Development Objective	Key Indicator
Assist the government in developing a National Biomass Plan (NBP) and developing a related policy framework and its regulations	Government has developed a NBP and has formulated and is implementing a policy framework and its related regulations and institutions

2. Expected Outputs	
Outputs	Key Indicator
<p>[a] execution of 35 demonstration projects that show the economic and institutional viability of comprehensive and sustainable solutions that facilitate the rural population's use of modern energy for productive and consumptive purposes, the more efficient use of biomass energy, and the implementation of improved management of biomass resources.</p> <p>[b] operational government institutions that are able to formulate policies and regulations, to monitor their execution, to evaluate and adjust them, if need be.</p> <p>[c] operational private sector support institutions that promote investments in biomass projects.</p>	<p>[a-1] execution of 20 biomass projects saving 20 K tons of biomass; [a-2] 15 projects of substitution of biomass by natural gas; [a-3] implementation of large scale (100,000 families) rural stove program; [a-4] execution of 5 natural forest management projects.</p> <p>[b-1] establishment of a biomass unit within the ministry; [b-2] formulation of technical regulation and standards; [b-3] development of an energy database.</p> <p>[c-1] training centers operational to train rural public sector staff as well as rural users in forest management; [c-2] investment by the private sector in 20 projects for an amount of \$1 million.</p>

3. Implementation Progress: (State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)

Component	Start	End
Investment in energy substitution in 5 artisanal sugar-mills	02/98	12/99
Investment in energy substitution in 5 rice-mills	02/98	12/99
Investment in energy 30 efficient brick kilns	02/98	12/99

4. Expected Dates for: (State the reasons for any revision in Item 5 below)

	Original	Revised
Project Completion (all project activities completed):	12/2000	
Project Closing (all financial transactions executed):	02/2001	

5. Summary of Current Project Status, Issues and Actions: (please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)

[a] preparatory work for the execution of 30 demonstration projects has almost been finalized. Execution is expected to start early 1999 with commercial financing. [b] within the ministry a biomass unit is not yet operational, though part is covered by the environment Unit. Preparation of regulations and standards is underway. The regulation for the energy database has been completed and is partially operational.

6. Site Visit Dates: Last 08/98 Next 02/99

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Funds Received	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D	E = B - D
ESMAP					
of which:					
Trust Funds	2,590,258	918,590	266,205	187,406	731,184
World Bank	0		0	0	0
Others	77,890	77,890	52,449	27,615	50,275
Total	2,668,148	996,480	318,654	215,021	781,459

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	BOLIVIA
Activity Name	RENEWABLES FOR RURAL ELECTRIFICATION
Theme	RENEWABLE ENERGY
Project Code	6L-UE-45287
Origin of Funds	NETHERLANDS/DENMARK
Source of Funds Code	TF023851/TF033957
Task Manager(s)	ERNESTO TERRADO

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
04/01/96	n.a.	n.a.	n.a.	2/28/99

2. Objectives:

- (a) Assist GOB and the Bank's project development team determine the feasibility of using renewable energy systems to provide electricity supplies to isolated areas of Peru.
- (b) Determine the most effective mechanisms for implementation of these types of subprojects and the possibility of obtaining GEF grant financing for the incremental costs of eligible subprojects.

3. Principal Tasks:

- (a) Assist GOB and the Bank's project development team determine the feasibility of using renewable energy systems to provide electricity supplies to isolated areas of Peru.
- (b) Determine the most effective mechanisms for implementation of these types of subprojects and the possibility of obtaining GEF grant financing for the incremental costs of eligible subprojects.

4. Summary of Current Project Status, Issues and Actions:

This ESMAP project was a response to a request from the LAC region energy sector in 1996 for assistance in developing a rural electrification project featuring renewable energy systems. After one field mission, a project concept document was prepared, based on materials and support from the Bolivian energy ministry. The PCD was endorsed by a letter from the Minister of Energy. However, in

a formal country team meeting, the proposed project was given lower priority by the CMU over other non-energy projects. The issue was basically the competition for scarce IDA resources.

With this result, the ESMAP project was discontinued after disbursing only about \$11k of the \$90k originally allocated. The decision to terminate was made after the Region postponed several times over almost a year its consideration of the project proposed by the Bolivian Government. Although the project proposal was finally put in the pipeline recently, its priority remains uncertain. The ongoing ESMAP rural energy project in Bolivia managed by Mr. Willem Floor will take care of any follow-up that may be needed in the future.

The brief Activity Completion Report was submitted to ESMAP Manager on October 26, 1998 for review and approval for final publication.

5. **Site Visit Dates:** Last Next

6. **Project Completion Date** (all project activities completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	10,944	10,944	10,944	0
Others				
Total	10,944	10,944	10,944	0

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	BRAZIL
Activity Name	BAHIA END-USE ENERGY AND EFFLUENT MANAGEMENT STRATEGY TA
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	BR-UE-45121
Origin of Funds	NETHERLANDS/GERMANY
Source of Funds Code	TF022185/UN002005
Task Manager(s)	SALVADOR RIVERA

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
03/96 (TOR)	09/96	n.a.	n.a.	03/31/99*

*Reports by host industrial sites including action plan to be issued by FIEB.

2. Objectives:

To assist the Industrial Association of the State of Bahia (Federacao das Industrias do Estado do Bahia - FIEB) to prepare a strategy and action plan to demonstrate the application of Monitoring and Targeting (M&T) systems for energy management and waste minimization operations in industrial enterprises. The aim is to create a portfolio of "Good Practice" case studies at 5-6 industrial host sites in Bahia. The activity supplements a collaborative initiative between ESMAP, the InterAmerican Development Bank, and the European Union's OPET-CS to develop a of the overall strategy to transfer know-how and technology on energy management from Europe to Latin America.

3. Principal Tasks:

- (i) To assist FIEB to identify and screen prospective industrial enterprises for participation as host sites for the pilot demonstration project. This involves energy audits to identify feasibility of establishing "energy accountable centers" within each host site, and to assess potential energy cost savings with the application of M&T techniques.
- (ii) To assist FIEB to develop a one-year implementation plan for the Bahia M&T Pilot Demonstration project, including a framework for evaluating performance and for subsequent replication within FIEB member industries. This assistance includes a study tour by FIEB and FINEP to the UK and EU-THERMIE to meet with key organizations that have been involved in

the development and dissemination of M&T systems in the UK's Best Practice Program, and the EU's THERMIE Program.

- (iii) To assist FIEB and prospective industries prepare detailed proposals for use in securing financing for equipment, instrumentation, and computer hardware and software needed for site specific M&T application. Such proposals are to be submitted as part of line of credit applications for each enterprise to FINEP, the lead federal agency in Brazil for financing technology modernization projects by private industry.

4. Summary of Current Project Status, Issues and Actions:

- (i) The consultant report has been completed and an *activity completion report is under preparation, jointly with the other projects that have used M&T as methodology, this report will be completed in December 1998.* The EU/Thermie program has approved ECUs 140,000 to assist FINEP and FIEB in enlarging the program.
- (ii) *The submission of the draft final report will be issue March 1999 and follow-up results in Colombia has been updated to February 1999.*

5. Site Visit Dates:

Last

Next

6. Project Completion Date (all project activities completed):

03/31/99
06/30/99

Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	64,400	61,815	61,815	2,585
Others	0	0	0	0
Total	64,400	61,815	61,815	2,585

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	BRAZIL
Activity Name	ENERGY EFFICIENCY TA PHASE II - FINEP
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	BR-UE-44442
Origin of Funds	CORE
Source of Funds Code	TF023706
Task Manager(s)	SALVADOR RIVERA

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
01/15/96	n.a.	n.a.	n.a.	03/31/99

2. Objectives:

Assist Financiadora de Estudos e Projetos (FINEP), the principal financial institution for studies and projects of the Ministry of Science and Technology, to define the key elements of a coherent strategy to transfer M&T (Monitoring and Targeting) technology to Brazil. This initiative is part of the overall national effort to promote greater efficiency of energy use in the industrial and commercial sectors. This is a follow up to the reconnaissance work conducted under the ESMAP Latin America Regional activity on End-Use Energy Management (completed).

3. Principal Tasks:

- (i) identify an effective configuration of nationally prominent organizations or agencies that would collaborate with FINEP to manage and coordinate the key elements of the M&T technology transfer strategy.
- (ii) develop a strategy for introducing M&T systems into two or three states in addition to Bahia;
- (iii) develop of a portfolio of pilot capacity building activities that would complement the pilot demonstration projects in Bahia State and thereby lead to the creation a commercially viable national infrastructure (i.e., a network of services that would ensure that energy consumers that adopt M&T for their premises would, on demand, have access to expert advice, technical information, training, and equipment supply and maintenance services.

- (iv) define the full complement of training events that would be required to support the introduction and dissemination of M&T. Such training strategy would be aimed at program managers and/or coordinators, the management and operating staff of prospective industrial host sites, and local consultants; and
- (v) identification of local and external sources of financing that could be tapped to provide credit on a cost recovery basis to enterprises that participate in the pilot program, and also to fund capacity building and information dissemination activities to promote M&T in Brazil.

4. Summary of Current Project Status, Issues and Actions:

All the above tasks have been completed successfully. Some of the components of the proposed strategy have been included in the Energy Efficiency loan. In view of the fact that the use of Monitoring and Targeting (M&T) as a delivery system has been common to Peru, Colombia, Brazil, and Slovakia, a combined final report, integrating the lessons learned is being prepared.

5. **Site Visit Dates:** Last Next

6. **Project Completion Date** (when all project activities are expected to be completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	90,000	87,758	87,758	2,242
Others	0	0	0	0
Total	90,000	87,758	87,758	2,242

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	BRAZIL
Activity Name	NORTHEAST RENEWABLE ENERGY IDENTIFICATION
Theme	RENEWABLE ENERGY
Project Code	BR-UE-45123
Origin of Funds	CORE/CORE/CORE
Source of Funds Code	TF022256/TF023835/UN007650
Task Manager(s)	ANKE MEYER/ERNESTO TERRADO

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR
03/96	n.a.	n.a.	n.a.	07/30/99

2. Objectives:

Identify potential investments which could be part of a World Bank project. The project would assist some states in North-East Brazil extend the supply of electricity to remote rural areas. Renewable technologies and new institutional and organizational arrangements for the provision of services and equipment would be supported.

3. Principal Tasks:

- (i) Review of the technical, financial, economic and institutional experience with renewable energy in Brazil, especially in the Northeastern States of Ceara, Bahia and Minas Gerais.
- (ii) Prepare an overview of the existing renewable resource base in the Northeastern states, including solar, wind and biomass energy.
- (iii) Prepare an overview of population patterns, incomes and current energy expenditures as well as the extent of infrastructure and other public services in place in rural areas of the Northeast to define the composition and size of the potential markets and the payment capability of potential consumers.
- (iv) Review of current rural electrification and water supply policies and implementation in those states: strategy and guidelines, extent and coverage, resources (state budget), cost of installation, O&M cost, tariffs.

- (v) Identification of possible participants in a renewable energy project: private concessionaires, service providers, equipment sellers, leasing firms, energy service companies, non-governmental organizations, rural cooperatives and communities, and end users.
- (vi) Assessment of the existing barriers for expansion of electric services and applications based on renewables, e.g., existing regulations, technological issues, development of technical specifications, technical support, importation tariffs, electricity tariffs, and first investment cost, and proposals for the design of institutional, regulatory and financial measures to overcome these barriers and increase market penetration.
- (vii) A comparison of conventional rural electrification (grid extension and diesel generation) with electrification on the basis of renewable energy in terms of the economic and environmental costs and benefits.
- (viii) Recommendations for a focused renewable energy investment program and implementation mechanisms. Studies will be initiated, as needed, to complete tasks (i) to (vii). A draft TOR for the studies will be prepared.

4. Summary of Current Project Status, Issues and Actions:

Based on the results of activities carried out under tasks (i)-(vii), a Project Concept Document was prepared for a proposed Bank-funded Brazil Renewable Energy Project. In parallel, Winrock provided financing for the services of a consultant to develop a financial simulation model to be used to determine the attractiveness of the proposed investment to the private sector. At the request of the Brazil Country Management Unit (CMU), a Quality Enhancement Review of the proposed project was carried out in September 1988 which will be discussed with the CMU and the project task team in November 1998.

The PCR will be finalized by the end of December 1998 in order to be able to report on the results of the discussions of the Project Concept Document for a Bank project and the following QAG review. The thrust of the PCR depends to some extent on the outcome of those activities.

Delay of Project completion from June 1998 to December 1998 is due to extremely slow progress in discussing project proposal with Bank management (task viii).

The summary of results and conclusions will be added in next quarterly update.

5. Site Visit Dates: Last Next

6. Project Completion Date (all project activities completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	103,555	120,484	120,484	-16,929
Others	0	0	0	0
Total	103,555	120,484	120,484	-16,929



ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	BRAZIL
Activity Name	SPECIAL INITIATIVE ON ENERGY EFFICIENCY
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	BR-UE-47023
Origin of Funds	CORE/UNITED STATES
Source of Funds Code	UN002005/TF028677
Task Manager(s)	SALVADOR RIVERA

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR
02/97	*See note	*See note	*See Note	04/99

* Reports will be a series of technical notes prepared by the Government and Bank staff in the 18 month period. A technical note will be prepared summarizing ESMAP support on the design of the loan and support to FINEP.

2. Objectives:

- (a) To assist the National Electric Energy Conservation Program (PROCEL) in preparation of Energy Efficiency Project, particularly on the design of alternative Financial and Institutional Delivery Mechanisms, i.e. Utility and private based delivered efficiency projects.
- (b) As a case, assist both Financiadora de Estudos e Projetos (FINEP) and Federaçao das Industrias do Estado do Bahia (FIEB) to implement their proposed strategy to deliver efficiency project.

3. Principal Tasks:

- (i) Targeted consulting support and visits to design Energy Efficiency Project (\$200 million).
- (ii) Targeted support to FINEP and FIEB in implementing with the proposed strategy jointly with EU-THERMIE and IDB.
- (iii) Development of partnerships with local NGOs and private sector companies, through Co-sponsoring of conferences on the Bank's emerging energy agenda i.e. "Cogeneration and

Distributed Generation” with, INEE in May 1999; financing instruments and delivery systems on CO2 emissions trading, spring 1999.

4. Summary of Current Project Status, Issues and Actions:

The main focus over the last period has been in supporting PROCEL—through consultants and Bank staff—in the design of the energy efficiency loan and its components. This phase will come to an end during the September mission, since the project will be appraised in October. The project has been appraised and the project will go to negotiations on March 23, 1999: (a) support to PROCEL has been completed and reflected in the Project Appraisal Document issued by the region February 10, 1999; (b) proceedings have been received and no further conferences are scheduled; (c) last mission will take place in April 1999 to present to FINEP the final results and this will complete the overall project. In parallel and to move forward to emerging products, the program co-financed with INEE (local NGO), BNDES, PETROBRAS, COMGAS, FURNAS, ELETRONORTE, CHESF, a first seminar on Co-generation and Distributed Generation. This is the first of a set of seminars designed to support the process of energy reform and the leading role by Brazil on climate change discussions. Additionally, through FINEP—a financial intermediary—and FIEB, an industrial trade association, the project has co-financed consultants with the EU-THERMIE program. Their efforts to implement the strategy and action plan derived from previous ESMAP support on projects in Brazil Energy Efficiency TA Phase II – FINEP and Brazil Bahia End-Use Energy and Effluent Management Strategy Study.

Next actions are: a) completion of support to PROCEL in design of Efficiency loan; b) review of proceedings with INEE on Distributed generation conference and agreement on next conference’s outline (INEE will issue proceedings); and c) fielding of missions by consultants in September at host industrial sites.

5. Site Visit Dates:

Last

Next

6. Expected Project Completion Date (when all project activities are expected to be completed):

04/99
07/99

Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	135,000	125,795	98,295	36,705
Others	90,000	85,560	85,560	4,440
Total	225,000	211,355	183,855	41,145



ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	CAMBODIA
Activity Name	COMMERCIALIZATION OF A POWER COMPANY
Theme	SECTOR REFORM AND RESTRUCTURING
Project Code	KH-UE-44441
Origin of Funds	SWEDEN/SWEDEN
Source of Funds Code	UN007055/TF024633
Task Manager(s)	JEAN-PIERRE CHARPENTIER

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
12/15/95	t.b.d.	n.a.	n.a.	t.b.d.

2. Objectives:

Increase the efficiency of the power sector in order to make it attractive for investment by the private sector. Attention is expected to focus on three major areas: the management of the efficiency program within the electricity company, the restructuring of the sector including the implementation of the regulatory system and the enhancement of the technical capabilities of Energy Ministry staff in charge of energy efficiency activities.

3. Principal Tasks:

- (i) Put in place an operational structure within Electricity of Cambodia for managing energy efficiency programs;
- (ii) Propose a regulatory system for the power sector in Cambodia;
- (iii) Enhance the ability of the staff of the Energy Efficiency Unit of the Ministry of Energy;
- (iv) Provide advice and guidance in preparing and implementing energy efficiency policies.

4. Summary of Current Project Status, Issues and Actions:

Tasks (i) and (iii) were launched during an initial mission which took place in February 1996. Two working groups were created, one within the electricity utility (EDC) and another at the Ministry of Energy and Mining (MIME). The working group of the electricity utility has the responsibility of guiding and monitoring the energy efficiency progress of the company. The working group is operational

since May 1996. Its work program is coordinated by the Management Committee of the company. The objective of the working group of the Ministry, which was created during the first mission (February 1996) is to develop coordinated energy efficiency policies within several sectors of Cambodian economy. Unfortunately an unexpected training requirement for the group was identified during the May 1996 mission. A training program was prepared with the support of the local Institute of Technology and was almost completed when the civil war started in July 1997. The civil war lasted about three months and an identification mission was fielded in November 1997 to identify the damages of these devastating three months on the project. Its main conclusions are: (i) most of previously trained staff are back in their respective offices, (ii) a large part of gathered information is missing, (iii) the morale and enthusiasm of the staff has been deeply affected, but (iv) the management of both EDC and MIME requested the continuation of the project. Therefore it has been decided: (a) to continue the support of the EDC and MIME groups for an additional year and (b) to limit the activities of MIME to one or two energy saving demonstration programs in one or two sectors of the economy. A mission was fielded in February 1998 to re-activate the above mentioned activities and to launch the definition of a regulatory system for the power sector (task ii). Upon return of the mission, the Minister of Energy sent a letter to the World Bank expressing his satisfaction with the project's evolution and requesting a further assistance for at least two additional years. *The political turmoil faced by the country over the last six months did not allow to schedule any new mission and activity. If the situation is back to normal soon, a mission is tentatively scheduled for December 1998. Its objective will be to evaluate the situation of the project and probably to redesign the final part of the project towards those activities that may be the most productive and efficient for Cambodia.*

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
of which:				
Trust Funds	362,381	295,076	262,576	99,805
Others	0	0	0	0
Total	362,381	295,076	262,576	99,805

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	CAMEROON
Activity Name	DECENTRALIZED RURAL ELECTRIFICATION
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	CM-UE-44275
Origin of Funds	BELGIUM
Source of Funds Code	TF023891/TF023893
Task Manager(s)	RENE MASSE

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	PCR (final)*
05/96	n.a.	n.a.	n.a.	06/30/99

** Implementation Completion Report*

2. Objectives:

To assist the Government to devise a strategy and investment plan to address the electricity needs of rural households through private sector participation.

3. Principal Tasks:

- (i) Assess electricity demand patterns and supply options.
- (ii) Review sector policy and legal framework.
- (iii) Implement pilot operations of decentralized rural electrification.
- (iv) Develop action plan to bring about private sector managed decentralized rural power projects.

4. Summary of Current Project Status, Issues and Actions:

A workshop has been held in March 1996 with all stakeholders to agree upon a common approach as well as develop a work program. The latter has been agreed upon with the Government and the other stakeholders and will be co-financed by Societe National d'Electricite

(SONEL); project execution has started in December 1996. The work program is on target, with the Government institutions: i) a decentralized rural electrification sector policy letter has been formulated by the government; and ii) proposals for new decentralized Rural Electrification regulation documents have been studied by a pluri institutional committee; *they will be part of the future electrical law under preparation, scheduled to be presented at the approbation of the next Assemblée Nationale meeting in March 1999.* In the field also, pilot activities are ongoing; i) *photovoltaic and picohydro training have been done; ii) a one kW picohydro-turbine has been locally built and installed at Bamougoum; the system, locally managed, is used to power 240 light bulbs and battery charger; iii) concerning the Photovoltaic project in Bibindi and Bidjouka, the tenders have been selected by SONEL; Skaidula Siemens for 40 light SHS kits and Total Energie for 30 bigger SHS, and the technical receptions in Factories are planned to be held in November 1998;* and iv) in collaboration with SONEL, EDF International and ADEME, the field studies for *three village* diesel electricity projects (at *Lindoi*, Mbonjo and Ebodje) have been achieved with APAVE technical assistance. *Ebodje is ready for an implementation and the supplier COSANEX has been selected to provide all imported equipment.* As a result of this ESMAP project, a Project Concept Document *has been prepared with the support of the Bank Regional office for a Learning and Innovation Loan (LIL) project to help develop a DRE national program.* Other International operators and donors have formulated their willingness to commit themselves to coordinate DRE program in Cameroon.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	B=A-C
ESMAP				
of which:				
Trust Funds	250,000	219,910	169,140	80,860
Others	0	0	0	0
Total	250,000	219,910	169,140	80,860

8. **Agreements Reached during Review Meeting of:**

Extended until the end of June 1999.

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	CAMEROON
Activity Name	ENERGY STRATEGY
Theme	REFORMS IN PETROLEUM, ELECTRICITY AND TRADITIONAL SUBSECTORS
Project Code	CM-UE-23867 (3CAMUN015)
Origin of Funds	NETHERLANDS/FRANCE
Source of Funds Code	UN007720/UN006680
Task Manager(s)	MICHEL LAYEC

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
04/31/93	n.a.	n.a.	n.a.	n.a.

2. Objectives:

- (a) Preparation and discussion of an Energy Strategy for Cameroon covering the next 10 years and corresponding Action Plans.
- (b) Foster close collaboration among Cameroonese experts, international experts, ESMAP and World Bank, to engage in necessary dialogue leading to a reform program through Structural Adjustment Credits, technical assistance etc.

3. Principal Tasks:

- (i) Reconnaissance Mission and Activity Initiation Brief.
- (ii) Update of Cameroon Energy Sector Strategy.
- (iii) In-depth analysis of priority energy issues.
- (iv) Initial draft of the Energy Strategy and Action Plans and discussions between experts.
- (v) Finalization of the Energy Strategy and presentation/discussions with the decision-makers.

4. Summary of Current Project Status, Issues and Actions:

Task 3i: Completed.

Task 3ii: Completed. Energy Workshop held October 18-22, 1993, in Yaounde.

Task 3iii: Completed. Petroleum Subsector: Consultants have been selected to: (a) assess downstream reform requirements and propose actions; (b) review and propose changes in the upstream framework. The PFP and IMF program have included the reform of the petroleum sector (upstream and downstream) as a central issue with structural benchmarks. Work on upstream issues has been initiated in October 1995, recommendations were provided in January 1996 and *a revised Law is expected to be enacted by early 1999*. A new Code is also expected with respect to natural gas development. Key decisions have already been implemented: first-ever external audit of the Societe Nationale des Hydrocarbures (SNH); implementation of state-of-the art financial/accounting system for SNH; liberalization of imports; decreasing protection of the domestic refinery.

Power Subsector: In Mid 1997 and following a Bank led 3-donors mission, the Government has decided to proceed with the electricity sector reform and the privatization of the power utility. *An Investment Bank has now been selected has initiated work, assisting the Government in proposing a new strategy and regulatory framework, an institutional structure for the electricity sector and in selecting strategic investors*. Decentralized power pilot operations (PV systems, pico hydros and diesel units) have also been initiated with financial support from private sector and the power utility (A project concept is currently discussed by various Donors).

Energy Sector Institutions. The role of the various players (particularly public and private) will be assessed in the coming weeks.

Task 3iv: Under the PFP/IMF new program, an agreement on the role of the different entities in the petroleum sector is expected to be reached. Similar work is currently on-going for the electricity sector through the work of the Investment Bank and the efforts on Decentralized Power pilot operations and the implementation of the electricity sector privatization.

Discussions are on-going at the Prime Minister level to set-up a Task-Force to deal with the strategic issues confronting Cameroon with respect to the role of the private sector and the reliance on hydro vs. natural gas for electricity generation. The task manager will obtain a firm commitment from the government to proceed with the energy sector strategy work. Upon confirmation of the government, the project needs to be redesigned and a new proposal will be prepared and on how the remaining tasks will be carried out, implemented and completed. If a commitment cannot be obtained from the government, a completion report will be issued to record lessons learned that can be drawn from the project.

The Bank is awaiting confirmation that the above mentionned Task-Force has been set-up. Once such confirmation is obtained, the project objectives and a revised work program will be discussed with the Task-Force.

5. Site Visit Dates:

Last

05/98

Next

End 10/98 - Beginning 11/98

6. **Expected Project Completion Date** (when all project activities are expected to be completed): 12/98
- Expected Project Closing Date** (when final commitments are expected to be reported in Section 7 below): 12/98

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
of which:				
Trust Funds	426,467	273,757	273,757	152,710
Others	0	0	0	0
Total	426,467	273,757	273,757	152,710

8. Agreements Reached during Review Meeting of :

All efforts to obtain the government's commitment to proceed with the energy sector strategy work have failed to date. However, progress has been made in several areas. The government has engaged the IFC to assist with the privatization of the SONEL. In the upstream petroleum sector, progress made on the development of the regulatory framework. Also, on downstream activities, liberalization of product imports has started.

As the possibility of engaging in a comprehensive sector strategy, does not look realistic, at this juncture, it was agreed to close this activity and redirect the efforts to Rural Energy issues through a new activity. The financing will be redirected accordingly.



ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	CENTRAL AMERICA AND PANAMA
Activity Name	RURAL ELECTRIFICATION AND POWER REFORM
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	6C-UE-53523
Origin of Funds	NETHERLANDS
Source of Funds Code	TF023849
Task Manager(s)	DOUGLAS BARNES

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
10/01/97	09/30/99	n.a.	t.b.d.	t.b.d.

2. Objectives:

- (a) Complete background study on rural electrification options in Central America and Panama.
- (b) Development of priorities for grid and off grid electricity projects for rural areas.
- (c) Assess strategies to develop market for products to serve people without access to grid electricity.
- (d) Assess feasibility of user's associations and private entrepreneurs to promote electricity service in rural communities without access to grid electricity.

3. Principal Tasks:

- (i) Complete background review of countries in the region, including sector policies affecting rural distribution.
- (ii) Develop priorities for grid and offgrid electrification in consultation with the country governments.
- (iii) Complete a workshop on electrification in one of the countries in the region

4. Summary of Current Project Status, Issues and Actions:

Regional staff have been thoroughly consulted on the study and it has been revised according to new issues developing in the region, including the fast pace of electricity sector privatization. At the present time, it is anticipated that the project will be carried out in

Guatemala, Nicaragua, and El Salvador. The project has been delayed somewhat as a result of Hurricane Mitch. Cooperating regional staff are focusing their efforts on emergency relief efforts. However, a regional consulting firm will submit shortly a proposal for the completion of the background review, and work will begin on this phase of the project in January 1999. A new proposal confined to renewable energy has been proposed by the region, which would be considered as complementary follow-on work to this project.

5. **Site Visit Dates:** Last Next

Mission schedule still to be determined.

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	115,317	26,033	25,897	89,420
Others	0	0	0	0
Total	115,317	26,033	25,897	89,420

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	CENTRAL AND EASTERN EUROPE
Activity Name	DISTRICT HEATING I
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	1E-UE-43955
Origin of Funds	CORE/NETHERLANDS/CORE/SWITZERLAND CTF/ NETHERLANDS CTF
Source of Funds Code	UN007055/TF020821/UN007721/UN001005/TF033758/ TF032730
Task Manager(s)	ANKE MEYER

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
03/95	05/15/97	06/06/98	10/30/98	05/30/99

2. Objectives:

Assess comparative advantages of various types of heating systems.

3. Principal Tasks:

- (i) Prepare methodology document.
- (ii) Conduct workshop with consultants.
- (iii) Conduct case studies in Lithuania, Poland, Russia and Ukraine.
- (iv) Prepare summary document and conduct seminar with recipients and World Bank staff.

4. Summary of Current Project Status, Issues and Actions:

- (i) *The Yellow Cover report was issued in June 1998, and the Green Cover version was submitted to the Bank's regional energy sector unit for clearance in September 1998. An updated version will be sent for external review in October. The Blue Cover will be finalized in January 1999.*

- (ii) *A website will be developed to further disseminate the results.*
- (iii) *Delay of finalizing the final report from July 1998 to January 1999 is due to slower progress than expected with preparation of various report stages (receiving comments, integrating comments, clearances, etc.).*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
of which:				
Trust Funds	601,591	512,698	571,438	30,153
Others	72,500	72,500	72,500	0
Total	674,091	585,198	643,938	30,153

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	CENTRAL ASIA
Activity Name	CENTRAL ASIA GAS TRADE
Theme	INTERNATIONAL ENERGY TRADE
Project Code	7C-UE-42450
Origin of Funds	CORE, NORWEGIAN OIL AND GAS TRUST FUND, JAPAN GENERAL CTF, CANADIAN CTF, DENMARK GENERAL CTF, NETHERLANDS TA CTF, NETHERLANDS TA FOR CENTRAL ASIA END EASTERN EUROPE CTF, FRANCE CTF EASTERN EUROPE, NETHERLANDS CTF
Source of Funds Code	TF023892, TF023895, UN002005, TF031399, TF032626, TF033334, TF033824, TF033892, TF034177, TF034243, TF034485, TF034747, TF020781, TF035477, TF035478, TF035482
Task Manager(s)	SHIGERU KUBOTA

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

1st Phase Study: Kazakhstan - Natural Gas Investment Strategy Study

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
11/95	9/96	4/97	5/97	1/98

2nd Phase Study: Turkmenistan - Natural Gas Export Strategy Study

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
11/95	4/98	6/98	9/98	11/98

Note: The second phase was cancelled as per the May 7, 1998 agreement.

2. Objectives:

To assist the Governments of gas producers in Central Asia (initially Kazakhstan and later on Turkmenistan when the Bank receives the government's request) in developing a sound strategy for natural gas investment, use and trade.

3. Principal Tasks:

- (a) To assist officials of Kazakhstan (and Turkmenistan), in developing an economically sound strategy for natural gas development in the region and for related investments which focuses on domestic gas utilization in the northern and southern regions of the country.
- (b) In parallel with the above activities, a working committee of Central Asian and major consumer countries, private sector and international oil and gas companies will be organized to coordinate the activities.

4. Summary of Current Project Status, Issues and Actions:

The final draft report for the Kazak component (e.g. the first phase study), was well received by Kazak officials and representatives of international oil/gas companies. The final report was completed and distributed in December 1997. (Report #199a/97). *Phase I is complete. There is a potential to re-define Phase II: Turkmenistan component to include oil products and power sub-sectors. The Phase II study would be presented as a new project. This project is now completed.*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):

Phase I completed in FY98
09/98

Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 09/30/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	C	D	E=B-D
ESMAP				
<i>of which:</i>				
Trust Funds	389,882	389,882	389,882	0
World Bank	0	0	0	0
Others	757,484	757,484	757,484	0
Total	1,147,366	1,147,366	1,147,366	0

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	CHINA
Activity Name	INSTITUTIONAL STRENGTHENING AND TA IN THE RURAL POWER SECTOR: POWER EFFICIENCY PILOT STUDY
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	CN-UE-23715 (4CHAUN036/4CHAUN036A)
Origin of Funds	CORE
Source of Funds Code	UN007780
Task Manager(s)	NOURREDINE BERRAH/DEAN GIRDIS

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
03/01/92	02/14/97	06/01/97	11/30/97	03/30/99

2. Objectives:

- (a) Assist Chinese counterparts in carrying out power loss reduction pilot studies.
- (b) Dissemination of transferred methodologies to help increase efficiency of rural power systems.

3. Principal Tasks:

- (i) Data collection and computer-aided analysis of two county power systems.
- (ii) Preparation of a power loss reduction program.
- (iii) Preparation of a training handbook for power distribution system planning and loss reduction studies.

4. Summary of Current Project Status, Issues and Actions:

The White Cover report has been reviewed and after incorporating the revisions, the Yellow and Green Cover reports have been discussed. *The draft completion report has been cleared by the Bank's Regional Office and was submitted to EMTES the end of August 1998 for review and waiting for approval for publication of the report.*

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

03/30/99
05/30/99

7. Status of Funding as of 12/31/98:

Funding Source	Total Cost	Donor Funds Received	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D	E=A-D
ESMAP					
<i>of which:</i>					
Trust Funds	324,108	324,108	324,108	324,108	0
Others	0	0	0	0	0
Total	324,108	324,108	324,108	324,108	0

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	COMOROS
Activity Name	SOLAR MARKET DEVELOPMENT
Theme	RENEWABLE ENERGY
Project Code	KM-UE-45205
Origin of Funds	FRANCE
Source of Funds Code	UN006680
Task Manager(s)	ROBERT VAN DER PLAS

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover*	Yellow Cover	Green Cover	ACR (final)
8/95	n.a.	n.a.	n.a.	06/99

* The project started in July 1997 (2 years program). Consultant report.

2. Objectives:

To launch a program to develop the suppressed market for solar electric equipment as an alternative to extension of grid electricity into areas where this is not economically justified.

3. Principal Tasks:

- (i) Develop with the GOC the details of the program.
- (ii) Identifying an equipment supplier to carry out the program.
- (iii) Monitor the program.

4. Summary of Current Project Status, Issues and Actions:

A survey was carried out to explore the barriers in more detail. Continued supervision of the demonstration program is now needed. A status report will be issued before the end of the fiscal year 1999 with a focus on the methodology followed under the project to develop the market for solar electric equipment. To that effect, a supervision mission will be fielded in the first trimester of 1999 to review progress and to gain experience to date.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	168,120	141,367	138,371	29,749
Others	0	0	0	0
Total	168,120	141,367	138,371	29,749

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	EGYPT
Activity Name	RENEWABLE ENERGY STRATEGY & INSTITUTIONAL STRENGTHENING STUDY
Theme	RENEWABLE ENERGY
Project Code	EG-UE-43925
Origin of Funds	ITALY/ITALIAN CTF/ITALIAN CTF
Source of Funds Code	TF023840/TF032678/TF033094
Task Manager(s)	RICHARD SPENCER

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR
12/22/95	n.a.	n.a.	n.a.	04/30/99

2. Objectives:

To develop and initiate the implementation of a strategy for the commercialization and deployment of renewable energy technologies within the Egyptian marketplace.

3. Principal Tasks:

- (i) Analyze existing studies.
- (ii) Undertake resource cost curve analysis for promising technologies.
- (iii) Prepare sample project profiles for promising technologies.
- (iv) Prepare strategic action plans.

4. Summary of Current Project Status, Issues and Actions:

As the quality of the Consultants' report is not satisfactory, a summary will be issued as an activity completion report so that the results can be made available more broadly. Delays have been encountered in producing the summary owing to the assumption of additional duties by the Task Manager. The lack of a summary is not prejudicing New and Renewable Energy Authority's actions in implementing its action plans.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	75,029	69,800	69,800	5,229
Others	38,000	38,000	38,000	0
Total	113,029	107,800	107,800	5,229

8. **Agreements Reached during Review Meeting of:**

The ICR will be completed by the end of April 1999.

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	EGYPT
Activity Name	SOLAR THERMAL POWER OPTIONS
Theme	RENEWABLE ENERGY
Project Code	EG-UE-50683
Origin of Funds	NETHERLANDS
Source of Funds Code	TF022185
Task Manager(s)	RICHARD SPENCER

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR
03/01/97	n.a.	n.a.	n.a.	03/99

2. Objectives:

The overall aim of the activity is to act as a bridge from the current high-level understanding to a more detailed knowledge of the issues and options in deploying a practical ISCCS unit.

3. Principal Tasks:

- (i) Defining and analyzing the issues and options at plant and power system level up to site identification and characterization, and identifying the institutional options for deployment;
- (ii) Defining financial, economic and technical pre-feasibility requirements, including understanding of greenhouse gas mitigation and incremental cost issues and investigating the prospects for future costs of solar thermal units as more are built;
- (iii) Assisting the building of the understanding of the institutional issues and the requirements for private sector participation. The outcome will be presented to government, industry and other stakeholders to assist in identifying the issues relating to the next steps which would be to initiate a project. If co-funding can be identified, a workshop will be held.

4. Summary of Current Project Status, Issues and Actions:

All tasks have been completed. The project has been successful in catalyzing preparatory studies for a Bank/GEF investment project in a solar thermal power plant using private participation. A short draft activity completion report (ACR) was issued in May but further work will be undertaken on the ACR and will be issued by the end of March 1999.

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	50,000	47,703	47,703	2,297
Others	0	0	0	0
Total	50,000	47,703	47,703	2,297

8. Agreements Reached during Review Meeting of:

The draft activity completion report is being reviewed and will be issued by end March.

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	GHANA
Activity Name	CORPORATIZATION OF DISTRIBUTION CONCESSIONS THROUGH CAPITALIZATION
Theme	SECTOR REFORM AND RESTRUCTURING
Project Code	GH-UE-52260
Origin of Funds	FINLAND
Source of Funds Code	TF023385
Task Manager(s)	MANGESH HOSKOTE

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
4/97	12/30/98	01/31/99	2/28/99	5/31/99

2. Objectives:

Assess the feasibility of incorporating employee share ownership as an integrated approach to the capitalization of distribution utilities.

3. Principal Tasks:

- (i) Organize and conduct a workshop on the types of employee ownership arrangements in privatization strategies.
- (ii) Conduct a valuation of a selected distribution utility franchise.
- (iii) Conduct a prefeasibility study of integrating employee share ownership into the capitalization of the selected distribution utility franchise.
- (iv) Organize and conduct a workshop to discuss the prefeasibility study findings and next steps.

4. Summary of Current Project Status, Issues and Actions:

The study was launched in mid-October 1997 when an exploratory mission visited Ghana. A draft report outlining Employee Stock Ownership Plan (ESOP) in privatization *will be prepared by end of November 1998. A workshop will be held sometime in February 1999 to discuss the Green Cover report.*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	140,000	77,073	63,073	76,927
Others	0	0	0	0
Total	140,000	77,073	63,073	76,927

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	CARBON BACKCASTING STUDY
Theme	ENERGY AND THE ENVIRONMENT
Project Code	47963 (ENVGC internal code)
Origin of Funds	NETHERLANDS
Source of Funds Code	TF022183
Task Manager(s)	CHARLES FEINSTEIN (ENVGC)

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
11/1/96	1/21/97	3/11/97	6/15/97	02/28/99

2. Objectives:

The Carbon Backcasting Study has three main objectives: (i) understand how the energy and transport portfolios of the World Bank have been impacted by the incorporation of a shadow value ranging from \$5 to \$40 per ton for carbon emissions; (ii) provide analytic support for the formulation of World Bank climate change policy; (iii) identify greenhouse gas mitigation investment opportunities for the international community.

3. Principal Tasks:

- (i) Prepare an initial Scoping Study, which will develop the analytical methods to be used, and determine the data needs and gaps for estimating carbon emissions in the main study;
- (ii) In Part I of the main study, examine the effect of three different shadow prices of carbon (\$5/tC, \$20/tC, \$40/tC) on rates of return for the Bank's energy loan portfolio;
- (iii) In Part II of the main study, examine the rates of return on alternative investments, or the effect of incremental investments on total project rates of return in order to determine whether the shadow price would make these investments more attractive compared to the selected project. (This analysis will include alternative

- investments considered by the Bank at the time of the loan as well as other alternatives identified by the team conducting the analysis).
- (iv) Prepare a final report that consists of carbon shadow price analysis methods and results, alternative analysis methods and results, and issues and recommendations for the Bank.
 - (v) In a supplemental study, examine the effect of carbon shadow prices on a sample of the Bank's transport loan portfolio, and identify the main issues for incorporating global externalities into economic analysis of loans in the transport sector.

4. Summary of Current Project Status, Issues and Actions:

All tasks are completed. The final report of the energy study was delivered to ENVGC on June 15, 1997. The report was sent to ENV in October 1997 for departmental clearance before publishing as an ENV department paper in the Climate Change series. It was returned with suggestions for revisions. The revisions were completed in March 1998, *the revised report was cleared by ENV and published as an Environment Department Paper in July 1998.* The supplemental study on transport was also completed by end FY98. *The energy study report was edited by a consultant and ENV will review the editorial changes made by the consultant. The report is scheduled to be published as a joint ESMAP/ENV document by the end of February 1999.*

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of: 12/31/98

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-B-C
ESMAP				
<i>of which:</i>				
Trust Funds	100,000	93,021	93,021	6,979
World Bank	0	0	0	0
Others	0	0	0	0
Total	100,000	93,021	93,021	6,979

* Due to exchange rate loss, funds available to commit totals \$229.80.

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	COSTS OF GRID EXTENSION FOR RURAL ELECTRIFICATION
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	1W-UE-53230
Origin of Funds	NETHERLANDS
Source of Funds Code	TF023852
Task Manager(s)	WILLEM FLOOR

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
06/97	06/30/98	n.a.	n.a.	03/31/99

Workshop planned for January 1999.

2. Objectives:

- (a) Determine what gives rise to the high costs commonly associated with grid extension for rural electrification.
- (b) Review whether these high costs are intrinsic to grid extension and, if not, what lessons can be learned from experiences around the world to reduce the capital as well as recurring costs?
- (c) Assess how low can these costs be under different circumstances.

3. Principal Tasks:

- (i) Describe for each selected country typical line construction—including voltage, line configuration, pole height—and its rationale.
- (ii) Provide a cost breakdown per structure and also per kilometer, with costs further broken down into materials and labor.
- (iii) Determine costs (materials and labor) and characteristics of additional components, including such items as transformers, guys, capacitor banks, grounding, arrestors, and fused cutouts.

- (iv) Based on a comparative analysis, to assess the adequacy of the design and the basis for the costs incurred, one or more low-cost designs for grid extension to serve the same "standard" rural scenario will be "extracted" and/or low-costs designs for specific components will be proposed, depending on the findings of this analysis.

4. Summary of Current Project Status, Issues and Actions:

The study has been finalized after incorporation of comments from various Bank staff with experience in distribution projects. A workshop will be held in the Bank in January 1999 where the final report will be presented to both a Bank and non-Bank audience. The final report (which will be translated into Spanish and/or French, depending on the cost) will be distributed to relevant energy specialists to ensure that those involved in future distribution projects will be aware of the alternative low-cost technology.

5. **Site Visit Dates:** Last Next

6. **Project Completion Date** (all project activities completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	85,000	58,900	35,340	49,660
Others	0	0	0	0
Total	85,000	58,900	35,340	49,660

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	ELECTRICITY BENEFITS ASSESSMENT
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	1W-UE-44279
Origin of Funds	NETHERLANDS
Source of Funds Code	TF023851
Task Manager(s)	DOUGLAS BARNES

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover (final)
04/15/96	08/01/99	n.a.	10/01/99	01/31/00

2. Objectives:

This study was developed in response to an evaluation of rural electrification in Asia, completed by the Operations Evaluation Department. One of the conclusions of the study was that the methods used to estimate the benefits of rural electrification by the Bank may be conservative and may not reflect the actual benefits of projects. The report recommended that it would be appropriate to develop better measures for determining the economic benefits of rural electrification. This study was developed to:

- (a) Prepare a practical method for assessing the benefits of rural electrification, going beyond current methods which are very dependent on tariffs.
- (b) Implement the beneficiary assessment methodology in a selected country order to determine how practical it is to apply to other Bank rural electrification projects.

The project will help power distribution companies to more accurately measure the benefits of their service, and perhaps reinforce customer service as a significant but often overlooked goal of power development in developing countries. The work will complement two other study that were completed in Malawi and Bolivia, using other methods.

3. Principal Tasks:

- (i) Review Benefit Assessment Methodology.
- (ii) Develop methods to capture "hard to measure" benefits.
- (iii) Conduct a case study in Philippines.
- (iv) Prepare report on Benefits Assessment case studies.
- (v) Prepare guidelines on how to utilize new methodology.

4. Summary of Current Project Status, Issues and Actions:

A background paper on methods for evaluating the benefits of rural electrification is completed. The Philippines was identified as the country in which the study will be conducted. The survey team from Ateneo de Manila University made a visit to Washington in November 1996 to participate in questionnaire design, sample design and analysis plan. *The survey fieldwork was somewhat delayed, but it has now been completed by Ateneo de Manila University in the Philippines, and the team is now processing the data. The survey results will be analyzed starting in January 1999.*

5. Site Visit Dates: Last Next

6. Project Completion Date (all project activities are expected to be completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	237,000	188,653	142,025	94,975
Others	0	0	0	0
Total	237,000	188,653	142,025	94,975

ESMAP Project Summary Form
(as of December 31, 1998)

Country	GLOBAL
Activity Name	ENERGY & ENVIRONMENT STEERING COMMITTEE
Theme	ENERGY AND ENVIRONMENT
Project Code	1W-UE-45338
Origin of Funds	SWEDEN/CORE
Source of Funds Code	UN007055/TF023835
Task Manager(s)	MASAKI TAKAHASHI

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover (final)
04/96	n.a.	n.a.	n.a.	n.a.

The Energy and Environment Steering Committee co-sponsoring the Biomass Gasification Expert Workshop by providing the Risk Analysis/Mitigation Model (PowerSim Model). The model will be finalized after the workshop and it will be the product of the ESMAP.

EPRI and the World Bank (ESMAP) will be developing the joint web site featuring energy-environment technology update for the demonstration at the Energy Week 1999.

2. Objectives:

- (a) To obtain views on the main carriers for the dissemination of environmentally benign technologies in developing countries;
- (b) To determine the most effective way for accelerating the dissemination of such technologies in developing countries;
- (c) To establish a network that will facilitate the exchange of information and will facilitate cooperation for the above objectives.

3. Principal Tasks:

- (i) *Developing a model to evaluate new technologies which are environmental friendly but still in the development stage and at high cost and high risk. The model would be able to estimate the cost at the matured stage of the technology as well as analyzing associated risks and recommending mitigation measures at current stage of the development.*
- (ii) *The Committee will comments on the implementation and operationalizing plan of the "Fuel for Thought" paper once approved by the Board in early 1999.*
- (iii) *Develop "Energy Insights": a joint World Bank-EPRI web site that provides up-to-date information on energy and environment-related technologies as they apply to developing countries.*

4. Summary of Current Project Status, Issues and Actions:

- (i) The committee is currently chaired by Richard Baltzhaizer, former Electric Power Research Institute (EPRI) president.
- (ii) A technology assessment workshop on Biomass Gasification Combined Cycle Power Plant is planned for *March 1999* (delayed due to the of the Brazil Biomass project delay) in connection with the preparation of the Brazil Biomass Gasification Project. Experts from international organizations and specialized institutions will be invited to participate to assess the prospects of cost reductions through learning curve effects. The workshops will be sponsored jointly with GEF. *A model of analyzing technical risks and uncertainties and estimate cost after replication of building plants have been developed by PowerSim. The draft model will be circulated to the committee member for comments and discussed at the expert workshop.*
- (iii) *Energy and Environment Strategy Paper "Fuel for Thought" will be circulated to the committee member for their comments after the Bank's board approval. The Steering committee is scheduled to be held early 1999 to discuss how to implement and operationalize the strategy.*
- (iv) *The World Bank and EPRI is working together to develop state-of-the-art power technology reference: "Energy Insights". The joint web site featuring energy and environment technologies will be prepared for the demonstration at the Energy Week 1999 organized by the World Bank.*

5. Site Visit Dates:

Last

Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):

*

Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

*

*This is a continuing activity of steering committee and no definite completion nor closing date set.

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
of which:				
Trust Funds	138,050	96,236	86,236	51,814
Others	0	0	0	0
Total	138,050	96,236	86,236	51,814



ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	1997 ENERGY EFFICIENCY ROUNDTABLE
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	1W-UE-50019
Origin of Funds	NETHERLANDS/CORE
Source of Funds Code	TF022185/UN007780
Task Manager(s)	SALVADOR RIVERA/ ANKE MEYER

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover (final)**
2/20/97	04/24/97	n.a.	n.a.	09/98

* Date of the Roundtable; ** Issuance of the Roundtable Proceedings.

2. Objectives:

- (a) Prepare and present the Energy Efficiency Roundtable: Institutional and Financial Delivery Mechanisms to be held in Washington, April 24-25, 1997.
- (b) Participants to include representatives from developing countries, energy efficiency professionals, and the financial sector.

3. Principal Tasks:

- (a) Prepare and present Roundtable.
- (b) Cover costs of speakers from developing countries.
- (c) Prepare and issue a summary of proceedings of the Roundtable.

4. Summary of Current Project Status, Issues and Actions:

The summary of the proceedings was posted on the IENPD web page in February 1998. *The report was published in September 1998. The project is now completed.*

5. **Site Visit Dates:** Last Next

6. **Project Completion Date** (all project activities are expected to be completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

09/98
10/98

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	85,127	85,127	85,127	0
Others	0	0	0	0
Total	85,127	85,127	85,127	0



PROJECT IMPLEMENTATION FORM

Region: GLB	Country: GLOBAL
Project Title:	ENERGY SECTOR REFORM
Theme:	REFORM
Project No. (Product ID Code)::	1W-UE-58005
Origin of Funds:	CORE
Source of Funds Code:	TF020213
Project Manager:	ROBERT BACON
Organizational Unit:	EMTOG

1. Development Objective	
Development Objective	Key Indicator
To improve strategy for efficient targeting of reform possibilities.	Identification of circumstances that are propitious for adoption of reform strategy.

2. Expected Outputs	
Outputs	Key Indicator
Scoresheet of status of energy sector reform on a global basis. Case studies of reform.	Completion of reform questionnaire.

3. Implementation Progress: <i>(State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)</i>		
Component	Start	End
Scoresheet Case Studies		Oct. 1998 Sep. 1998

4. Expected Dates for: <i>(State the reasons for any revision in Item 5 below)</i>	Original	Revised
Project Completion <i>(all project activities completed):</i>	Sep. 1998	Apr. 1999
Project Closing <i>(all financial transactions executed):</i>		Jul. 1999

5. Summary of Current Project Status, Issues and Actions: *(please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)*

Data on six steps of reform in the power, upstream oil and gas, downstream oil, and downstream gas have been collected for 115 developing countries. A scoresheet of the level of reform by sector and aggregated over all sectors has been constructed from the results of the questionnaires. A series of overall reform scores have been calculated. The data has been presented and analyzed in the paper "A Scoresheet for the Extent of Global Energy Sector Reform". This paper is completed (apart from one or two missing observations which are still being pursued) and is ready for dissemination within the Bank for comment.

Four detailed case studies of the process of reform and factors facilitating or retarding the adoption of energy sector reform have been completed (Ghana, Peru, Côte d'Ivoire and Ecuador). Preliminary general lessons were drawn from these cases and implications for Bank strategy towards achieving sector reform have been suggested. A full draft of this work: "Case Studies of Factors Leading to Energy Sector Reform" has been completed.

The presentation "A Scoresheet on Energy Sector Reform" is planned for November 23, 1998.

6. Site Visit Dates: Last n.a. Next n.a.

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	150,000	101,243	94,051	55,949
World Bank	0	0	0	0
Others	0	0	0	0
Total	150,000	101,243	94,051	55,949

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	ENERGY, TRANSPORT, ENVIRONMENT STUDY
Theme	ENERGY AND THE ENVIRONMENT
Project Code	1W-UE-44208
Origin of Funds	NETHERLANDS
Source of Funds Code	TF022185
Task Manager(s)	RICHARD SPENCER

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover (final)
2/15/96	04/15/97	n.a.	n.a.	03/30/99

2. Objectives:

- (a) Review the current state of knowledge concerning a variety of interrelated issues such as transportation demand, urban and transportation development, traffic management, the effectiveness of emissions standards, vehicle and fuel taxes, etc. and pollution reductions.
- (b) Identify measures which could be undertaken within the energy sector and/or in combination with other sectors or policy areas to reduce the environmental impact of transport.

3. Principal Tasks:

- (i) An individual consultant will be hired to review the literature and discuss relevant topics with Bank staff and other concerned groups as needed.
- (ii) Present a summary of the findings at the Annual Energy Donors Conference in May 1996.

4. Summary of Current Project Status, Issues and Actions:

The final report has been received and is undergoing final clearances for publication. The report will be issued by end of March 1999.

5. **Site Visit Dates:** Last Next

6. **Project Completion Date** (all project activities completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	28,000	25,643	25,643	2,357
Others	0	0	0	0
Total	28,000	25,643	25,643	2,357

8. Agreements Reached during Review Meeting of:

The draft Blue Cover Report is being reviewed and prepared for publication by end of March 1999.

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	ENVIRONMENTAL MANUAL FOR POWER DEVELOPMENT
Theme	ENERGY AND THE ENVIRONMENT
Project Code	1W-UE-49548
Origin of Funds	NETHERLANDS
Source of Funds Code	TF020061
Task Manager(s)	MASAKI TAKAHASHI/STRATOS TAVOULAREAS

1. Report Preparation Stages:

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Completion Report (final)
n.a.	n.a.	n.a.	n.a.	<i>03/30/99</i>

* Report Preparation Stages is not applicable. Project has components with individual timings.

2. Objectives:

Provide computer based analytical tools (EM model) and reference material information (EMPower Info) for the design and environmental assessment of power projects. The development phase of the project has been completed with the release of version 1.0 of the EM model and the installation of EMPower Info on the internet. The objectives and tasks of the current phase relate to dissemination, application, and training in the use of the tools.

3. Principal Tasks:

- (i) Release of Version 1.0 of EM model and EMPower Info software
- (ii) EM Promotion
- (iii) Dissemination and Application. Dissemination of the EM Model and EMPower Info
- (iv) Development of EM Users Network
- (v) Maintenance
- (vi) Software Enhancements

The various tasks were supported by the following agencies which worked together in a collaborative way:

- *Gesellschaft fuer Technische Zusammenarbeit (GTZ), Germany; developed the EM model, technical support of EM users, EM model dissemination workshops, supported case studies and development of EM databases*
- *Directorate General for International Cooperation (DGIS), Netherlands; provided funding for a variety of activities in all above tasks. The DGIS program was managed by ESMAP and is the primary focus of this document.*
- *Department for International Development (DFID), United Kingdom; supported the development of manual for assessing the environmental impacts of hydroelectric project, as well as numerous cases studies in which the EM model was used.*
- *Bundesamt fuer Aussenwirtschaft (BAWI), Switzerland; supported the development of guidance material for assessing the environmental impacts of electricity transmission and distribution project.*

4. Summary of Current Project Status, Issues and Actions:

- (i) *Task 1. Release of Version 1.0 of software.* Completed. Approximately 900 copies of the EM model have been distributed through floppy disks, email and downloading from the World Wide Web. Furthermore, the EM model and the EMPower Info are available through the internet at the world wide web locations.
EM model: <http://www.usf.uni-kassel.de/service/em/emhome.htm>; also, through a "mirror site" at the World Bank: <http://www.worldbank.org/html/fpd/em/model/emhome.htm>
EMPower Info: <http://www.worldbank.org/html/fpd/em/>
- (ii) *Task 2. EM Promotion.* The EM model and EMPower Info were demonstrated
 - Through an information kiosk in the World Bank/IMF Annual Meetings in Washington October 1995.
 - At the International Symposium on Energy, Health and the Environment (Vienna, October 1995).
 - At a seminar for World Bank staff (December 1995) on tools for environmental assessment of power projects.
 - A presentation was given to representatives of 18 countries was given to a USAID sponsored course on Air Pollution Control Technologies (Roanoke Virginia, USA).
 - Promotion within the World Bank; the EM model was used in the GreenHouse Gas Assessment Handbook developed by the World Bank (ENVGC).
 - Participation at the EU-funded Conference on Sustainable Energy Development in Southern Africa, June 4-6, 1997 to identify potential applications of the EM model in the Southern African region.
 - Workshop and training program in Beijing, China on August 11-15, 1997.
- (iii) *Task 3. Dissemination and Application* are being accomplished primarily through workshops and case studies and in response to queries by potential users.

- Regional workshop in Manila (with GTZ funding in parallel) completed in October 1995.
 - Case studies have been completed in Philippines, Morocco and Fiji with GTZ funding.
 - Sectoral environmental assessment of the Philippines completed; report will be released as an ESMAP report; it has been reviewed by the World Bank and the National Power Corporation of the Philippines, and is in the final stage of production.
 - Case study on the cost-effectiveness of alternative power generation and environmental control technologies in Shanghai, China in collaboration with World Bank Operations and the Beijing Economic Research Institute (BERI). A similar study (Assessment of Cost-Effectiveness of Environmental Control Options) has been completed for the Henan Province; the final report is expected by *November 30, 1998*. The results were presented at the International Symposium on Clean Coal Technology, November 18-20, 1997, Xiamen, Fujian, P.R.China *and on April 29, 1998* in the Clean Coal Conference, Reno, Nevada and on October 7, *1998 and in the APEC Clean Fuel Energy Technical Seminar in Okinawa, Japan*; key findings of the study were also included in World Bank's report on "China's Environment in the 21st Century/Clear Water-Blue Skies" which was released in the Annual Meeting in Hong Kong, Sept 1997.
 - Training provided for consultants to use the EM model to assess the environmental impacts of heating alternatives in Eastern Europe as part of six Case Studies as part of the ESMAP project District Heating in East and Central Europe. The EM has been used to carry out the study. A workshop was held in July 1996 to review results.
 - The EM has been used in Viet Nam connection with the technical assistance project (ADB funded) being carried out by ERM Consultants. The additional cost associated with the application of the EM is being funded by ODA.
 - Indian consultants working on the World Bank/ODA-funded study of Environmental Issues in the Power Sector were trained on the EM model.
 - A case study was initiated in India to assess the cost-effectiveness of greenhouse gas options; final report is expected by the *end of November, 1998*.
- (iv) *Task 4. EM Users Network.* The Internet will be used to link EM users, project participants and key organizations working on energy and environment issues. Also, included are the establishment of regional centers to disseminate the EM model and EMPower Info, and provide user support on an ongoing basis. Appropriate centers to be identified in conjunction with regional workshops. The EM Network was updated with EM model users and energy-environment sites. Also, the EMPower Info has been updated and the web site design has been improved.
- (v) *Task 5. Maintenance.* This task includes minor improvements of the EM model and EMPower Info as suggested by the users (especially improvements which are essential for the completion of the case studies or for the enhancement of their usability and attractiveness). ESMAP and Oeko Institut are providing support to users on as needed basis, as well as direct support of on-going case studies.
- (vi) *Task 6. Software Enhancements.* This task includes enhancements of the software such as:
- expansion of material on qualitative impacts for hydroelectric plants in both the EMPower and EM model (with parallel funding from ODA).
 - addition of material on sectoral environmental assessments, EA models and environmental standards.

- enhancement of EM model to handle district heating environmental assessment depending on experience with case studies.
- material on renewable technologies as they relate to developing countries has been collected and will be added to the EMPower Info in the Web. Also, data on renewable technologies will be added to the EM model.

(vii) The data on renewable technologies were identified and organized by a Dutch Consultant. In July 1998, they were provided to Oeko Institut to be included in the EM mode. The report will be completed by the end of December 1998 and the project will be closed then. The project is delayed for a month due to the involvement of the task manager in other activities (e.g. Turkey proposal and a China report).

5. **Site Visit Dates:** Last Next

No further mission required.

6. **Project Completion Date** (all project activities completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
of which:				
Trust Funds	455,700	440,191	397,483	58,217
Others	0	0	0	0
Total	455,700	440,191	397,483	58,217



PROJECT IMPLEMENTATION FORM

Region: GLB	Country: GLOBAL
Project Title:	FINANCING OF DECENTRALIZED RURAL ELECTRIFICATION
Theme:	RURAL AND HOUSEHOLD ENERGY
Project No. (Product ID Code)::	1W-UE-61189
Origin of Funds:	NETHERLANDS
Source of Funds Code:	TF022185
Project Manager:	WILLEM FLOOR
Organizational Unit:	EMTEG

1. Development Objective		
Development Objective	Key Indicator	
[1] Design in one or more countries (e.g. Cameroon; Senegal; Nicaragua) a model DRE financing mechanism that can be managed by an autonomous organization to provide credit to private operators.	[1] A proposal to design an autonomous model DRE financing mechanism operational in one or more countries.	
2. Expected Outputs		
Outputs	Key Indicator	
[1] Comprehensive review of financial mechanisms used to develop DRE and other rural development activities	[1] Best practice desk-study on innovative experience of financing rural activities	
[2] Design of an international technical workshop to agree and disseminate the best practice strategy	[2] Publication of best practice paper	
3. Implementation Progress: (State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)		
Component	Start	End
<ul style="list-style-type: none"> • Review • Proposal produced 	01/15/99	04/30/99

4. Expected Dates for: (State the reasons for any revision in Item 5 below)	Original	Revised
Project Completion (all project activities completed):	04/30/99	
Project Closing (all financial transactions executed):	06/30/99	

5. Summary of Current Project Status, Issues and Actions: *(please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)*

The project is planned to start in January 1999.

6. Site Visit Dates: Last Next

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	15,000	0	0	15,000
World Bank	0	0	0	0
Others	0	0	0	0
Total	15,000	0	0	15,000

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	GAS FLARING REDUCTION
Theme	ENERGY AND THE ENVIRONMENT
Project Code	1W-UE-49075
Origin of Funds	THE NETHERLANDS
Source of Funds Code	TF022185
Task Manager(s)	ARINZE AGBIM

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
10/96	12/98	2/99	3/99	6/99

2. Objectives:

The objective of this desk study is to have an overview of worldwide gas flaring and venting practices, to examine the economic, environmental, and other consequences of flaring and venting large volumes of associated gas in oil fields, and to propose general mitigation measures. Such measures could assist developing countries in minimizing the waste of this natural resource in their oil fields.

3. Principal Tasks:

1. Review of gas flare provisions in a variety of countries. The aim is to determine which provisions have been effective in reducing gas flaring and how these can be applied to countries where adequate provisions do not exist.
2. Selection of focus countries for case studies:
 - (a) Countries which have achieved a good measure of gas flaring reduction through regulatory measures, incentives, etc.
 - (b) Countries where much is yet to be done.

3. Case studies for selected countries, and application of best lessons learned to specific countries.
4. Institutional strengthening and capacity building to address implementation issues.

4. Summary of Current Project Status, Issues and Actions:

- (a) *The first task above has been completed with a detailed literature survey of what obtains in several countries regarding gas flaring.*
- (b) *A detailed report that addresses three main issues: (i) the extent of gas flaring and venting worldwide, (ii) the alternative uses of flared and vented gas and, (iii) the regulation of gas flaring and venting has been prepared by Petroconsultants. Six countries: Azerbaijan, Indonesia, Iran, Nigeria, Norway, and Venezuela were selected and used to illustrate the major points made in the study.*
- (c) *This report is now being reviewed and the current plan is to work towards a blue cover ESMAP report using the material in this report together with other data and information that have been gathered on this theme over the period of this study. Target is to have this completed to green cover level by the end of the first Quarter of 1999, and to have a final report issued by May 1999.*

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of: 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	75,000	68,385	38,385	36,615
World Bank	0	0	0	0
Others	0	0	0	0
Total	75,000	68,385	38,385	36,615

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	INCREASING EFFICIENCY OF GAS DISTRIBUTION NETWORKS
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	1WLDUN133 - 1W-UE-36741
Origin of Funds	CORE, FRANCE CTF, WORLD BANK
Source of Funds Code	TF023705, TF023706, TF033537, BB
Task Manager(s)	PHILLIP MURRAY

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR
11/30/95, revised in 4/96.	6/98	n.a.	n.a.	3/99

Note: A Blue Cover report will not be produced. A completion report has been completed for Phase one as outlined in 4 (a) below, and it is presently being reviewed by ESMAP staff for publication in February. If the final report for the total project is to be completed as initially envisioned a new project will need to be initiated and additional funding provided to complete 4 (b) which will require further research and analysis.

2. Objectives:

- (a) To analyze the economic conditions under which urban natural gas networks can be soundly constructed, operated, and expanded;
- (b) To assess and recommend technical and institutional measures that should be undertaken to keep the construction and operation of gas networks cost-effective;
- (c) To address a certain number of closely related issues, such as pricing, taxation, regulation, environmental benefits, and social considerations; and
- (d) To assess the economic and institutional conditions under which private investors are likely to be interested in for developing new gas distribution systems or acquiring existing systems from the public sector.

3. Principal Tasks:

For each of the countries involved in the project, the study will:

- (a) Assess the cost of constructing and operating gas distribution networks, based on actual projects. Several projects where natural gas networks either already operate or are being constructed will be analyzed; and break down the distribution (construction and operation) cost into its various components, in order to estimate the part of the cost related to:
 - 1. the number of customers,
 - 2. the length of the network, and
 - 3. the gas quantities sold;
- (b) Establish distribution cost patterns and analyze the relationship between costs and certain basic parameters, such as: urban density, types of buildings, number and types of gas uses, and specific consumption per household;
- (c) Analyze the economics of natural gas distribution compared to alternative fuels, including, LPG, liquid fuels, coal and electricity where relevant;
- (d) Examine the possibility of applying new methods and technologies to improve the economics of urban gas distribution, including additional gas utilization (e.g., gas-based air-conditioning, space heating), implementation of cost-effective technologies, transfer of customer-related services to the private;
- (e) Examine regulatory, pricing and social policies and other matters related to improving economics. Particular attention will be paid to those conditions under which private investors are developing local utilities (e.g., Argentina).

4. Summary of Current Project Status, Issues and Actions:

- (a) As discussed in the September 30, 1998 summary report, sufficient funding to complete all phases of the study was not obtained, and therefore the number of case studies and work commitments were reduced. If the remaining work initially proposed is to be completed a new project will have to be initiated and additional work outlined in 4 (b) below must be undertaken.
- (b) *A new project will need to be initiated and further research, analysis and discussion needs to be done to complete the total amount of work outlined in the objectives and principal tasks; once completed a final report in Blue Cover can be completed. This may require one or more additional missions to Columbia or other "warm weather countries" to consider the efficacy of extending distribution systems in developing countries to residential customers where heating is not a primary end use, and further discussions and research on the cost effectiveness of non-heating residential network*

extensions in other countries will need to be undertaken. Funding for additional work outlined in this section will need to be arranged.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **7. Status of Funding as of 12/31/98:**

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	124,152	123,948	123,948	204
World Bank	300	300	300	0
Others	30,000	30,000	30,000	0
Total	154,452	154,248	154,248	204

8. **8. Agreements Reached during Review Meeting:**

ESMAP staff will complete the review of the Phase One report for publication, and determine if initiating a new project to complete the original objectives for the project is warranted. If the response from ESMAP is positive EMTOG will develop a new proposal for future ESMAP submission.

ESMAP Project Summary Form

(as of December 31,1998)

Region/Country	GLOBAL
Activity Name	LIGHTING SERVICES FOR THE RURAL POOR
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	1W-UE-44763
Origin of Funds	NETHERLANDS/BELGIUM
Source of Funds Code	TF023851/TF023893
Task Manager(s)	ROBERT VAN DER PLAS

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
02/01/96	05/30/97*	n.a.	n.a.	03/31/99

*First phase.

2. Objectives:

Develop and field test prototype equipment to satisfy lighting needs of the rural poor.

3. Principal Tasks:

- (i) International tender among manufacturers to obtain prototype equipment
- (ii) contract a local NGO to coordinate field work
- (iii) order equipment
- (iv) field test equipment
- (v) carry out a survey among users

4. Summary of Current Project Status, Issues and Actions:

An article on the results of the first Phase was published in the “Journal of Energy for Southern Africa”, as well as in the “Liaison Energie – Francophonie”, incorporating the results from Niger where similar work was carried out under a different project. The

second phase has started in June 1997, with further marketing tests of more lighting kits (using recuperated money from sales of kits during first phase), and development of modified equipment based on user feedback. Test marketing started early October 1997, and the market for this type of equipment is developing very rapidly to the point that the local manufacturer started commercial production without further assistance. *Surveys are being conducted to monitor the field performance of the equipment, as well as its commercial development. An issues paper was issued in November 1998 to generate more knowledge about this in the Bank. An Activity Completion Report was submitted to the ESMAP Manager in the middle of December 1998 for review and approval for publication. A follow-up project will be carried out under ESMAP, co-financed with an NGO, to further explore the market for recommended equipment under this Lighting Services for the Rural Poor project.*

5. Site Visit Dates: Last Next

6. **Project Completion Date** (all project activities are expected to be completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	120,100	126,884	126,884	-6,784
Others	0	0	0	0
Total	120,100	126,884	126,884	-6,784



PROJECT IMPLEMENTATION FORM

Region: GLB	Country: GLOBAL	
Project Title:	OIL AND GAS INVESTMENT PROMOTION PROJECT (Old Name: Global Petroleum Project Promotion)	
Theme:	Energy and the Environment / Sector Reform	
Project No. (Product ID Code):	TAS/1W-UE-57415	
Origin of Funds:	Core	
Source of Funds Code:	TF020144	
Project Manager:	Thomas E. O'Connor	Organizational Unit: EMTOG

1. Development Objective	
Development Objective	Key Indicator
Produce the design of a program to assist the Bank and its client countries in the identification and effective promotion of oil and gas development opportunities on the best obtainable terms	Expressed interest from countries in obtaining assistance from the Bank or private sector in developing Petroleum Investment Promotion Projects/Programs

2. Expected Outputs	
Outputs	Key Indicator
1. Inventory of discovered but undeveloped petroleum resources 2. Analysis of the causes of present situation 3. Promotion program designed, priority list of projects established	1. A database is designed, established and operational 2. Draft analysis is produced and distributed to key players 3. Final Report including promotion Program design and Priority list prepared

3. Implementation Progress: *(State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)*

Component	Start	End
Data collection & analysis	July 1998	Mar. 1999
Dissemination during Bank's Energy Week, (was O&G Forum, Dec. 1998)	Mar. 1999	Mar. 1999
Promotion Program (Final Project Report), was February 1999	Apr. 1999	Apr. 1999
4. Expected Dates for: <i>(State the reasons for any revision in Item 5 below)</i>	Original	Revised
Project Completion <i>(all project activities completed):</i>	Apr. 1999	
Project Closing <i>(all financial transactions executed):</i>	Jul. 1999	

5. Summary of Current Project Status, Issues and Actions: *(please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)*

A consultant with demonstrated experience in promotion project design has been hired. Contacts to suitable service companies is established to assist in creating an inventory of petroleum (crude oil, condensate and natural gas) resources of potentially commercial significance which has been discovered but not developed to date.

A large (over 5000 entries) "Discovery Opportunities 1996" dataset (in digital format) was acquired from the international consulting firm Petroconsultants S.A. together with an update (July 1998) of all the non-economic data on the Bank/IDA borrower countries extracted from Petroconsultants' Iris21 database. The two databases were made comparable and combined into an MS-access database containing 6155 unique datasets on undeveloped petroleum discoveries. Filters were designed to reduce the database size eliminating inappropriate countries (see below) and those fields which were beneath the viability threshold or which were unfeasible for other reasons were eliminated from the list. The initial analysis of the database using various parameters intended to highlight the most attractive opportunities, an iterative process based on publication of the various filters resulted in a much-reduced list long list (159 entries), Key indicator 1.

Some countries are so large and contain so many discoveries that they would absorb all the resources of our project, and furthermore represent a policy environment which is not likely to favor such small-scale initiatives: Russia, China, and India. Other countries have a well-developed industry, a high level of private sector activity, and enterprising and outward-looking national oil company or other sectoral organization e.g.: Kazakhstan, Egypt, Algeria, Angola, Indonesia, Brazil, Venezuela; to a lesser degree, Colombia, Argentina, Iran, Turkmenistan and Uzbekistan. In at least one country, current policy forbids private sector participation in exploration and production (Mexico). The discoveries in those countries were eliminated from the database but retained as an Attachment for reference and eventual dissemination to the governments concerned for information.

The next step in implementation of this project will involve the substantive analysis of the reduced long list of opportunities using data and factors exogenous but complementary to the original database. Input will be gathered from the consulting firm which provided the original databases as well as from World Bank staff with experience in the countries concerned, and this will then be cross-checked, jointly with Petroconsultants representatives and with geological industry experts from the UK-based geological consulting firm Robertson Research International. This process is expected to reduce the long list of entries (159) to an eventual short list of discoveries which are technically sound, fit the Bank economic sectarian criteria and with governments who are willing to work toward economic development of these discoveries.

The date for disseminating the project results has changed to occur at the Bank's Energy Week in March 1999 (and not at the Energy Forum December 1998), this is partly due to the presence of a more suitable audience at the Energy Week than at the Energy Forum but also due to a delay of the project completion time. The delay of the project is partly caused by a delay in being able to process and manage the large data bought from Petroconsultants and the difficulties in obtaining sufficient/adequate information about the discoveries in order to make the analysis as to why discoveries were not developed.

6. Site Visit Dates:

Last n.a.

Next n.a.

7. Status of Funding as of 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D-A-C
ESMAP				
<i>of which:</i>				
Trust Funds	150,000	80,553	54,934	95,066
World Bank				0
Others				0
Total	150,000	80,553	54,934	95,066

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	OIL SPILLS OCCURRENCE DATABASE, MODELING, REMEDIATION AND PREVENTION
Theme	ENERGY AND THE ENVIRONMENT
Project Code	1W-UE-49639
Origin of Funds	NETHERLANDS, NORWAY CTF, WORLD BANK
Source of Funds Code	TF022185, TF035878, BB
Task Manager(s)	ARINZE AGBIM

1. Report Preparation Stages: Phase 1

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
11/97	11/98	12/98	1/99	3/99 Phase I; 12/99 Phase II

2. Objectives:

This study was divided into two parts: Phase I and Phase II. The objectives of Phase I have been defined as follows:

Phase I Objectives:

- (a) To study historical oil pipeline spills and clean up costs in Russia and the Former Soviet Union, FSU.

The study will focus only on oil and product trunklines and gathering flow lines. Minor pipelines associated with oil fields, refineries and storage tanks will be excluded from the analysis in Phase I.

The provisional objectives of the second phase have also been defined but would be refined at the conclusion of the first phase of the study. The refined objectives would depend in part on the findings of the first phase.

Phase II Objectives (provisional):

- (b) To establish procedures and suggest technical facilities, regulations, and institutional structures to minimize spill probability and impact severity, and to recommend measures that would provide rapid-response equipment and trained teams for future spills, especially in areas of particularly high risk.
- (c) To promote the development of incentive systems to encourage the oil industry to minimize environmental degradation arising from pipeline oil spills.

3. Principal Tasks:

PHASE 1

- (a) Data search for oil pipeline spills.
- (b) Data analysis and risk assessment.

PHASE 2

- (a) Develop plans for regional rapid-response remedial facilities and economic evaluation.
- (b) Develop recommendations for strengthening the regulatory and monitoring systems.

4. Summary of Current Project Status, Issues and Actions:

The preliminary work for Phase 1, whose thrust is the general collection and analysis of pipeline, oil spill, and related data (so as to establish the nature and extent of the problem in the FSU), was completed with the delivery of a report by the Norwegian consultants, DNV. This report has been reviewed internally and found to be wanting in many respects. DNV did not address several items in the Terms of Reference satisfactorily. Current effort is centered on making factual and text improvements on the submitted report. Thereafter, an ESMAP report will be produced from the first phase findings. The report preparation stages and targets given in section 1 above, refer to the first phase of this two-phase study. The tasks under the second phase will be fully defined by March 1999.

5. Site Visit Dates: Last Next

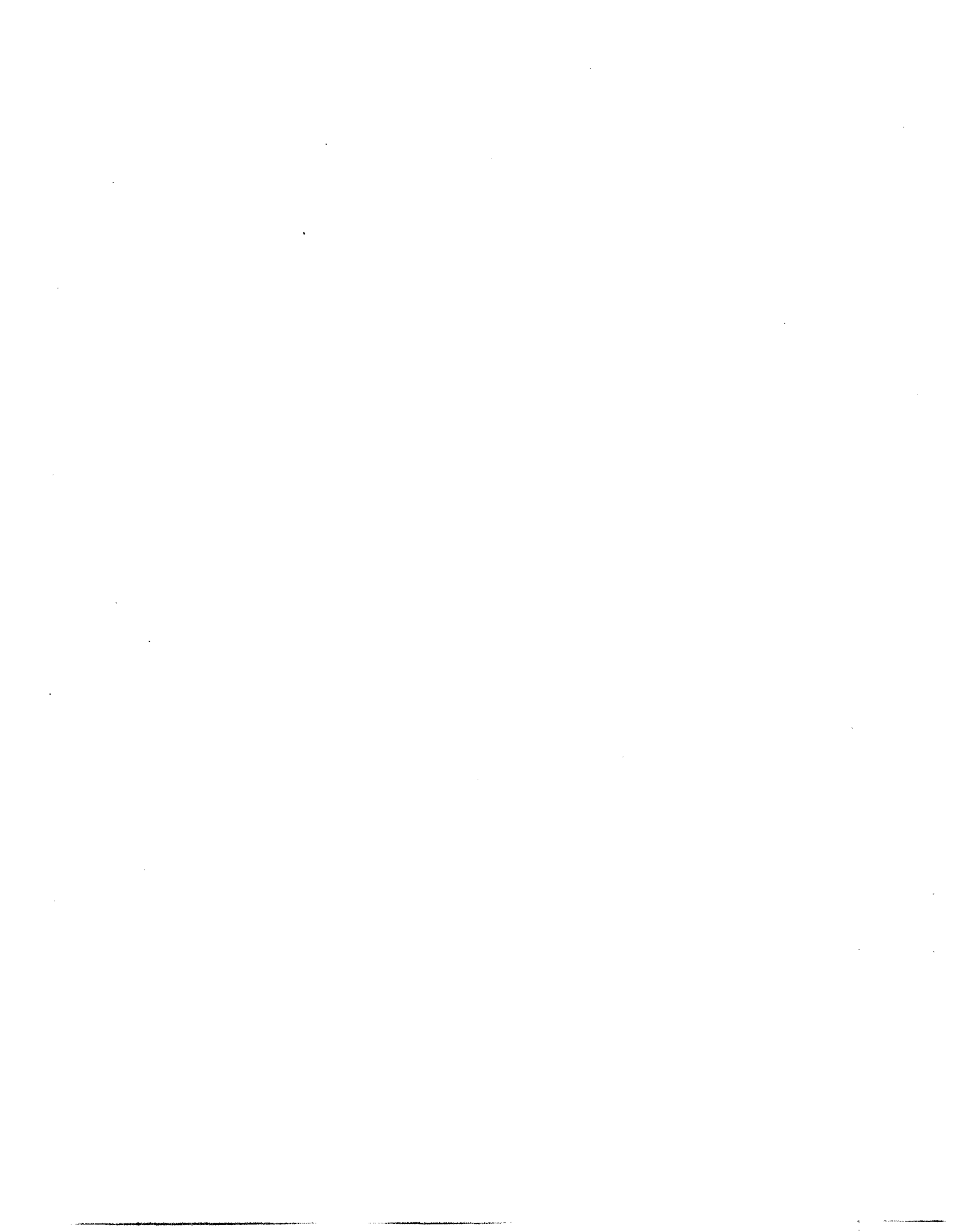
6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of: 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=AC
ESMAP				
<i>of which:</i>				
Trust Funds	50,000	21,559	21,559	28,441
World Bank	4,000	0	0	4,000
Others	367,300	100,000	60,000	307,300
Total	421,300	121,559	81,559	339,741

8. Agreements Reached during Review Meeting:

Approved summary in para. 4 was agreed upon with the Task Manager.





PROJECT IMPLEMENTATION FORM

Region: GLB	Country: GLOBAL
Project Title:	OVERLAY - GREENHOUSE GAS EMISSIONS IN THE INDIA POWER SECTOR
Theme:	ENERGY & ENVIRONMENT
Project No. (Product ID Code)::	1W-UE-57005
Origin of Funds:	DENMARK/NETHERLANDS
Source of Funds Code:	TF020104/TF020061
Project Manager:	ROBIN BATES
Organizational Unit:	EMTEG

1. Development Objective	
Development Objective	Key Indicator
<p>The study of Greenhouse Gas (GHG) emissions in the India power sector will be formulated as a Global Overlay for the states of Andhra Pradesh and Bihar. It will focus on how alternative policy options, including the restructuring of the power and coal sectors, will affect Greenhouse Gas (GHG) emissions, and thereby the global climate.</p>	<p>The GHG study will provide information to Indian policy makers in approaching climate change issues. The main audience of this activity would, therefore, be Indian policy-makers who are likely to represent India in the post Kyoto debate over global warming; and the World Bank and international donors interested in helping India formulate and implement policies involving GHG emissions.</p>

2. Expected Outputs	
Outputs	Key Indicator
Global Overlay Report for Andhra Pradesh	Completion of the report
Global Overlay Report for Bihar	Completion of the report

3. Implementation Progress: (State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)

Component	Start	End
Reconnaissance Mission	1/98	2/98
Concept Paper	3/98	7/98
Supervision Mission	8/98	9/98
First Draft Report	6/98	10/98
Concluding Mission	1/99	2/99
Final Report	10/99	3/99

4. Expected Dates for:	Original	Revised
(State the reasons for any revision in Item 5 below)		
Project Completion (all project activities completed):	2/99	3/99
Project Closing (all financial transactions executed):	5/99	5/99

5. Summary of Current Project Status, Issues and Actions: (please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)

Training was provided in August, 1998, to both the study teams (local consultants) in the use of the Environmental Manual. The first draft reports for both Global Overlays have been completed on schedule. Comments have been provided by the Bank and revisions are being made in preparing the Final Report, due in February, 1999. A concluding mission scheduled for December 98 was postponed to January/February 1999, due to postponement of the workshops to be held under Project IN-UE-57861 (see separate Quarterly Report) (for budgetary reasons, the missions have to be combined). Correspondingly, project completion is delayed by one month, to March 1999.

6. Site Visit Dates:	<u>Last</u> 08/98	<u>Next</u> 1/99-2/99
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7. Status of Funding as of 12/30/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D = A - C
ESMAP				
of which:				
Trust Funds	50,000	60,533	60,533	-10,533
World Bank	0	0	0	0
Others	0	0	0	0
Total	50,000	60,533	60,533	-10,533



PROJECT IMPLEMENTATION FORM

Region: GLB	Country: GLOBAL	
Project Title: PERI-URBAN ELECTRIFICATION PROJECT		
Theme: RURAL AND HOUSEHOLD ENERGY		
Project No. (Product ID Code):: 1W-UE-61190		
Origin of Funds: NETHERLANDS		
Source of Funds Code: TF022185		
Project Manager:	WILLEM FLOOR	Organizational Unit: EMTEG

1. Development Objective	
Development Objective	Key Indicator
Demonstrate validity and applicability of existing innovative experience with peri-urban delivery mechanisms to increase access to electricity in a sustainable manner	A proposal to demonstrate successful execution of a peri-urban electrification scheme applying the validated method.

2. Expected Outputs	
Outputs	Key Indicator
Complete review on experience with peri-urban delivery mechanisms (technical, institutional, financial)	Best practice paper on peri-urban electrification schemes

3. Implementation Progress: <i>(State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)</i>		
Component	Start	End
<ul style="list-style-type: none"> • Review • Proposal produced 	01/15/99	04/30/99

4. Expected Dates for: <i>(State the reasons for any revision in Item 5 below)</i>	Original	Revised
Project Completion <i>(all project activities completed):</i>	04/30/99	
Project Closing <i>(all financial transactions executed):</i>	06/30/99	

5. Summary of Current Project Status, Issues and Actions: (please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)

The project is planned to start in January 1999.

6. Site Visit Dates: Last Next n.a.

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	15,000	0	0	15,000
World Bank	0	0	0	0
Others	0	0	0	0
Total	15,000	0	0	15,000

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	REGIONAL PROJECT IDENTIFICATION STRATEGY II
Theme	RENEWABLE ENERGY
Project Code	1W-UE-44460
Origin of Funds	NETHERLANDS
Source of Funds Code	TF023851
Task Manager(s)	ERNESTO TERRADO

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
01/96	n.a.	n.a.	n.a.	03/30/99

2. Objectives:

The specific purpose of Phase II is to enable preliminary field investigations of renewable energy project opportunities in countries not covered in Phase I (possibly Estonia, Oman, Philippines, Bolivia, Ecuador, Ghana, etc.) but which are being considered by Bank regional colleagues for future renewable energy investments, with and without GEF assistance. A second purpose is to allow more focused follow-up reconnaissance work in countries already visited in Phase I with positive results obtained (Russia, Georgia, Armenia, Tunisia, Cape Verde, etc.)

3. Principal Tasks:

- (i) Continuation of desk reviews of ongoing renewable energy activities in the various regions in which the above-named countries are located.
- (ii) Two or three-man reconnaissance missions of about ten days each will be carried out in the chosen countries.
- (iii) From the mission reports and information obtained in the desk work phase, a strategy paper will be drawn up. It will suggest the optimal approach for conducting project follow-up activities, e.g., through the ESMAP program, the Solar Initiative or through programs of bilaterals active in the countries, etc.

- (iv) A small workshop will be organized to discuss the preliminary findings of both Phase 1 and Phase 2 work.

4. Summary of Current Project Status, Issues and Actions:

- (i) A reconnaissance mission (Terrado) was fielded to Bolivia has recently returned. LA3 has requested IENPD help to identify a renewable energy component for the proposed \$50 million rural electrification loan for dispersed areas.
- (ii) A consultant was hired to prepare background materials on renewable energy opportunities in Bolivia.
- (iii) The consultant's reports on Bolivia were completed in August and were used as basis for drafting an Initial Project Concept Paper.
- (iv) Discussions were held with ASTAE and EA1IN for collaboration on technical assistance to the Government of the Philippines to evaluate various options for privatization of their electrification operations in small islands. The TA/study is expected to lead to the identification of a future lending operation in the Philippines covering remote area/small islands electrification featuring renewables. A reconnaissance mission is contemplated in late July 1997.
- (v) Desk work was carried out during the period, collecting and examining various privatization experiences in developing countries and the impact on rural and dispersed area electrification programs.
- (vi) Discussions were made with ENVGC on the possibility of combining the planned Philippines TA with a Joint Implementation Project to test Wind/Diesel Hybrids in rural areas. The activity will be supported with Swiss Funds. The Philippines TA reconnaissance mission was reset to January 1998.
- (vii) Desk work was carried out during this period, collecting published information on methodology for economic analysis of PV projects and some preliminary materials on establishing standards and certification systems for PV projects.
- (viii) *The TM met with Sandia staff headed by Dr. Paul Klimas, Program Manager, International Division in June 1998, and had discussions focused on a potential PV project in Peru. SNL has had some exploratory work done in Peru and had gathered background information. Later, the TM communicated with Peruvian officials at the Ministry of Mines and Energy and with the Lima-based division of Solarex. While there was great interest in a solar home systems project, there was less enthusiasm for a*

potential Bank lending operation. The Peruvian Government hoped to carry out the project financed solely by bilateral contributions, principally from Japan. Further exploratory work on Peru under the objectives of the present ESMAP activity was therefore dropped.

(ix) *As requested by LAC Region, assistance was provided to Jonathan Halperin in July/August 1998 to evaluate consultant studies creating Office of Rural Electrification in Panama, as well as to comment on the new electricity law. Further assistance expected to be provided to conceptualize potential RE project.*

5. **Site Visit Dates:** Last Next

6. **Project Completion Date** (all project activities completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	112,000	62,645	62,645	49,355
Others	0	0	0	0
Total	112,000	62,645	62,645	49,355

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	RURAL ELECTRIFICATION: SUCCESS FACTORS
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	1W-UE-48934
Origin of Funds	CORE
Source of Funds Code	UN002005
Task Manager(s)	DOUGLAS BARNES

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover (final)
06/30/96	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>t.b.d.</i>

2. Objectives:

The purpose of the proposed project is to systematically evaluate the experience of rural electrification programs. By drawing on the experience of various programs world-wide, the work will attempt to determine the best practices that should be emulated, and those factors that should be avoided. The review will not be confined to the Bank's involvement, but will cover the whole rural electrification program. This includes the initial implementation, how the goals of the project changed over time, and the overall reasons for the success of the projects. The case studies will include only those projects that have been deemed as successful, defined as programs which were able to cover a large percentage of the rural population without extensive subsidies. However, the successful projects have been implemented in sometimes quite different ways--including the well-run public sector companies, rural cooperatives, and other firms of organization. These diverse experiences should make it possible to isolate the factors that lead to successful rural electrification programs. The main issues that will be examined are pricing policies, system planning and expansion, means of financing, customer service, communication, load promotion, monitoring and evaluation, and economic development.

- (a) **Pricing:** The price of electricity is often far below the cost of providing service, and this results in a disincentive to serve people in rural areas.
- (b) **System Planning and Expansion:** The rural electrification companies often are driven by political motivations, and do not set priorities for implementing rural electrification in areas conducive for economic development.
- (c) **Financing of Rural Electrification:** This is often a problem for rural electrification because of

the large subsidies involved. If the financing is not managed well, then even the electricity companies are not willing to keep putting their resources into rural electrification, which does not give them as high returns as other customers.

- (d) **Customer Service:** The billing is often poor, with people not getting bills for long periods of time and then getting large ones for a whole year. It is sometimes very difficult to get service initiated, and there is little help for financing these initial costs. If there is a problem and the electricity companies do not solve them quickly, people become reluctant to pay their electricity bills because the service is poor.
- (e) **Communication and Load Promotion:** There is often very little communication or load promotion in poorly managed rural electrification programs. Several questions need to be answered. What is the type of communications between the power company and the consumer? Are there programs to inform consumers about their service, and what they can do with their service. Are there any productive use promotion programs?
- (f) **Monitoring and Ongoing Evaluation:** There is often little monitoring of progress or problems developing in the system and therefore little capability to deal with problems. If service is monitored, then it helps the planners in the company to understand the areas where load will grow the fastest, and areas where it will lag behind, helping to make the development of the system financially efficient.
- (g) **Economic Growth:** Poor countries typically do not have extensive rural electrification programs. Does economic development proceed or precede rural electrification? Can you have economic development in rural areas without electricity? Obviously priorities must be established for stimulating improved production through investments in rural electrification.

3. Principal Tasks:

- (i) Conduct 6-7 case studies of successful rural electrification projects.
- (ii) Analyze and prepare paper synthesizing the results of the case studies.

4. Summary of Current Project Status, Issues and Actions:

This project complements other case studies that have now been completed in Thailand and Costa Rica, which are part of a global assessment of the factors that lead to successful rural electrification programs. The first two case studies were financed out of consultant trust funds. ***The case study of the Philippines (funded by ESMAP) is now completed in draft form, and will be revised by the end of December 1998. A new project proposal to complete the global work on rural electrification best practices will be submitted to ESMAP for funding.***

5. Site Visit Dates: Last Next

6. Project Completion Date (all project activities are expected to be completed):
 Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	50,000	50,000	30,000	20,000
Others	0	0	0	0
Total	50,000	50,000	30,000	20,000

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	1997 RURAL ENERGY ROUNDTABLE
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	1W-UE-50396
Origin of Funds	CORE
Source of Funds Code	TF023892
Task Manager(s)	WILLEM FLOOR

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover (final)
03/13/97	04/16/97*	n.a.	n.a.	05/30/98**

* Date of the workshop. ** Publication of the workshop proceedings.

2. Objectives:

Provide an opportunity for donors, development agencies, multilateral banks, NGOs, private sector firms and host country officials to participate in an open discussion on recent developments in rural energy and strategies to further activities in this field.

3. Principal Tasks:

- (i) Develop curriculum for Roundtable.
- (ii) Identify and invite speakers and participants.
- (iii) Coordinate the Roundtable.
- (iv) Prepare summary document and forward to all participants.

4. Summary of Current Project Status, Issues and Actions:

The Rural Energy Roundtable took place from April 16-18, 1997. In total, over 300 participants registered and there were about 180 attendees each day. The general impression and feedback from

participants, who included NGOs, government officials, donors, consultants and bank staff, was very favorable. The roundtable also provided considerable opportunities for the exchange of ideas. It provided many with insights on the value of renewable energy technologies in the context of development, with practical experience on how to implement these activities and programs. A summary of the conference has been prepared and is posted on the IENPD website. *The report has been distributed in May 1998. The project is now completed.*

5. **Site Visit Dates:** Last Next

No mission required.

6. **Project Completion Date** (all project activities completed are expected to be completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	61,592	61,592	61,592	0
Others	0	0	0	0
Total	61,592	61,592	61,592	0

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	GLOBAL
Activity Name	SOLAR INITIATIVE REGIONAL STRATEGY
Theme	RENEWABLE ENERGY
Project Code	1W-UE-39359
Origin of Funds	NETHERLANDS/CORE/France CTF/France CTF/ France CTF
Source of Funds Code	TF022185/TF023706/TF032439/TF033100/TF034600
Task Manager(s)	ERNESTO TERRADO

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
03/01/95	n.a	n.a	n.a	03/30/99

2. Objectives:

The main purpose of this activity is to develop a regionally-oriented strategy for identifying near-term investment opportunities for renewable energy, for both large-scale grid-tied power generation applications and smaller-scale, off-grid, rural based applications. This would be done by a combination of deskwork and highly-focussed reconnaissance missions in various regions. This activity will supplement ongoing global and country-specific work on the Solar Initiative by allowing a review of potential project opportunities in presently uninvestigated regions and countries.

3. Principal Tasks:

- (i) Task 1. An extensive desk review of ongoing renewable energy activities in various regions. From this review and other information already available in the Bank (such as ESMAP Energy Assessment reports and operational lending programs), a determination will be made as to which particular countries in each region are the most likely to be suitable for RE investments.
- (ii) Task 2. Two or three-man reconnaissance missions of about 10-12 days will be carried out in 1-2 chosen countries in each region. The subject regions will be Middle East and North Africa, Eastern Europe and Latin America. The specific countries are Argentina, Peru, Brazil, Russia, Morocco and Tunisia.

- (iii) Task 3. A strategy paper will be drawn up containing a plan for further, more focussed preinvestment or prefeasibility work on specific applications in specific countries in the various regions. It will rank the recommended activities in the order of likelihood of success.

4. Summary of Current Project Status, Issues and Actions:

- (i) The deskwork for LAC countries has been completed. Brazil, Argentina, Chile and Peru have emerged on the shortlist of prospective countries. Coordination was initiated with NREL that currently has started renewable energy work in these countries.
- (ii) In February 1995, a reconnaissance mission was fielded to Tunisia, Morocco and Cape Verde that was timed to coincide with operational missions of regional staff. In all three cases, opportunities for potential investments in renewables were identified. Agreement were reached with the Governments and with regional staff to conduct broader, strategy type work on renewables in Tunisia and Morocco, and for initial project oriented background work for Cape Verde.
- (iii) In March/April a reconnaissance mission was fielded to Argentina and Chile. This was followed by visit to the Bank of Argentinian officials interested in Bank/GEF assistance for rural electrification featuring renewables for dispersed communities. Bank region has requested IENPD/ESMAP to join mission in July to pursue this possibility.
- (iv) In April, an exploratory mission to Russia was fielded. A brief renewable energy assessment report was completed, concluding that wind and biomass are the most viable resources to exploit. The Ministry of Nationalities expressed support for further work.
- (v) In June, a mission to Brazil resulted in agreement with CEPTEL to put together a \$10 M potential renewable energy component of a Bank energy efficiency project.
- (vi) Bank regional staff has requested assistance in identifying renewable energy off-grid application that may be considered for inclusion in a proposed IDB/WB rural electrification loan to Peru. A reconnaissance mission in mid-November with the LA3IN task manager is planned.
- (vii) Assistance has also been requested by LA3IN for renewables/efficiency issues in a TA loan to Colombia.
- (viii) The planned mission to Peru was postponed due to outstanding issues still to be settled with GOP on the overall loan proposal. Mission to Colombia, planned to be timed with the Peru mission to obtain travel economies, was consequently also postponed.
- (ix) Meanwhile, requests for project identification work has been received for Yemen, Central Asian Republics and Sahelian Africa. These are being discussed.
- (x) [*Note: this entry for April-June 1996 was inadvertently put under Regional Strategy II*]. A consultant has been hired to prepare a report on renewable energy opportunities in Russia and neighboring countries. He will obtain data from the field while there on another project. A side mission to Bulgaria (Adamantiades) was made in June 1996 at the request of the Region. The purpose is to discuss with the Government potential project ideas in renewable energy. A report on this trip is being prepared.

At the request of LA1, a mission to Brazil was fielded in August to assist in identification of project opportunities in Northeast provinces. During the mission, the Task Manager also participated in the Bahia Second International Seminar on Solar and Wind Energy and made a presentation on the Solar Initiative. The mission identified potential solar home systems investments in Bahia, Ceara and Minas Gerais and has recommended field studies to characterize the markets and resources availability. Details of the mission results are available in Bank Back-to-Office report.

- (xi) A consultant was hired to study the Argentina concession system for dispersed area electrification now being piloted in two provinces. Bidding documents and other materials were obtained and are now being analyzed. The purpose is to see whether the delivery mechanism for renewables here will be applicable as well to other countries such as Brazil.
- (xii) Analysis of the concession system contracts continued during the period.
- (xiii) It was decided to wrap up this activity and prepare a draft report covering selected countries in North Africa, Central Europe and the former Soviet Union that emerged as having potential for follow-up work. The draft report has been completed and is being circulated for comments by relevant staff in the Regions.
- (xiv) Draft report completed and reviewed in December 1997. Some revisions were suggested by the reviewers. The report is now being finalized.
- (xv) *The draft Project Activity Completion Report was submitted to EMTES in August 1998 for clearance. The report will be published as soon as the report is cleared.*

5. **Site Visit Dates:** Last Next

6. **Project Completion Date** (all project activities completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	84,994	66,813	66,813	18,181
Others	86,300	86,300	86,300	0
Total	171,294	153,113	153,113	18,181

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	GUINEA
Activity Name	DECENTRALIZED RURAL ELECTRIFICATION
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	GN-UE-44276
Origin of Funds	BELGIUM
Source of Funds Code	TF023891/TF023893
Task Manager(s)	RENE MASSE

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
12/95	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	06/30/99

2. Objectives:

To assist the Government of Guinea in devising a strategic framework and formulate energy policies, plans, and projects that will lead to the delivery of least-cost electricity to the rural and periurban population.

3. Principal Tasks:

In cooperation with the Ministry of Natural Resources and Energy (MRNE), four main tasks are envisaged:

- (i) Evaluation of decentralized rural electrification experience to date, based on PV, pico hydro, and mini diesel projects.
- (ii) Support and assistance to MRNE for a study of the potential for decentralized rural electrification.
- (iii) A study on the institutional, legal, and fiscal framework required for a program of decentralized rural electrification.
- (iv) Identify electrification projects in PV, pico-hydro, and mini-diesel.

4. Summary of Current Project Status, Issues and Actions:

Most of the missions are now completed, and the remaining activity is focussed on the preparation of a National Decentralized Electrification program proposal. A household energy consumption has been realized by SNAPE in 625 families, through 25 villages in Basse Guinea and in Moyenne Guinea. An evaluation of decentralized rural electrification experiences have been achieved by the MRNE. a Decentralized Rural Electrification policy letter has been sent to the World Bank. In this letter, the GOG commits itself to promote an incentive institutional, legal and fiscal framework for Decentralized Electrification schemes. Institutional, legal and fiscal reglementations have been analyzed and the resulting recommandations for an appropriate DRE reglementation should be integrated in the new electrical law (under preparation). Seven pilot projects have been studied and designed; (i) three of them concern pico hydro schemes at Konkoure-Mamou, Kundingde and Sangassou; (ii) two are related with micro diesel grid systems (Tamagaly and Tanene); and (iii) two PV studies have been conducted in Fella-Hamdalaye and Yenguissa. Finally, a workshop was held in October 1997, which was devoted to the presentation by the MRNE representatives of the National Decentralized Rural Electrification (DRE) orientation draft Program.

As a result of this ESMAP project, a Project Concept Document has been prepared with the support of the World Bank Region office for a GEF project to help develop a DE national program. The PCD has been disseminated but the PCD review meeting has not been held until now.

The balance of the ESMAP project funds will be used to complete the consultant's work on the design of the financing mechanism for the DE and to finance the preparation of the ESMAP project completion report. The ESMAP Consultant mission is scheduled for the first trimester of 1999, in synergy with a Region supported Consultant mission.

The project was to be completed by end of November 1998. The main reason for the delay is that we had to forward at the same speed with our local partners, because our methodology was to support the local stakeholders in their commitments vs. to do surveys with international Consultants. Probably the recent changes in the way of thinking of the Electrification in Guinea could not have been processed more rapidly. Also, we are very attentive to get in touch with financing institutions, including the World Bank, in order to prepare the future of the after-ESMAP period in Guinea.

All along the process, we have discussed and disseminated our results; it was the best way to help people to think differently on the DRE in Guinea. The Task Manager held two ESMAP supported workshops in Guinea on this subject. The lessons learned are in two levels: (i) technical lessons: we have designed DRE schemes, an adapted reglementation for DRE, producing technical specifications documents, models of contracts, model of reglementation, etc.; and a financing mechanism also will be designed before the end of the ESMAP project. These concrete outputs can be useful tools for everybody working on the same subject, mostly as "food for thought a better design"; and (ii) DRE concept project. These lessons are going to be included in the second final report for the West Africa Solar ESMAP project. With other DRE involved Task Managers, there is a plan to propose a workshop on the DRE, in parallel to Energy Week' 99 in April 1999.

5. Site Visit Dates:

Last

10/98

Next

02 or 03/99

6. **Project Completion Date** (all project activities completed):

06/99

Project Closing Date (when final commitments are expected to be reported in Section 7 below):

08/99

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	250,000	215,132	198,439	51,561
Others	0	0	0	0
Total	250,000	215,132	198,439	51,561

8. **List of ESMAP technical reports:**

- “Enquetes sur la demande solvable d’électrification rurale hors reseau en Basse Guinee et en Moyenne Guinee”. SNAPE. Janvier 1998.
- “Etude des conditions de developpement de l’électrification rurale en Guinee; la solution decentralisee basse consommation GECO option source thermique: presentation generale du concept GECO”. APAVE Sud. June 1997.
- “Esquisse d’un plan de developpement de la filiere decentralisee basse consommation GECO”. APAVE Sud, June 1997.
- “Etude d’électrification rurale par procede GECO du village de Tamagali (S/P de Konkoure)”. APAVE Sud. June 1997.
- “Etude d’électrification rurale par procede GECO du village de Tanene (S/P de Tanene)”. APAVE Sud. June 1997.
- “Atelier Electrification Rurale Decentralisee: document de travail”. Direction Nationale de l’Energie. Octobre 1997.
- “Evaluation des realisations d’électrification rurale decentralisee en Republique de Guinee”. Mr. Ousmane Bah. Octobre 1997.
- “Etude d’électrification rurale par centrale hydraulique et mini-reseau de la sous-prefecture de Konkoure” APAVE Sud. Novembre 1997.
- “Pico-Hydro & Diesel electrification of Konkoure-Medina, Guinea”. Adam Harvey. Decembre 1997.
- “Etude d’un cadre reglementaire pour l’électrification rurale decentralisee en Guinee”. MRNEE. Fevrier 1997.
- “Etude du cadre normatif et reglementaire” du secteur electrique en Guinee. JC. Heraud. June 1997.
- “Commentaires provisoires sur les textes reglementaires”. A. Harvey. Avril 1997. And “Pico-hydro en Guinee – Cadre reglementaire”. A. Harvey. June 1997.
- “Observations sur le projet de Lettre de Politique sectorielle pour la promotion de l’ERD en Guinee”. Rene Masse. Septembre 1997.
- “Lettre de Politique sectorielle pour la promotion de l’électrification rurale decentralisee en Republique de Guinee”. MNRE. Fevrier 1998.
- “PCD: Decentralized Electrification Program in Guinea”, Draft. October 1998.





PROJECT IMPLEMENTATION FORM

Region: SAR	Country: INDIA		
Project Title:	DISSEMINATION ON ENVIRONMENTAL ISSUES IN THE POWER SECTOR		
Theme:	ENERGY AND THE ENVIRONMENT		
Project No. (Product ID Code)::	IN-UE-57861		
Origin of Funds:	CORE		
Source of Funds Code:	TF023717		
Project Manager:	ROBIN BATES	Organizational Unit:	EMTEG

1. Development Objective	
Development Objective	Key Indicator
<p>The key objective of the work is to disseminate to various states in India the results of an earlier activity, entitled "India: Environmental Issues in the Power Sector" (EIPS), that was completed in June 1998.</p>	<p>Extension to other states in India of the ability to apply the tools and process developed under EIPS and knowledge of the findings of EIPS to help decision-makers at the state level: (i) to improve the planning and management of their power systems, taking into account the major environmental impacts; and (ii) to assess more explicitly the economic and environmental trade-offs involved between different options for power development.</p>

2. Expected Outputs	
Outputs	Key Indicator
<p>National NGO Workshop in Delhi Bihar Workshop Manual for Environmental Decision-Making Orissa Workshop Haryana Workshop Andhra Pradesh Workshop Rajasthan Workshop Uttar Pradesh Workshop Kamataka Workshop Final evaluation Report</p>	<p>Production of the Manual for Environmental Decision-Making; holding of Workshops in Delhi, Bihar, Orissa, Haryana, Andhra Pradesh, Rajasthan, Uttar Pradesh and Kamataka</p>

3. Implementation Progress: (State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)

Component	Start	End
Hold National NGO Workshop in Delhi	5/98	5/98
Finalize Contracts with Consultants (MECON)	9/98	10/98
Hold Workshop in Bihar	8/98	8/98
Preparation of Manual for Environmental Decision-Making	8/98	12/98
Hold Workshops in Orissa and Haryana	2/99	2/99
Follow-up for Orissa and Haryana	4/99	4/99
Evaluate Dissemination Experience: Reformulate Dissemination Strategy for Other States	4/99	4/99
Design Formal Training (Transfer) Program	4/99	6/99
Hold Workshops in Andhra Pradesh, Rajasthan & UP	6/99	6/99
Follow-up in AP; hold Workshop in Karnataka	8/99	8/99
Follow-up in Karnataka, Rajasthan & UP	10/99	10/99
Final Evaluation Report	11/99	11/99

4. Expected Dates for:	Original	Revised
(State the reasons for any revision in Item 5 below)		
Project Completion (all project activities completed):	10/99	11/99
Project Closing (all financial transactions executed):	2/00	2/00

5. Summary of Current Project Status, Issues and Actions: (please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)

Work was initiated with the National NGO Workshop in Delhi (May 1998) and the first dissemination Workshop in Bihar (August 1998). A draft of the Manual for Environmental Decision-Making was completed in October; Bank comments were provided in November; and a final draft is due in December. A contract was signed with a local consulting firm (MECON) in October, to help organize the Workshops in Orissa, Haryana, Rajasthan, Uttar Pradesh and Karnataka. A mission planned for 12/98 has been postponed until 2/99, at the request of the Resident Mission in New Delhi, on the grounds that key officials in Haryana and Orissa would be preoccupied with urgent power sector restructuring activities.

A fund balance is expected on the activity which preceded this project (ENVIRONMENTAL ISSUES IN THE POWER SECTOR - IN-UE-47145). DFID has already agreed to transfer up to £41,000 of this balance to the current project on Dissemination on Environmental Issues in the Power Sector (IN-UE-57861), bringing the available funding up to £220,450 (US\$363,743 equivalent). If further funds remain on closing IN-UE-47145, the Donor will be asked if those funds could also be used for the dissemination work.

6. Site Visit Dates: Last 8/98 Next 2/99

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	299,520	164,990	31,720	267,800
World Bank	0	0	0	0
Others	0	0	0	0
Total	299,520	164,990	31,720	267,800





Project Implementation Form

Region: SAR	Country: India
Project Title:	ELECTRICITY SECTOR OF GOA – REGULATORY DEVELOPMENT AND TARIFF MODELING
Theme:	SECTOR REFORM & RESTRUCTURING
Project No. (Product ID Code)::	IN-UE-63167
Origin of Funds:	CORE
Source of Funds Code:	TF021163
Project Manager:	RAYMOND CLAMP
Organizational Unit:	ICF/CCF

1. Development Objective	
Development Objective	Key Indicator
Design a regulatory framework for the electricity sector in the state of Goa, India and outline an implementation and training plan to provide sustainable regulation of electricity tariffs that balances the objectives of customers and private investors.	<ol style="list-style-type: none"> 1. Appointment of Regulator 2. Establishment of Regulatory framework 3. Establishment of Regulatory guidelines
2. Expected Outputs	
Outputs	Key Indicator
<p>Paper 1: Regulatory Framework for Goa power sector</p> <p>Paper 2: Proposed Office of the Regulator</p> <p>Paper 3: Tariffs</p>	<p>Paper Covering:</p> <ol style="list-style-type: none"> a. Objectives of GOG for the sector b. Review of existing legislative framework c. Review of other states' regulatory framework d. Evaluation of compatibility of GOG's objectives with existing framework e. Assess modification required <p>Paper covering:</p> <ol style="list-style-type: none"> a. Multi versus single sector regulator b. Powers & duties of proposed regulator c. Regulations, process d. Rules e. Training requirements <p>Paper covering:</p> <ol style="list-style-type: none"> a. Review existing tariffs and costs b. Demand projections c. Revenue requirements d. Marginal cost of production e. 2-part tariffs f. Cross-subsidies

3. Implementation Progress: (State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)

Component	Start	End
1. Initial appraisal mission - Completed	09/6/98	09/16/98
2. All other activities – on hold	09/98	03/99

4. Expected Dates for:	Original	Revised
Project Completion (all project activities completed):	June 1999	
Project Closing (all financial transactions executed):	June 1999	

5. Summary of Current Project Status, Issues and Actions: (please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)

The project has been stalled by political turnover in Goa. Specifically, the government formed in August 1998 halted all policies of the previous Congress government including the privatization of the Department of Electricity (DOE) and all related aspects of designing a regulatory framework. Recently, i.e. in November, 1998, the previous Government was returned to power and IFC is discussing the basis of its re-engagement with the Government of Goa (GOG). Projected expected to re-start in January 1999.

6. Site Visit Dates: Last 09/98 Next 02/99

7. Status of Funding as of 12/31/98				
Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
of which:				
Trust Funds	298,889	298,889	0	298,889
World Bank				
Others	1,300,000	1,300,000	0	1,300,000
Total (US dollars)	1,598,889	1,598,889	0	1,598,889

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	INDIA
Activity Name	ENVIRONMENTAL ISSUES IN THE POWER SECTOR
Theme	ENERGY AND THE ENVIRONMENT
Project Code	IN-UE-47145
Origin of Funds	UNITED KINGDOM
Source of Funds Code	TF023714
Task Manager(s)	ROBIN BATES

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover (final)
3/6/95	n.a.	n.a.	6/30/98	7/30/98

2. Objectives:

- (a) The objective of the study is to reduce the environmental impact of power generation in India. The study will identify the main environmental effects related to the expansion of electricity generation from coal, including the environmental externalities and costs caused by the associated increase in the production of coal.
- (b) The study will present a menu of options for decision-makers to mitigate those effects, focusing on air, land and water.
- (c) Analytical tools will be developed, including a power systems planning model, to assist decision-makers in assessing trade-offs between options.

3. Principal Tasks:

(Task completion dates shown in parentheses)

- (i) Conduct cross-cutting studies ("Special Studies") for: demand-side management (8/97); inter-fuel substitution (8/97); market-based instruments for pollution control (8/97); the welfare effects of abatement policies (8/97); renewable energy options (8/97); ash pond management/ash disposal/ash utilization (12/96); and mitigation options for power development (8/97).
- (ii) Carry out case studies for the states of Andhra Pradesh (AP) and Bihar (5/98).
- (iii) Prepare a National Synthesis (6/98).

- (iv) Conduct an Inception Seminar (7/96), a national Technical Workshop (10/96), a national Mid-Way Workshop (5/97), state-level Decision-Makers Workshops in AP and Bihar (8/97), a national Decision-Makers Workshop (98) and a national NGO Workshop (5/98).

4. Summary of Current Project Status, Issues and Actions:

The Special Studies, Case Studies and National Synthesis have all been completed. The Inception Seminar, national Technical Workshop, national Mid-Way Workshop and state-level Decision-Makers Workshops in AP and Bihar were held in 7/96, 10/96, 6/97 and 8/97, respectively. *The national Decision-Makers and NGO Workshops were held in May 1998.* A supervision mission was carried out as planned in *April-May 1998.*

A joint World Bank/ESMAP Blue Cover report with the Bank's Regional office was issued at the end of June 30, 1998. The Task Manager (TM) is anticipating to have a fund balance on this project, and DFID has already agreed to transfer up to £41,000 of this to the project on Dissemination on Environmental Issues in the Power Sector (IN-UE-57861). If further funds remain on closing, the TM will request the Donor if those funds could also be used for the dissemination work. The project was completed at the end of July 1998 and is now closed.

5. Site Visit Dates: Last Next

6. Project Completion Date (when all project activities are expected to be completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	2,058,456	1,963,066	1,963,066	95,390
Others	0	0	0	0
Total	2,058,456	1,963,066	1,963,066	95,390

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	INDIA
Activity Name	RURAL ENERGY STUDY
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	IN-UE-35324 (8INDUN016/8INDUN046)
Origin of Funds	CORE/NETHERLANDS/CORE/CORE
Source of Funds Code	UN007780/TF026125/TF022256/UN002005
Task Manager(s)	DOUGLAS BARNES

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
07/30/89	01/31/99	n.a.	02/28/99	04/30/99

2. Objectives:

To evaluate appropriate energy policies and potential lending activities for India's vast rural population of 600 million people, including possibilities for conservation of existing supplies of modern fuels, strategies to eliminate bottlenecks in the distribution of modern fuels for productive uses, recommendations for making the rural electrification program more service oriented, possible substitution of modern and/or modern and renewable fuels for existing inefficient use of traditional fuels.

3. Principal Tasks:

Phase I (completed):

- (i) Prepare issues paper on rural energy.
- (ii) Participate in sector work being completed by South Asia Operations Department.
- (iii) Prepare a desk review of rural energy situation in India.

Phase II:

- (i) Conduct a survey of rural energy use in four states and prepare the data for formal analysis.
- (ii) Analyze the extent and potential for energy conservation in agricultural pumping.
- (iii) Examine consumer awareness, satisfaction, and participation in the rural electrification program.
- (iv) Assess the potential for substitution of renewable energy/modern fuels for traditional fuels.
- (v) Identify main environmental problems related to rural energy along with possible solutions.

4. Summary of Current Project Status, Issues and Actions:

The white cover draft report is near completion. In consultation with the regional operation staff, the report is being reorganized so that it can be an input into the development of a new lending project for India. This is the reason for the delay in the writing of the report. Part of the report is being utilized as the basis for formulating a rural energy loan for India on electricity distribution. The report will be cleared by the regional operation staff through the Ministry of Non-Conventional Energy Sources. The report will be published as an ESMAP blue cover report. With the exception of an internal bank seminar, there are no other plans for dissemination. Additional funds of \$14,170 has been allocated to cover for 2 staffweeks of ESMAP staff for report writing, consultant fees, administrative support and editing the report.

5. Site Visit Dates: Last Next

6. Project Completion Date (when all project activities are expected to be completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	389,866	378,582	362,082	27,784
Others	0	0	0	0
Total	389,866	378,582	362,082	27,784

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	INDIA
Activity Name	URBAN ENERGY STUDY
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	IN-UE-23736 (8INDUN043)
Origin of Funds	SWEDEN
Source of Funds Code	UN007055
Task Manager(s)	DOUGLAS BARNES

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
3/15/93	01/30/97	04/15/97	11/15/97	03/30/99

2. Objectives:

The project will enhance the capability of the World Bank and the Government of India in the field of assessing urban energy problems and meeting urban energy needs. The project will evaluate appropriate energy policies and potential investments for India's rapidly growing urban populations. The project will address the following issues:

- (a) The problems and prospects of the continued use of traditional fuels in urban areas, especially their environmental impact,
- (b) the potential for energy conservation to reduce problems associated with the rapidly growing demand for electricity and other forms of energy,
- (c) and the impact of energy policies on the urban poor, including the impact on their quality of life.

3. Principal Tasks:

The principal tasks will be to:

- (i) conduct a survey of urban energy use and an assessment of main areas from which wood fuels are being harvested;

- (ii) prepare an evaluation of energy and appliance markets, including identification of bottlenecks;
- (iii) assess the potential for urban interfuel substitution, focusing on the substitution of modern fuels for traditional fuels;
- (iv) evaluate the impact of existing energy pricing policies on urban household energy use;
- (v) analyze the patterns and possibilities of energy conservation, especially for lighting and refrigeration;
- (vi) make recommendations for energy services that would aid the poor; and
- (vii) analyze the impact of urban energy use on the environment, including forest degradation.

4. Summary of Current Project Status, Issues and Actions:

The Green Cover ESMAP report on the policy recommendations of the study was completed in November 1997. *The Bank's Regional Office has given their clearance on the report and an informal subsequently clearance from the government has been obtained. In the past two weeks the government has cleared the project for publication. The report has been forwarded to ESMAP for publication. Dr. Manzoor Alam, the principal author of the consultant's report, will travel to Washington in February, 1999 to make a presentation on the project. Additional funds of \$5,900 has been allocated for Dr. Alam's trip, workshop arrangements and report production.*

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	202,831	202,831	202,831	0
Others	0	0	0	0
Total	202,831	202,831	202,831	0

ESMAP Project Summary Form
(as of December 31, 1998)

Country	KENYA
Activity Name	PHOTOVOLTAICS FINANCING MECHANISMS FOR SOLAR ELECTRIC EQUIPMENT
Theme	RENEWABLE ENERGY
Project Code	KE-UE-44166
Origin of Funds	NETHERLANDS/SWEDEN
Source of Funds Code	TF023851/UN007055
Task Manager(s)	ROBERT VAN DER PLAS

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
9/30/95	10/30/96	n.a.	n.a.	06/30/99*

* Implementation Manual

2. Objectives:

- (a) Develop innovative financing mechanisms in villages in Kenya, for solar electric equipment.
- (b) Field test these mechanisms, and issue an implementation manual for replication.

3. Principal Tasks:

- (i) Subcontract implementation to an NGO and a credit organization.
- (ii) Procure equipment.
- (iii) Starting with villagers' views on how they prefer to have credit schemes organized, a local bank will test several different setups. Local technical assistance will be mobilized to help this bank. A local NGO will coordinate between the different participants. Tests of different financing mechanisms in the field.

4. Summary of Current Project Status, Issues and Actions:

A workshop was held in July 1998 to discuss the issues with all parties and propose a workplan for the final Phase. A few Cooperatives with a high demand for the services proposed have been identified, and they have already deposited their matching contribution into a special bank account. Training and supervision of installers will be provided under

the project. A draft version the implementation manual is being prepared, following the July 1998 workshop and the final field preparations with the chosen bank and Cooperatives.

After more than two and a half years of capacity building, the effort finally begins to pay off. Having abandoned one rural bank (for not delivering on promises) and several local installers, the project has finally come to the point that a fairly efficient method seems to have been established to find clients, to finance their needs for solar equipment, to procure equipment, and to install and monitor the equipment. This was documented in an Implementation Manual (draft is available; it will be modified following the experience of the ongoing phase).

It is interesting that Kenyans buy smaller and smaller solar electric equipment when they have to pay cash, but that they want the largest possible system if it is offered with a loan. Getting local installers and electricians to work more professionally correct is a major task, as the prevailing rural business code mainly calls for making a quick buck. Talking about financing mechanisms or actually developing and testing are two entirely different matters. It took more that one and half years to get the first 15 solar systems financed; under the ongoing phase, it will probably take six months to get 75 - 100 systems financed, and the estimation is that the next 500 systems will take 3 months. Without the capacity built and training provided under the ESMAP project, the IFC/GEF Photovoltaic Market Transformation Illicitive (PVMTI) project would have had a problem, as most viable project submissions are based on the method presented in the Implementation Manual.

The output of the project is to provide solar electricity to about 150 households to replicate and extend to other areas and countries. A draft implementation manual will be prepared in the middle of 1999 after which the project will be closed.

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
of which:				
Trust Funds	255,000	236,243	227,243	27,757
Others	0	0	0	0
Total	255,000	236,243	227,243	27,757

ESMAP Project Summary Form

(as of December 31, 1998)

Country	LAO PDR
Activity Name	DECENTRALIZED RURAL ELECTRIFICATION
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	LA-UE-48066
Origin of Funds	NETHERLANDS
Source of Funds Code	TF023851
Task Manager(s)	DOUGLAS BARNES/WILLEM FLOOR

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	PCR (final)
04/96	n.a.	n.a.	09/98	03/30/99

2. Objectives:

- (a) Minimizing the cost of the economy and the environment in increasing access to electricity supply in rural areas;
- (b) Reduce the financial cost to rural households and commercial establishments; and
- (c) strengthen the capability of the Government of Laos and power company to evaluate the parameters affecting the cost-effectiveness of decentralized electric distribution systems and to design and execute a rural electrification energy projects.

3. Principal Tasks:

- (i) execution of the demand survey in a representative sample of villages;
- (ii) identification of obstacles to the increased use of micro-hydro;
- (iii) design of a national pilot program to develop a micro-hydro resource assessment; train staff to do so including in micro-hydro project design, system management and operation and management as well as develop the appropriate policy and institutional framework.

4. Summary of Current Project Status, Issues and Actions:

A pre-appraisal mission has taken place in March 1997 which has led to the formulation of a national decentralized rural electrification program. GEF has approved the co-financing of the decentralized rural electrification program, which the project was effective in spring 1998. The study has resulted in a component in the Lao PDR Southern Provinces Rural Electrification Project, approved by the Board in March, 1998. *The Green Cover report has been cleared by the Bank's Regional Office as of September, 1998 and has been cleared by the government on the first week of January 1999. The report will be processed for final publication.*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	208,662	208,662	208,662	0
Others	0	0	0	0
Total	208,662	208,662	208,662	0

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	LATIN AMERICA AND THE CARIBBEAN
Activity Name	IMPROVING FUEL QUALITY IN LATIN AMERICA (LEAD ELIMINATION PHASE 2)
Theme	ENERGY AND THE ENVIRONMENT
Project Code	6L-UE-50511
Origin of Funds	CANADA
Source of Funds Code	TF020317
Task Manager(s)	ELEODORO MAYORGA ALBA

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
1/97	05/98	n.a.	n.a.	03/99

2. Objectives:

- (a) To undertake regional studies on supply and demand issues related to the improvement of fuel quality in Latin America, including the elimination of leaded gasoline;
- (b) To provide technical assistance and training to governments in the formulation and implementation of National Pollution Prevention Plans as related to the improvement of fuel quality.

3. Principal Tasks:

- (a) To prepare technical/economic studies to be presented to governments aiming at facilitating the formulation and implementation of national plans;
- (b) To identify policies and programs to phase out leaded gasoline and identify opportunities for regional cooperation to accelerate the phase-out process;
- (c) To carry out specific technical assistance activities at national and regional levels related to the efforts to eliminate lead in gasoline, and to improve fuel quality in the region in general.

4. Summary of Current Project Status, Issues and Actions:

(a) Specific country cases that have been launched include:

- (i) **Venezuela:** *A new joint WB/PAHO initiative is planned for the first quarter of 1999, to discuss phase out plans with the new government authorities.*
- (ii) **Peru:** *A comprehensive Clear Air Strategy has been adopted following the decision to phase out lead by the year 2004. Early March 1999, a workshop will be held to present the strategy to potential donors.*
- (iii) **Clean Air Initiative:** *Together with the LAC region and EDI a Clean Air Initiative for the LAC major cities was launched early December 1998. A major Seminar is planned in Washington DC followed by city specific activities (Rio, Bs. As., Mexico and Lima) during the first half of 1999.*

(b) Several technical and economic studies in preparation include:

- (i) *Comparison of experiences with LPG and CNG as alternative transport fuels (carried out using other ESMAP TF);*
- (ii) *Harmonization of technical fuels specifications in the LAC region (for which a contract has been extended to AI-Consult). After the presentation/discussion of the preliminary proposals for regional specifications for gasoline, diesel, LPG and fuel oil at seminars in Uruguay (September 1997) and Ecuador (October 1997), the final outcome was presented and discussed at The World Fuel Conference in Washington, DC (October 1997), the OLADE Annual Meeting of Ministers and Council of Experts in Uruguay (November 1997), and the Energy Business Forum of the Americas in Venezuela (January 1998). AI-Consultant prepared the final report in both English and Spanish, which after clearance by the regional Steering Committee, has been issued as ESMAP Reports for wider distribution in May 1998.*
- (iii) *Promotion of Private Investments in Refineries.* TOR for this study which will require separate funding has been prepared, including comments from specialized consulting firms, regional organizations and government representatives. OLADE has approached the EU for funding. A meeting will take place and coordinate the launching of this study under the new funds obtained from EU and ESMAP.
- (iv) *Last Status Report: A new questionnaire to assess lead phase out progress as of end-1998 has been circulated to all National Focal Points with a cover letter signed by the OAS Executive Secretary.*

- (v) **Publications:** Two reports on the Harmonization of Fuels Specifications in LAC and the Status Report with the technical and country case studies (situation as of December 1997) on the Elimination of Lead in Gasoline in LAC were completed in May 1998. In preparation, there is a final report on the overall lead phase out work carried out in LAC since 1996.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of: 12/31/98**

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	363,022	336,194	317,794	45,228
World Bank	0	0	0	0
Others	0	0	0	0
Total	363,022	336,194	317,794	45,228





PROJECT IMPLEMENTATION FORM

Region: LAC	Country: SUB-ANDEAN
Project Title: SOCIO-ENVIRONMENTAL ISSUES AND OPTIONS	
Theme: ENERGY AND THE ENVIRONMENT	
Project No. (Product ID Code): 6A-UE-59530	
Origin of Funds: CORE	
Source of Funds Code: TF020416	
Project Manager: ELEODORO MAYORGA-ALBA	Organizational Unit: EMTOG

1. Development Objective	
Development Objective	Key Indicator
<p>To establish an on-going discussion and forum between respective Governments and develop a common approach in forming and implementing policy and suitable frameworks for promoting environmentally and socially acceptable oil and gas industry operations.</p>	<ul style="list-style-type: none"> • Assignment of National Coordinators—high ranking Government officials—who would be members of a working group. • Common set of principles and best practices prepared and disseminated.

2. Expected Outputs	
Outputs	Key Indicator
<p>First Phase:</p> <ul style="list-style-type: none"> - Nomination of national Coordinators - Comparative assessment of legal, regulatory and institutional frameworks - Recognize the need for dialogue with other stakeholders <p>- Decision to carry out longer term actions based on a comprehensive work plan</p> <p>Second Phase:</p> <ul style="list-style-type: none"> - Start Dialogue with other stakeholders - develop improved regulations - Increase institutional capacity to enforce regulations 	<ul style="list-style-type: none"> - done - Consultant report reviewed by national coordinators and the Bank. - Meeting with the national coordinators and extending an invitation to stakeholders. - Work plan agreed and presented to the last OLADE ministerial meeting. - Hold meeting scheduled for March 1999 - Produce set of guidelines - Training activities

3. Implementation Progress: (State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)

Component	Start	End
Nomination of National Coordinators Inception meeting Draft report Second meeting of National Coordinators Proposed project design for Phase 2	May 1998 July 1998 October 1998 October 1998 December 1998	

4. Expected Dates for:	Original	Revised
Project Completion (all project activities completed):		
First Phase (including 3 rd meeting of National Coordinators)	Oct. 98	May 99
Project Closing (all financial transactions executed):		
.....Second Phase: requires additional funding	June 1999	

5. Summary of Current Project Status, Issues and Actions: (please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)

- All eleven countries of the Sub-Andean Basin have nominated National Coordinators who has already met twice in the OLADE headquarters in Quito.
- A draft consultant study including a comparative assessment based on updated matrices of current legislation, regulations and institutional frameworks is available. We are expecting the revised consultant study by the middle of January 1999 and will be issued by the end of January 1999.
- The National Coordinators have agreed to continue making efforts to implement a Work Plan including:
 - development of an information system;
 - dialogue with other stakeholders;
 - improvement of regulations; and
 - training and institutional capacity building.
- The national Coordinators have decided to hold a 3rd. meeting and start a dialogue with other stakeholders from industry and indigenous peoples and the implementation of the agreed work plan.

Resources from ESMAP and LAC Social Compact will be exhausted with the 3rd Meeting of National coordinators, who have decided to invite the industry and indigenous people representatives to this meeting. The Bilaterals and Multilaterals are interested in funding the components of the agreed work plan.

6. Site Visit Dates: Last Nov 8-10, 1999 Next March 1999

7. Status of Funding as of 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	130,000	127,362	67,092	62,908
World Bank	0	0	0	0
Others	0	0	0	0
Total	130,000	127,362	67,092	62,908

8. Comments from Management Review:

ESMAP would be open to consider financing of Phase II, provided Phase I is satisfactorily completed. Awaiting Phase I completion report.

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	MALAWI
Activity Name	RURAL ENERGY DEVELOPMENT
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	MW-UE-44764
Origin of Funds	CORE/CORE/CORE
Source of Funds Code	TF023706/TF020604/UN007650
Task Manager(s)	MANGESH HOSKOTE

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover (final)
02/12/96	03/09/98	6/15/98	7/15/98	03/30/99

2. Objectives:

To fully assess the opportunity for the economic use of the combination of renewable energy and conventional rural electrification and to design a program of policy and institutional changes necessary to facilitate the economic use of each set of technologies in rural Malawi.

3. Principal Tasks:

- (i) The first step in conducting the study is to come to an agreement with the Government of Malawi on the Terms of Reference for the work and to establish responsibilities for the respective components of the work.
- (ii) Following the development of Terms of Reference, a set of detailed outlines for the actual work will be prepared and reviewed by the Bank and the Government. When agreement on the outlines is reached, work can begin.
- (iii) Draft work products will be produced and will be the subject of a multi-day Workshop, to include appropriate outside experts, to ensure the validity of the work and to suggest integrating strategies and policy steps to be taken. Insofar as possible, outside experts will be drawn from elsewhere in Africa and/or other developing countries that face similar problems.
- (iv) Following the Workshop, a final report will be produced along with a specific set of projects (The Action Plan) that would begin implementation of the recommendations.

4. Summary of Current Project Status, Issues and Actions:

A working draft report has been prepared based on the first mission in March/April 1997. Bank's Regional review of the draft report *was completed in May/June 1998. The Green Cover report was sent to the government in July 1998. The government's comments were received early January 1999 and being incorporated in the draft report. The final Blue Cover report is expected to be published by the end of March 1999 upon approval of the ESMAP management. A beneficiary consultation forum will be scheduled in consultation with the Region and the government.*

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<u>Funding Source</u>	<u>Project Cost</u>	<u>Committed to Date</u>	<u>Disbursed to Date</u>	<u>Remaining Balance</u>
	A	B	C	D=A-B-C
ESMAP				
<i>of which:</i>				
Trust Funds	322,554	244,238	231,643	90,911
Others	0	0	0	0
Total	322,554	244,238	231,643	90,911



PROJECT IMPLEMENTATION FORM

Region: LAC	Country: MEXICO
Project Title:	ENVIRONMENTAL STRATEGY FOR THE ENERGY SECTOR
Theme:	ENERGY AND ENVIRONMENT
Project No. (Product ID Code):	MX-UE-62488
Origin of Funds:	GERMANY
Source of Funds Code:	UN002005
Project Manager:	WALTER VERGARA
Organizational Unit:	LCSES

1. Development Objective	
Development Objective	Key Indicator
<p>The objective of this project is to assist in the development of an integrated, strategic vision of the interactions between the energy and environmental sectors and its implications for the economy.</p>	<ul style="list-style-type: none"> • A better understanding of the environmental impacts of the energy exploration, conversion, transmission and use. • An assessment of the associated environmental costs.

2. Expected Outputs	
Outputs	Key Indicator
<p>The specific outputs of the effort, include the following:</p> <p>Generic: Development of a modeling tool for the analysis.</p> <ol style="list-style-type: none"> 1. Analysis of the role of macroeconomic parameters on energy-demand and supply. 2. Identification of supply-demand scenarios and sensitivity analysis of key scenarios. 3. Consistency analysis of economic, energy and environmental policies. 4. Identification and quantification of environmental impacts of the energy sector and impact of environmental policies and international treaties on the energy sector. 5. Cost analysis of emission reduction alternatives. 	<p>Generic: Design and operation of a simulation model for the interactions between energy, environment and the economy.</p> <ol style="list-style-type: none"> 1. Quantification of the impacts of GNP growth rate, demographic growth and energy intensity by key economic sectors on energy demands. 2. Preparation of scenarios for modeling through the BRUS-II-M. 3. Comparison of objectives and impacts of policies in energy, environment and the economy; identification of conflicts. 4. List of key environmental impacts and estimate of order of magnitude of associated costs; list of impacts of environmental policies and international treaties on the energy sector and the economy. 5. Estimates, through the use of BRUS-II-M of the capital and O&M costs associated with

6. Identification of best scenarios and policy implications. 7. Identification of best policy options.	emission reduction alternatives. 6. Formulation of best scenarios. 7. Preparation and justification of a policy agenda.
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3. Implementation Progress: *(State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)*

Component	Start	End
Energy supply demand analysis	Nov 1, 98	Oct 1, 99
Environmental and global impacts. Compatibility analysis of sector policies	Jan. 4, 99	May 1, 99
Cost-assessment of measures to control environmental impacts	May 1, 99	Nov 1, 99
Analysis of restructuring needs/alternatives in the energy sector	May 1, 99	Aug. 1, 99
Sector Analysis (Gas, renewables, energy efficiency)	Feb 1, 99	Aug 1, 99

4. Expected Dates for: *(State the reasons for any revision in Item 5 below)*

	Original	Revised
Project Completion <i>(all project activities completed):</i>	Jun. 30, 99	Nov 1, 99
Project Closing <i>(all financial transactions executed):</i>	Sep. 30, 99	

5. Summary of Current Project Status, Issues and Actions: *(please include factors on which the above ratings for Items 1, 2 and 3, are based, where possible, refer to the key indicators)*

The key issue today is the increased relative weight being given by the Mexican team to the model at the potential expense of the analysis. As a consequence the analysis work has been postponed and the start up of project activities were delayed. After consultation with the Country Director and the ESMAP Management, it has been agreed to proceed with the generic output (development of the modeling tool) and associated outputs and indicators (1, 2, 5) and the analysis of costs to the economy of the climate change treaty. As the model is developed, we expect to be able to continue with the balance of outputs and indicators, as per the revised schedule.

However, before these outputs are completed, it is imperative for management to intervene in favor of completion of all the tasks that are judged essential for the successful finalization of the EER in Mexico.

6. Site Visit Dates:

<u>Last</u>	November 22-25, 1998	<u>Next</u>	February 5-8, 1999
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7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	145,000	34,213	5,013	139,987
World Bank	0	0	0	0
Others	0	0	0	0
Total	145,000	34,213	5,013	139,987



ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	MIDDLE EAST AND NORTH AFRICA
Activity Name	LEAD ELIMINATION
Theme	ENERGY AND THE ENVIRONMENT
Project Code	5M-UE-49640
Origin of Funds	THE NETHERLANDS
Source of Funds Code	TF022185
Task Manager(s)	ELEODORO MAYORGA-ALBA

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
2/1/97	t.b.d.	n.a.	t.b.d.	t.b.d.

2. Objectives:

To act as a catalyst for initiating and implementing national action plans. The ultimate goal of the project is the adoption of viable national and, where possible, regional plans, with a clearly defined timeline for phasing out the use of lead additives in gasoline consumed in this region.

3. Principal Tasks:

- (a) Identify regional partners for the project and agree on the distribution of tasks and time table.
- (b) Carry out a regional survey. The results of the survey will help to provide a basis for identifying and selecting countries requiring technical assistance and/or studies related to eliminating lead from gasoline.
- (c) Identify those responsible for lead phase-out and bring them together to discuss the results of the survey.
- (d) Provide training in respect of how to go about formulating lead phase-out action plans.
- (e) Ensure an effective review and dissemination process, including working sessions and seminars.

- (f) Prepare country case studies. Two or three countries that can particularly benefit from case studies will be identified.
- (g) Prepare the presentation of the agreed strategies to the regional authorities.

4. Summary of Current Project Status, Issues and Actions:

Bank Staff participated to the OAPEC Seminar on the Protection of the Environment in the Petroleum Industry held in Cairo, October 5-7, 1998, and presented the LAC region experience in lead phase out and a preliminary evaluation of the responses obtained to the questionnaire.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of : 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	50,000	50,178	50,718	-718
World Bank	0	0	0	0
Others	0	0	0	0
Total	50,000	50,178	50,718	-718

8. Agreements Reached during Review Meeting of:

Awaiting decision of OAPEC members on future activities to establish exact process for project closing.



PROJECT IMPLEMENTATION FORM

Region: EAP	Country: MONGOLIA
Project Title:	COAL STOVE IMPROVEMENT PROGRAM
Theme:	RURAL AND HOUSEHOLD ENERGY
Project No. (Product ID Code)::	MN-UE-58884
Origin of Funds:	NETHERLANDS
Source of Funds Code:	TF022185
Project Manager:	RENE MASSE
Organizational Unit:	EMTEG

1. Development Objective	
Development Objective	Key Indicator
<p>(a) to reduce harmful emissions from lignite-fueled residential cookstoves;</p> <p>(b) to develop a cheap coal stove (or lignite briquette) so as to reduce energy expenditures of the poor periurban families of the Ulaan Baatar (UB).</p>	<ul style="list-style-type: none"> • Analyses and recommendations for the use of coal stove and briquettes prepared and disseminated. • Follow-up activities to identify cost-effective and affordable solutions determined.

2. Expected Outputs	
Outputs	Key Indicator
<ul style="list-style-type: none"> • Data collection and analyses/model development, • Field visit: <ul style="list-style-type: none"> - supply & consumption analyses, - model testing • Final report 	<ul style="list-style-type: none"> • An assessment technical report is prepared and disseminated, • Technical improvement proposals are designed and experimented, • A follow-up activities report (if needed) is written in a form of a bankable project.

3. Implementation Progress: (State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)

Component	Start	End
(a) make an inventory of what is known about coal stoves and coal briquettes prior to a visit;	05 - 1998	06 - 1998
(b) make a field visit to UB to collect information on (i) the consumption of household fuels, in particular lignite, with what kind of equipment, at what cost, with what kind of conversion efficiency and for which end-uses; and (ii) to possibly test an alternative model of a coal stove, depending on the outcome of item (a) and the field visit.	06 - 1998	02 - 1999
(c) based on the results of field visit, a final report will be written which will define what, if any, follow-up activities are needed. If follow-up activities are justified these should lead to an improvement dissemination project.	02 - 1999	05 - 1999

4. Expected Dates for:	Original	Revised
(State the reasons for any revision in Item 5 below)		
Project Completion (all project activities completed):	03/99	
Project Closing (all financial transactions executed):	05/99	

5. Summary of Current Project Status, Issues and Actions: (please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)

From May to June 1998, we have collected and analyzed data, especially from World Bank projects in Mongolia and from the Chinese experiences in that sector, and a technical report has been issued. From June 16 to July 11, 1998, an ESMAP mission visited the Capital city Ulaan Baatar and conducted the following activities; (i) a household energy survey; based on questionnaire 53 families were interviewed in seven ger districts; (ii) physical scientific tests on stove performance (emissions, power, turn-down ratio, efficiency), both from a typical traditional stove and an improved model; (iii) comparative cooking tests in two families using a typical traditional stove and an improved stove; (iv) a survey on the coal and fuelwood delivery mechanism; (v) a survey on stove production and the delivery mechanism of stoves, and (vi) a pre-feasibility study on production and use of coal briquettes. From September to December, we have focussed our activities on two main tracks: (a) to analyze all surveys we made during the mission and to finalize the technical report, and (b) to design new standardized components (like an improved combustion chamber to be put inside the traditional stove), new commercialized inlets able to improve the traditional stoves without replacing them. These technical proposals have been sent in UB to our partners in order for them to experiment technical improvement for a commercialized coal stoves, during this winter season. A last mission is scheduled around February 1999 to assess the field experimentation results and design an improvement dissemination project.

6. Site Visit Dates:	<u>Last</u>	07/98	<u>Next</u>	02/99
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7. Status of Funding as of 12/31/98.

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	50,000	33,164	33,164	16,836
World Bank	0	0	0	0
Others	0	0	0	0
Total	50,000	33,164	33,164	16,836



ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	MONGOLIA
Activity Name	ENERGY EFFICIENCY PROGRAM
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	MN-UE-44672
Origin of Funds	NETHERLANDS/SWEDEN CTF/DENMARK CTF
Source of Funds Code	TF022185/TF033572/TF033717
Task Manager(s)	SALVADOR RIVERA

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
01/16/96	03/30/97*	n.a.	n.a.	04/30/99

*Consultant's report.

2. Objectives:

To prepare an energy efficiency strategy and action plan for implementation in district heating and power sector.

3. Principal Tasks:

- (i) Gather and evaluate material on Mongolia's energy sector.
- (ii) Prepare Terms of References for specific and targeted analytical notes to increase revenues and reduce losses in the power sector and district heating system.
- (iii) Carryout evaluation of losses in both (i) district heating; and (ii) power systems.
- (iv) Prepare action plan with Government for presentation to donors.

4. Summary of Current Project Status, Issues and Actions:

Draft reports by consultants *was* prepared and discussed with government counterpart in July 1997. Technical notes summarizing evaluation have been prepared and *was issued to the government in May 1998*. As a follow-up, a World Bank lending operation (\$35 million) is being prepared and an appraisal will be done in early December 1998. *The project completion note, summarizing the consultant report, and updated pre-appraisal information, will be prepared in April 1999.*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	50,000	54,852	54,852	-4,852
Others	540,150	540,149	540,149	1
Total	590,150	595,001	595,001	-4,851

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	MOROCCO
Activity Name	GAS DEVELOPMENT PLAN, PHASE 2
Theme	INFRASTRUCTURE
Project Code	5MYCUN015 - MA-UE-23924
Origin of Funds	BELGIUM, CORE
Source of Funds Code	TF023893, TF023890, TF023891, TF022256
Task Manager(s)	WILLIAM PORTER, YOUNES MAAMAR

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief (Revised)	White Cover	Yellow Cover	Green Cover	ACR (final)
03/93	2/97	3/97	7/97	2/28/99

2. Objectives:

To refine and deepen the major conclusions of Phase 1 of the Gas Development Plan carried out in 1991 and presented to Moroccans in early 1992, in particular, the objectives are to:

- (a) assess the economic viability of Morocco for developing a new gas industry based on the availability of natural gas through the future Maghreb-Europe gas pipeline (GME);
- (b) evaluate the consequences of such a new scheme; and
- (c) coordinate with ESMAP's study on Institutional Development of the Energy Sector.

3. Principal Tasks:

- (a) Evaluation of gas demand for power generation in Morocco, for both new projects and the conversion of existing facilities;
- (b) Updating of the gas demand in potential industrial markets;
- (c) Updating of technical characteristics and cost estimate of a transmission gas grid; and
- (d) Analysis of consequences of the use of natural gas on other fuels markets and on refineries' operation.

4. Summary of Current Project Status, Issues and Actions:

- (a) Upon request of the Government of Morocco, ESMAP reviewed the recently updated version of the Power Development Plan prepared by the power utility ONE. This new version takes into account major additions to the power generation and transmission system, in particular, the coal-based power plants at Jorf-Lasfar, a large hydro plant at Matmata and the interconnection line with Spain.
- (b) The report considers the new projections by ONE and make recommendations concerning whether and where to build new gas-based power plants.
- (c) The White and Yellow Cover reports were reviewed in March 1997. The Green Cover was presented and discussed with the Government of Morocco in May 1997. The comments were received in October 1997 and was taken into account to prepare the Blue Cover report. *The Blue Cover report will be ready for publication by the end of February 1999.*

5. Site Visit Dates: Last Next

No further mission required.

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<u>Funding Source</u>	<u>Project Cost</u>	<u>Committed to Date</u>	<u>Disbursed to Date</u>	<u>Remaining Balance</u>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	525,407	512,619	512,619	12,788
World Bank				0
Others				0
Total	525,407	512,619	512,619	12,788

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	MOROCCO
Activity Name	GAS PRICING STUDY
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	5MYCUN017 - MA-UE-36723
Origin of Funds	UNDP/IPF
Source of Funds Code	UN002060
Task Manager(s)	YOUNES MAAMAR

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover (final)
1/94	12/94	5/97	10/97	10/98

2. Objectives:

Establish and define a gas pricing policy for Morocco, following the introduction of imported Algerian natural gas.

3. Principal Tasks:

- (a) Review of gas pricing principles to be applied in Morocco;
- (b) Definition of domestic gas tariffs;
- (c) Analysis of impact of gas pricing on fiscal revenues.

4. Summary of Current Project Status, Issues and Actions:

Consultants have been hired to carry out the first part of the study of gas pricing principles to be applied in Morocco. A preliminary presentation of the report to the Government took place during the April 1996 mission. The Consultant's report (final) on the second part of the study on fiscal issues was delivered in November 1996. The report has been delayed due to additional studies requested on the impact of fiscal revenues on pricing of gas and competitive fuels. The Yellow Cover report was drafted in May 1997 and a discussion meeting with the Moroccans

took place in late May 1997. The Green Cover report was issued in late October 1997 and the *Blue Cover report was published in October 1998. The project is now completed.*

5. **Site Visit Dates:** Last Next

No further mission required.

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	188,089	185,582	185,582	2,507
World Bank	0	0	0	0
Others	0	0	0	0
Total	188,089	185,582	185,582	2,507

ESMAP Project Summary Form

(as of December 31, 1998)

Country	NICARAGUA
Activity Name	MODERNIZATION OF FUELWOOD SECTOR
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	NI-UE-53228
Origin of Funds	TF023853
Source of Funds Code	NETHERLANDS
Task Manager(s)	RENE MASSE

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
8/97	n.a.	n.a.	n.a.	06/30/99*

* Consultant report

2. Objectives:

- (a) Develop an integrated program for the modernization of the production and consumption of woodfuels in the Managua area and its supply centers.
- (b) Minimize the cost to the economy of the supply of woodfuels and to minimize environmental damage to the natural forests and the financial cost to urban consumers.

3. Principal Tasks:

- (i) develop a comprehensive and realistic strategy for the supply of woodfuels to Managua;
- (ii) formulate the required policy framework for the implementation of this strategy;
- (iii) prepare the required investment and technical assistance program to implement the strategy.

4. Summary of Current Project Status, Issues and Actions:

Since last September, all field activities have been achieved including: (i) the production of all technical reports (see the attached list below); (ii) the formulation of an investment and

technical assistance program titled "Household Energy Project", and (iii) in end November 1998, the last scheduled mission (jointly with the World Bank Forestry Project Consultant), during which the proposal document has been discussed with Governmental representatives (MAGFOR and INE) and selected by the Government of Nicaragua was presented to the After-Mitch donors meeting in Washington, December 10, 1998. The next activity will be focussed on the promotion support to the household energy project and the dissemination of the lessons learned in Nicaragua.

We are only one month late on the initial funding and field activity timetable. It is due to the extra time we had to use for having the Prolena contract signed and the money sent in Nicaragua. Now, the project has been allocated additional funds US\$ 25,000 in December 14, 1998; this will support the next mission and the valorization of lessons learned in Nicaragua. After Mitch hurricane, the next mission will not be appropriate before February 1999. It will result a delay until April 1999.

The lessons learned have been disseminate during all the process, using all opportunities such as the six rural workshops held in August 1998, the First Forum Wood Energy in September, the comity dendroenergetic we promulgated within this project, the technical reports ready to be disseminated, the Web site of Prolena etc. As a result, the Government of Nicaragua is supporting the Household Energy Project, and INE-BID project is using the ESMAP methodology (and the same Prolena team) to get more data in other part of the country. The lessons learned can be profitable outside Nicaragua, and especially in the Central American region. We already made an exploratory mission in Honduras and we thought that, after Mitch hurricane, this activity can be extended to Honduras an Salvador. An ESMAP publication (in Spanish and in English) on the ESMAP methodology can also be of interest for these institutions, NGOs, development projects, private Cie, etc. We can also propose to hold a workshop on this ESMAP methodology (developed in Niger, ongoing in Mali, Chad, and projected in Madagascar, Nicaragua, etc.) during the Energy Week' 99, in April 1999.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	175,000	160,496	145,171	29,829
Others	0	0	0	0
Total	175,000	160,496	145,171	29,829

8. List of ESMAP technical reports:

DOCUMENTOS ESMAP ELABORADOS EN EL MARCO DE LA PREPARACION DEL PROYECTO DE MANEJO DEL BOSQUE TROPICAL SECO Y MODERNIZACION DEL SECTOR DENDROENERGETICO DE NICARAGUA

Diagnostico:

- "Programa de modernización del sector dendroenergetico en Nicaragua". Marge. Enero de 1998.

Aspectos reglamentarios y fiscales:

- "Diagnostico de los aspectos reglamentarios y fiscales que inciden sobre la leña comercial en Nicaragua". Proleña. Septiembre 1998,
- "Análisis legal y fiscal del sector dendroenergetico en Nicaragua" Marge. Septiembre de 1998.

Impacto ambiental:

- "Impacto ambiental ocasionado por el pique de leña en 5 sitios de Managua y León". Proleña. Septiembre, 1998,
- "Análisis ambiental en las zonas de extracción de leña y carbón". Marge. Septiembre 1998,

Consumos y preferencias de los consumidores:

- "Cantidades de leña comercializada en las ciudades de Managua y León". Proleña. Septiembre 1998,
- "Preferencias de combustibles en la ciudad de Managua". Proleña. Septiembre 1998,
- "Encuesta de energía domestica en el sector urbano de las ciudades de Managua y León". Proleña. Septiembre 1998. (dos tomos).

Primer Foro Nacional de Energía de la Madera:

- "Declaración oficial el foro nacional de energía de la madera Nicaragua". Proleña. Septiembre 1998

Documento de Proyecto:

- "Household Energy Project: Project Concept Document". October 1998.



Project Implementation Form

Region: South Asia	Country: Pakistan
Project Title:	Clean Fuels Project
Theme:	Energy and Environment
Project No. (Product ID Code):	PK-UE-62907
Origin of Funds:	Core/United Kingdom
Source of Funds Code:	TF020723/T.B.D.
Project Manager: Masami Kojima	Organizational Unit: EMTOG

1. Development Objective	
Development Objectives	Performance Indicator
Reduced emissions of lead and particulates from vehicles	<ul style="list-style-type: none"> • GOP accepts final recommendations made on fuel specifications, vehicle control measures and timetable. • Working group to review recommendations and implement specific action plans established.

2. Expected Outputs	
Outputs	Key Indicator
1 Petroleum sector analysis with respect to clean fuels completed: (a) refinery analysis (b) sector policy analysis	1(a) Cost of producing cleaner fuels estimated 1(b) Recommendations made for possible changes in petroleum sector policy
2 Macroeconomic analysis of the impact of fuel pricing and vehicular emission reduction measures	2 Recommendations which consider trade-offs between environmental benefits and economic impact are made with due consideration for impact on the poor
3 Analysis of particulate emission reduction options	3 Recommendations for gross emitters made
4 Health benefit analysis	4 Benefits of mitigation options calculated
5 Study findings disseminated	5 Political consensus building throughout the program, final report distributed and regional workshop held

3. Implementation Progress: (State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)

Component	Start	End
1. Refinery analysis	t.b.d.	
2. Petroleum sector analysis	t.b.d.	
3. Socio-economic impact of fuel pricing and other measures	t.b.d.	
4. Health benefit analysis	t.b.d.	
5. Analysis of fine particulate emission reduction measures	t.b.d.	
6. Publication of final report	t.b.d.	

4. Expected Dates for: (State the reasons for any revision in Item 5 below)	Original	Revised
Project Completion (all project activities completed):	t.b.d.	
Project Closing (all financial transactions executed):	t.b.d.	

5. Summary of Current Project Status, Issues and Actions: (please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)

A technical committee in Pakistan to work on this project was established and a mechanism is now in place for coordinating communication with the petroleum ministry and the key stakeholders. Consultation with technical committee members in Pakistan was held in October 1998. A questionnaire was distributed to the technical committee in early November and data collection is currently underway. Consultants' work will start once the Donor Supplement Letter has been executed and funds are available. Key dates will be determined prior to project implementation.

6. Site Visit Dates: Last 16-22 October 1998 Next t.b.d.

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Funds Received	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D	E=B-C
ESMAP	530,000	105,000	0	0	530,000
of which:					
Trust Funds	530,000	105,000	0	0	530,000
Others	0	0			0
Total	530,000	105,000	0	0	530,000

8. Comments from Management Review:

Pakistan ENERCON Project remaining balance will be transferred to this project.

ESMAP Project Summary Form

(as of December 31, 1998)

Country	PAKISTAN
Activity Name	ENERGY EFFICIENCY TECHNICAL ASSISTANCE TO ENERCON
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	PK-UE-43364
Origin of Funds	UNITED KINGDOM
Source of Funds Code	TF023711
Task Manager(s)	RICHARD SPENCER

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
03/95	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	02/99

2. Objectives:

- (i) Institution building to strengthen ENERCON's capacity to coordinate and step up its core operations, especially those such as the Training Outreach Services which have been the mainstay of ENERCON's operations since its establishment, and to guide ENERCON towards commercialization of its services and the development of a market orientated staff.
- (ii) Assist ENERCON to carry out its role as national execution agency for the UNDP-GEF funded project on 'Fuel Efficiency in the Road Transport Sector'.

3. Principal Tasks:

- (i) Finalize management structure of ENERCON on the basis of management of programmes and projects on a performance contract basis so that it can fulfill its objectives of becoming the lead implementing agency for energy efficiency and conservation programs in Pakistan.
- (ii) Strengthen ENERCON program/project execution capabilities and assist Managing Director of ENERCON to:
 - formulate and implement the plans for its internal organization,

- develop, document, and put into effect operational guidelines, procedures and systems necessary to assure performance on all aspects of program management,
 - design, develop, document and put into effect a human resources management system, and
 - investigate the potential for providing an advisory service as an identifiable program in its own right.
- (iii) Assist with the development of Training and Outreach Services including:
- identifying and analyzing needs in targeted sectors,
 - develop a proportion of existing technical reports into targeted material aimed at an identified target market sector,
 - investigate the potential for a general awareness program,
 - investigate the status of the existing library and then potential for transforming it into an inquiries bureau designed to react to the demand generated through the increasing number of programs likely to come under the management of ENERCON.
- (iv) Review and upgrade ENERCON's financial, contracting, grant administration, and procurement management systems and controls for programs to an auditable standard which will provide the levels of accountability required by its clients. The scope of work includes: (i) evaluate existing contracting and procurement procedures, (ii) determine whether there is sufficient separation in terms of controls, systems and management between program and internal ENERCON financial, contractual and procurement matters; (iii) assist ENERCON's key staff to further develop a management information system including financial reporting with EPSILON-II, procurement and contract and grants administration.

4. Summary of Current Project Status, Issues and Actions:

This activity has been closed. An Activity Completion Report (ACR) was submitted to EMTES in August 1998 for review and clearance. The ACR draws a number of lessons from the project, much of it about the conduct of complex, sensitive institutional strengthening activities. Some of the major conclusions are:

- (i) Conditions for starting the activity were not clearly stated. The TA should have been conditioned with absolute clarity on what those conditions were, their timetable and the responsibility for meeting them;*
- (ii) The problems to be addressed by the TA were neither clearly defined, nor agreed, nor comprehensive;*
- (iii) A more rigorous approach to quality at entry was required, including an assessment of the necessary conditions for a successful TA activity;*
- (iv) Delays in implementing the TA, which followed on from an earlier strategy exercise not only jeopardized its chances of success but diminished the value of the first phase;*

These issues are covered in greater detail in the ACR. The ACR will be published in February 1999.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	152,569	152,569	152,569	0
Others	0	0	0	0
Total	152,569	152,569	152,569	0



ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	PERU
Activity Name	ENVIRONMENTAL IMPACT OF HYDROCARBONS PRODUCTION
Theme	ENERGY AND THE ENVIRONMENT
Project Code	PE-UE-43320
Origin of Funds	CANADA
Source of Funds Code	TF020312
Task Manager(s)	ELEODORO MAYORGA-ALBA

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
<i>10/31/97</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>03/31/99*</i>

* Output is a draft regulation prepared with the participation of government, industry and indigenous people.

2. Objectives:

To carry out a corporative analysis of the legal, regulatory, contractual and institutional framework dealing with environmental related matters, including the socio-economic and cultural impact of oil and gas operations on indigenous people in Camisea.

3. Principal Tasks:

- (i) Examine laws, regulations, contracts as they relate to indigenous people.
- (ii) Provide a comparative assessment.
- (iii) Recommend strategy to follow-up.

4. Summary of Current Project Status, Issues and Actions:

With the assistance of a local consultant, a draft regulation to complement the sector legal framework, on industry operations in indigenous peoples lands, will be prepared through a tripartite negotiation process. A first draft has already been reviewed by government bodies and industry experts. It has been passed for comments to local NGOs and will be initially discussed with indigenous peoples representatives at 3 workshops scheduled for February 1999.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of: 12/31/98**

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D = A - C
ESMAP				
<i>of which:</i>				
Trust Funds	207,199	215,446	126,646	80,553
World Bank	0	0	0	0
Others	0	0	0	0
Total	207,199	215,446	126,646	80,553

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	PERU
Activity Name	RURAL ENERGY ELECTRIFICATION
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	PE-UE-43318
Origin of Funds	CANADA/CORE/CORE
Source of Funds Code	TF020312/TF023705/UN007650
Task Manager(s)	ANKE MEYER

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	PCR (final)
09/01/95	n.a.	n.a.	n.a.	03/99*

*Consultant report

2. Objectives:

To establish the most economic way (technology, organization) of supplying electricity to rural, isolated poor people and to carry out pilot projects for replication. Main objective is to lower the costs of electrification so more people can obtain it and projects would more easily pass economic and financial viability tests.

3. Principal Tasks:

- (i) Search for economic source of generation (grid extension, solar PV, wind, mini-hydro, diesel, biomass).
- (ii) Search for recipient organizational structure to lower costs of operation and maintenance, and possibly, investment.
- (iii) Select, inventory, evaluate low cost technologies.
- (iv) Implement 3-5 pilot cases.

- (v) Disseminate results on Workshops.
- (vi) Propose Best Practice Dissemination System.

4. Summary of Current Project Status, Issues and Actions:

The activities of the third and final phase (development and piloting of administrative models, review of legal framework for rural electrification and development of training modules and training for operators and administrators of small rural electricity operations) were finalized in September 1998. At that time, a mission took place during which the target audience and the outline for the final report were discussed with the consultants. In addition, consultations took place with stakeholders in the government and the NGO sector to initiate the process of preparing a scale-up strategy for cost-effective provision of rural infrastructure. It was proposed to present the results of the ESMAP study and discuss the strategy in a forum in Peru towards the beginning of 1999.

Summaries and conclusions will be summarized in section 4 in the next update. The delay is due to completion of third phase three months behind schedule (El Nino impacts), and change in dissemination strategy which will require an additional mission in early 1999 once the activity report is completed. The draft final report is now being reviewed.

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	178,668	184,239	156,930	21,738
Others	0	0	0	0
Total	178,668	184,239	156,930	21,738

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	PERU
Activity Name	TRAINING: ENERGY MANAGEMENT SERVICES
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	PE-UE-43319
Origin of Funds	CANADA
Source of Funds Code	TF020312
Task Manager(s)	SALVADOR RIVERA

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
10/15/95	n.a.	n.a.	n.a.	04/30/99

2. Objectives:

The objectives are to strengthen:

- (a) the Government's institutional capacity in a deregulated energy market.
- (b) consumer's capacity to develop energy efficiency programs and energy supply to rural markets. The Government has designated CENERGIA, a Government-sponsored NGO, as the main counterpart for this project.

3. Principal Tasks:

- (i) Design of hands-on training program, focusing on: (a) rural electrification; and (b) energy management services.
- (ii) Design and implementation of pilot cases.
- (iii) As an output, design of a scaled-up program for energy efficiency and rural energy.
- (iv) Organization of Workshops and study tours to disseminate results of program and acquire knowledge of best practices.

- (v) Development of business plan to establish a local ESCO.

4. Summary of Current Project Status, Issues and Actions:

First phase of training on Verification and Monitoring of Energy and Savings has been completed. *A final report has been completed by CENERGIA.* To complete the project, a business plan to establish a local ESCO development unit at CENERGIA is underway and should be completed by March 1999. In the last 6 months, one mission took place in September and October, 1998, where a revision of the draft report was conducted as well as meetings with the host industries, and prospective new industries for a larger scale, GEF co-financed, program. *Management changes at CENERGIA did slow down preliminary plans to complete the project in December 1998. Comments to CENERGIA final report has been completed. The report will be submitted for clearance to the Bank Regional office and the Government.*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	307,198	241,241	237,404	69,794
Others				0
Total	307,198	241,241	237,404	69,794

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	PERU/COLOMBIA
Activity Name	END-USE ENERGY AND EFFLUENT MANAGEMENT STRATEGY STUDY
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	PE-UE-45122
Origin of Funds	NETHERLANDS
Source of Funds Code	TF022185
Task Manager(s)	SALVADOR RIVERA

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
03/96 (TOR)	n.a.	n.a.	n.a.	03/31/99

*Reports by host industrial sites and consultants including action plan.

2. Objectives:

To assist the Industrial Associations of Colombia (ANDI) and Peru (SNI) to prepare an action plan to demonstrate state of the art techniques for plant specific end-use energy and effluent management operations.

3. Principal Tasks:

- (i) Confirmation of sites to be involved.
- (ii) Confirmation of form, cost and time-scale for a pilot programme.
- (iii) Completion of action plan to implement a demonstration programme.

4. Summary of Current Project Status, Issues and Actions:

A combined final report, including Brazil End-Use Energy and Effluent Management Strategy TA and Brazil Energy Efficiency TA Phase II - FINEP is being prepared. *The report includes the tasks above indicated but also preliminary results of work undertaken in implementation of action plans. In both countries Verification and Monitoring systems at industrial sites*

were successfully implemented. In Peru, the IDB is following-up with a TA operation. In Colombia, the IDB has also prepared a lending operation where outputs of ESMAP's work will be used at a larger scale.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
of which:				
Trust Funds	50,000	51,288	51,288	-1,288
Others	0	0	0	0
Total	50,000	51,288	51,288	-1,288



PROJECT IMPLEMENTATION FORM

Region: EAP	Country: PHILIPPINES
Project Title:	STRENGTHENING OF THE RURAL AND NON-CONVENTIONAL ENERGY DEVELOPMENT PROGRAM
Theme:	RENEWABLE ENERGY
Project No. (Product ID Code)::	PH-UE-53242
Origin of Funds:	CORE/CORE
Source of Funds Code:	UN002005/UN007055
Project Manager:	ERNESTO TERRADO
Organizational Unit:	EMTEG

1. Development Objective	
Development Objective	Key Indicator
Significant contribution of renewable energy to total energy mix in ten years.	Contribution of all RE types to Energy Mix increase by 10% in 2004 and 20% by 2009 compared to 1998 levels

2. Expected Outputs	
Outputs	Key Indicator
<ul style="list-style-type: none"> • Coherent national level strategy for renewable energy development and commercialization • Identified near-term investment opportunities in renewable energy 	<ul style="list-style-type: none"> • Report on Program Evaluation completed and accepted by DOE • Outline of specific investments with costs, timetable and financing plan prepared

3. Implementation Progress: (State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)

Component	Start	End
Initiation mission	Feb 1998	Feb 1998
Prep work by local team	Jun 1998	Jul 1998
Bank mission	Sept 1998	Oct 1998
Field & Consultant Studies	Oct 1998	Dec 1998
Workshop	May 1999	May 1999
First Draft Report	Jun 1999	Jul 1999

4. Expected Dates for:	Original	Revised
<i>(State the reasons for any revision in Item 5 below)</i>		
Project Completion (all project activities completed):	Oct 1999	
Project Closing (all financial transactions executed):	Dec 1999	

5. Summary of Current Project Status, Issues and Actions: (please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)

Main mission completed Sept 21 to Oct 3, 1998. Full support from GOP. DOE Secretary wants special attention in TA to Presidential project to electrify over 5,000 villages. Project team preparing document to use by DOE as policy framework for project.

6. Site Visit Dates: Last 9/21/98 Next 12/1/98

7. Status of Funding as of 12/31/98				
Funding Source	Project Costs	Committed	Disbursed	Remaining
		to Date	to Date	Balance
	A	B	C	D = A - C
ESMAP				
of which:				
Trust Funds	210,000	81,649	76,249	133,751
World Bank	0	0	0	0
Others	0	0	0	0
Total	210,000	81,649	76,249	133,751

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	POLAND
Activity Name	ENERGY SECTOR RESTRUCTURING PROGRAM
Theme	SECTOR REFORM AND RESTRUCTURING
Project Code	PL-UE-23735 (7POLUN012)
Origin of Funds	NETHERLANDS/UNITED KINGDOM/SWITZERLAND CTF/ DENMARK CTF/CORE
Source of Funds Code	TF023265/TF023716/TF034010/TF033978/TF024631
Task Manager(s)	PETER CORDUKES

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover.	Green Cover	Blue Cover (final)
02/93	12/97	n.a	n.a.	10/31/98

2. Objectives:

The main objective is to support the Polish government in reforming the energy sector along market lines and promote private sector participation.

3. Principal Tasks:

- (a) Assist in the establishment of a regulatory agency.
- (b) Assist in the drafting of the supporting legislation.
- (c) Study alternative natural gas import options and recommend the best one for Poland.
- (d) Organize additional studies and/or training activities required for successful restructuring of the sector.

4. Summary of Current Project Status, Issues and Actions:

- (i) **Overall Program:** The program began in early December 1992 with the preparation of a draft Energy Law. The Polish government used the draft as the basis for preparing a subsequent proposal for consideration of the energy sector entities in Poland, maintaining in that manner ownership of the process. In May 1993 ESMAP assisted the government in examining which was the best natural gas import option for Poland. The study was completed in September 1993.

- (ii) Regulatory Agency: ESMAP prepared the Activity Initiation Brief (AIB) early in 1993. However, because there was no consensus in Poland on the need for a new energy law and regulation, the start of the project was extensively delayed and it was not until about mid-1995 that Ministry of Industry and Trade (MoIT) agreed to carry out this activity. KEMA-ECC Europe, NERA, and McKena & Co. were appointed as consultants to assist an energy regulatory task force set up in Poland.
- (iii) ESMAP submitted an Inception Report in December 1995 outlining the work plan based on the key issues and priorities, detailing the deliverables and milestones. It was well received by the Ministry of Industry and Trade, and agreement was reached on the objectives, proposed methodology and timetable. In January, ESMAP held a Workshop and in June carried out the first milestone week with key Polish energy officials; (a) to inform about the project objectives, approach and timetable, (b) examine the international regulatory developments, and (c) review the key areas where decisions need to be made. ESMAP has drafted a series of Working Papers on: government roles and views, era organization issues, combined heat and power, training, and electricity, gas and oil licenses (including outline licenses).
- (iv) Following dissatisfaction expressed by the Polish (MoIT), the work of the consultants was brought to a close in December 1996. This freed up about \$170,000 which has been used to assist with the formation of the regulatory authority.
- (v) The Energy Law was signed by the President of Poland and became effective in July 1997. The president of the Energy Regulatory Authority was appointed in August and on December 4, 1997, the ERA became operational. ESMAP has provided assistance to the new regulator in establishing and organizing the ERA. Both the Ministry of Economy and the president of ERA have requested further Bank/ESMAP assistance after the ERA is established. ESMAP has prepared a new proposal outlining the future assistance now being sought. This would need to be funded as a new activity.
- (vi) Since the activity is an implementation project, a final report was published in *October 1998* to summarize the methodology and disseminate best practices. *The project is now completed.*

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Donor Funds Received	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D	E=B-D
ESMAP					0
<i>of which:</i>					
Trust Funds	1,073,612	1,117,424	1,073,612	1,073,612	43,812
Others	78,252	78,252	78,252	78,252	0
Total	1,151,864	1,195,676	1,151,864	1,151,864	43,812

8. Agreements Reached during Review Meeting of:

Unused remaining funds will be returned to the Donor.



ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	POLAND
Activity Name	NATURAL GAS UPSTREAM PRICING
Theme	SECTOR REFORM AND RESTRUCTURING
Project Code	PL-UE-48620
Origin of Funds	UNITED KINGDOM/NETHERLANDS CTF
Source of Funds Code	UN007721/TF035622
Task Manager(s)	PETER LAW

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
1/97	12/97	n.a.	1/98	8/98

2. Objectives:

The study will prepare:

- (a) A critical review of the natural gas upstream pricing policies for a number of diverse countries offering differing degrees and types of risk for domestic and foreign private investors;
- (b) A critical review of model concession agreements for these diverse countries; and
- (c) A critical review of PGNG's upstream accounting procedures and comparison with international procedures.

3. Principal Tasks:

- (a) Prepare a critical review of the natural gas upstream pricing policies for a number of diverse countries offering differing degrees and types of risk for domestic and foreign private investors and draw out experiences and lessons which would be applicable to Poland.

- (b) Identify policy options and corresponding measures which will promote the development and utilization of remote gas, low methane gas and low pressure fields for on-site power generation.
- (c) Identify and advise on changes to the model agreement (including commercial, taxation and legal conditions) which could be considered for incorporation to streamline the review and award procedures and be more attractive to domestic and foreign private investment.
- (d) Review the levels of taxation and duties for upstream equipment which needs to be imported for the exploration stage.
- (e) Review the present structure of concession blocks and propose measures to allow private oil companies a greater share in exploration.
- (f) Advise on the suitability of Production Sharing Contracts (PSCs) for attracting new investors into the Polish gas industry.
- (g) Review the current field accounting practices and advise on modifications which will ensure that they conform with internationally accepted standards.

4. Summary of Current Project Status, Issues and Actions:

The Green Cover Report was discussed with the Government in February 1998. Subsequently, a delegation from the Bureau of Geological Concessions visited Washington to transmit the detailed comments of the PGNG and the interested ministries *and were incorporated in the final report. The Blue Cover report was published in August 1998. The project is now completed.*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of: 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D = A - C
ESMAP				
<i>of which:</i>				
Trust Funds	56,266	56,266	56,266	0
World Bank	0	0	0	0
Others	29,961	29,961	29,961	0
Total	86,227	86,227	86,227	0



PROJECT IMPLEMENTATION FORM

Region: EAP	Country: REGIONAL
Project Title:	DEVELOPMENT OF A REGIONAL ELECTRICITY MARKET IN THE GREATER MEKONG SUB-REGION
Theme:	INTERNATIONAL ENERGY TRADE
Project No. (Product ID Code)::	4E-UE-58029
Origin of Funds:	CORE
Source of Funds Code:	TF020221
Project Manager:	JEAN-PIERRE CHARPENTIER
Organizational Unit:	EMTEG

1. Development Objective	
Development Objective	Key Indicator
To establish a consensus and develop strategy options for the promotion and development of power trade in the region.	<ul style="list-style-type: none"> • Establishment of a Working Group of regional experts who will carry out activities included in an Action Plan prepared at the end of the project; • Preparation of an Action Plan for investigating the development of a regional power market

2. Expected Outputs	
Outputs	Key Indicator
<ul style="list-style-type: none"> • Proceedings related to the launching workshop; • Action Plan report 	Issue date: September 1998 Issue date: January/February 1999

3. Implementation Progress: <i>(State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)</i>		
Component	Start	End
Initial Workshop	June 1998	June 1998
Workshop Proceedings	Sept. 1998	Sept 1998
Second Meeting	Nov. 1998	Dec.1998
Completion Report	First Quarter 1999	

4. Expected Dates for: (State the reasons for any revision in Item 5 below)	Original	Revised
Project Completion (all project activities completed):	03-1998	
Project Closing (all financial transactions executed):	03-1998	

5. Summary of Current Project Status, Issues and Actions: (please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)

The initial launching workshop took place in Bangkok in June 1998. It gave the opportunity to local experts:

- 1) to learn lessons from different worldwide experiences in the domain of regional power market development;
- 2) to better understand different issues that they may face in their own region, and;
- 3) to create a regional Working Group which will conduct future activities.

Two major challenges are still contemplated:

- 1) the development of an agreed Action Plan, and;
- 2) to find the financial support for implementing the Action Plan.

The workshop proceeding report has been published in September 1998.

6. Site Visit Dates:	<u>Last</u>	06/98	<u>Next</u>	12/98
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7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
of which:				
Trust Funds	140,000	92,948	56,547	83,453
World Bank	0	0	0	0
Others	0	0	0	0
Total	140,000	92,948	56,547	83,453

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	SLOVAK REPUBLIC
Activity Name	ENERGY EFFICIENCY TECHNICAL ASSISTANCE - MONITORING AND TARGETING AND FEASIBILITY OF THIRD PARTY FINANCING
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	SK-UE-40067
Origin of Funds	SWITZERLAND
Source of Funds Code	TF020012
Task Manager(s)	ANKE MEYER

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover.	Green Cover	ACR (final)
8/94*	n.a.	n.a.	n.a.	6/96** 3/99***

* Redefined 11/95; ** Report for Phase I; *** Final report for Phase II received in 9/97

2. Objectives:

The general objectives of this redefined activity are twofold: (i) demonstration of Monitoring and Targeting (M&T) techniques to stimulate the development of energy management systems in Slovakia and, (ii) feasibility of Third Party Financing (TPF) to promote the use of M&T in Slovakia. The activity has been divided in two phases: (i) Phase I: M&T set-up at host sites including training, and (ii) Phase II: Achieving the Savings and TPF Study. The activity will be finalized in 15 months from activity initiation. The particular aims of this phased activity are to:

- (a) recruit three host companies within the industrial and/or building sectors;
- (b) carry out audits to identify where additional metering is required at the host sites;
- (c) manage the installation of the M&T system into the host companies;
- (d) train the host companies how to operate the M&T system with particular regard to how to set targets and motivate their staff to achieve them;
- (e) ensure that energy saving measures are identified at the host sites such that they achieve an excellent payback period;

- (f) investigate the possibility of using third party financing (TPF) to accelerate the uptake of M&T in Slovakia;
- (g) develop a strategy to extend M&T/TPF throughout the country.
- (h) write a project report and produce some brief case study documents to publicize the M&T systems and Feasibility Study of TPF; and
- (i) organize Workshop to disseminate results.

3. Principal Tasks:

The main tasks for Phase I are:

- (i) Finalize TOR of the redefined technical assistance activity
- (ii) Select consultants and prepare contractual arrangements
- (iii) Set-up M&T at host sites, consisting of:
 - ⇒ Recruitment of host sites
 - ⇒ Initial site visits and audits
 - ⇒ Installation of M&T system and training

The main tasks for Phase II are:

- (i) Implementation of M&T in the selected host sites
- (ii) Feasibility Study for Third Party Financing
- (iii) Development of a Strategy
- (iv) Final Workshop to Disseminate Case Studies and TPF study results.

4. Summary of Current Project Status, Issues and Actions:

The experience from this M&T project will be summarized together with M&T experiences financed by EU/ESMAP in Latin America (report to be finalized December 1998).

5. **Site Visit Dates:** Last Next

No further mission required.

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	301,659	303,311	292,947	8,712
Others	0	0	0	0
Total	301,659	303,311	292,947	8,712

ESMAP Project Summary Form

(as of December 31, 1998)

Country	SLOVENIA
Activity Name	WORKSHOP ON PRIVATE PARTICIPATION
Theme	SECTOR REFORM AND RESTRUCTURING
Project Code	SI-UE-51579
Origin of Funds	CORE
Source of Funds Code	UN007721
Task Manager(s)	MANGESH HOSKOTE

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
5/97	n.a.	n.a.	n.a.	02/28/99

2. Objectives:

- (a) Assess in coordination with the World Bank group Foreign Investment Advisor Services (FIAS), the legal and regulatory requirements for the participation of the private sector in power and other infrastructure sectors.
- (b) Discuss an implementation strategy for private participation in power and other infrastructure sectors.
- (c) Disseminate best practices in competitive bidding for power projects and other infrastructure projects.

3. Principal Tasks:

- (i) In coordination with FIAS review existing and proposed legal aid regulator regime, and recommend options for private participation in the power sector.
- (ii) Participate in an Investors' Roundtable to discuss perceived risk by the private sector in infrastructure investment.

- (iii) Invest local logistics to organize and conduct a "hands on" training workshop on the contractual and financial aspects of private investment in the power and other infrastructure sectors.

4. Summary of Current Project Status, Issues and Actions:

All tasks have been conducted and *the report is being edited by a consultant and will be processed for final publication by the end of February 1999.*

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	54,000	36,465	35,325	18,675
Others	0	0	0	0
Total	54,000	36,465	35,325	18,675



Implementation Completion Report

Region: AFR	Country/Area: Southern Africa
Project Title: - Southern Africa Conference on Regional Energy Regulation Cooperation	
Project No. (Product ID Code):: 3A-UE-60797	
Project Manager: Alfred Gulstone	Organizational Unit: AFTG1

Basic Information

Development Objectives	Performance Indicator
1. Identification of the sector restructuring needed in the individual countries to promote efficient electricity markets for regional economy growth.	1. Pre-investment activities in several countries identified during the conference.
2. Optimal regulation of energy markets to optimize their efficiency and improve their sustainability.	2. Acceptance by conference participants of an Action Plan defining means, mechanisms and institutions best suited to facilitate regional regulatory cooperation.
Expected Outputs	Key Indicator
1. Improved co-operation among countries' regulatory bodies.	1. Resolution to form a regional regulators club with the objective of removing the existing cross-border anomalies in the legal and regulatory frameworks of individual countries to facilitate efficient electricity trade.
2. Establishment of regulation of the power sector in the countries where it did not exist at the time of the conference.	

Implementation Schedule

Component	Plan	Actual	
Conference	Aug 2-4, 1998	Aug 2-4, 1998	
Conference Proceedings issued	September 1998	April 1999	
Estimated Costs		Actual Costs	
Total Project Cost	ESMAP Costs	Bank Costs	Other Costs
US\$80,000	80,000	0	0
Total Project Cost	ESMAP Costs	Bank Costs	Other Costs
	16,487		

Summary of Assessments

Achievement of:	Substantial	Partial	Negligible	Not applicable
Development Objectives	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expected Outputs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implementation Schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project Budget	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MAJOR RESULTS/CONCLUSIONS: (Brief summary; include key issues on implementation experience.)

The major result of the conference was reaching participants' understanding of the necessity to identify the sector restructuring needed in the individual countries to promote efficient electricity markets for regional economy growth and to prepare projects to initiate sector restructuring in several countries.

The agreement on the need for regional regulatory cooperation was also an important result.

LESSONS LEARNED. (including process issues)

The lessons learned during the conference showed that it was very useful to provide the countries of the region an opportunity to share their views on sector restructuring in their individual countries, including the needed support on the regulatory side, and to exchange views and ideas on common problems and possible solutions. It was an opportunity to transfer a mass of knowledge about similar work done by other countries, and for the participants to learn firsthand how these countries have addressed the issues involved in sector restructuring.

DISSEMINATION. (List any publications, conferences, seminars and/or workshops.)

The conference materials including the presentations and the following discussions were published jointly by ERB Zambia and NER South Africa as the "Summary of Proceedings at the First Southern African Conference on Energy Regulatory Co-operation" and disseminated to the participants of the conference, line ministries of the participating countries, the World Bank and donors.

NEXT STEPS. (Describe follow-up steps, if any, regarding investment operations, technical assistance, etc.)

The resolution of the Conference was that its long-term output could be projects to begin sector restructuring in the countries of the region and that critical to this effort would be including other donors in the process.

The next step anticipated is the donors conference in Zimbabwe planned for March 1999 to coordinate and focus these activities.

The ICR was prepared by Ludmilla Butenko, Africa Energy Unit, and reviewed by Alfred Gulstone, Africa Energy Unit.

Preparation of this ICR was begun on February 12, 1999 after the completion of the project. It is based on material in the project file. Local counterparts contributed to preparation of the ICR by contributing a copy of the "Summary of Proceedings at the First Southern African Conference on Energy Regulatory Co-operation".

Project Manager	Alfred Gulstone	Date:
Supervisor of Project Manager	Mark Tomlinson	Date:
Dominique Lallement ESMAP Program Manager		Date:

ESMAP Project Summary Form
(as of December 31, 1998)

Country	SOUTHERN AFRICA
Activity Name	DEVELOPMENT OF AN ELECTRICITY MARKET
Theme	INTERNATIONAL ENERGY TRADE
Project Code	F6-UE-48933
Origin of Funds	CORE
Source of Funds Code	TF023706
Task Manager(s)	JEAN-PIERRE CHARPENTIER

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover.	ACR (final)
05/15/96	07/15/97 *	n.a. *	n.a. *	05/30/99

* A proceeding of the workshop was prepared. Additional follow-up support to SAPP is still in process.

2. Objectives:

Organize a regional workshop which will support the development of the Southern Africa Power Pool (SAPP) which was created officially between the twelve countries of the SADC region at the end of 1995. Such regional workshop will provide a forum for enhancing a regional cooperation program in the power sector by drawing on different worldwide experiences accumulated in different areas including: power sector restructuring, harmonization of regulatory systems, wheeling/transmission pricing structures and participation of the private sector. Upon request from the SAPP Executive Committee some limited additional follow-up support activities may be undertaken.

3. Principal Tasks:

The main tasks are:

- (i) To agree with the Executive Committee of the SAPP on the date, location and structure of the workshop;
- (ii) To define a specific and agreed program;
- (iii) To identify and invite worldwide recognized specialists with expertise in the different domains identified as of major concern for the SAPP members and;
- (iv) To organize the workshop.
- (v) To provide the SAPP Executive Committee with limited additional support upon request.

4. Summary of Current Project Status, Issues and Actions:

Upon request from the SAPP's Executive Committee, a workshop on "project finance" was organized at the beginning of the formal annual meeting of the Committee in Harare during the second week of May 1997. The objective of the workshop was to better understand the potential involvement of the private sector in the evolution of the regional power pool. A proceeding was published in July 1997. Several key issues were identified including: the compatibility of national regulatory systems, the governance of the regional coordinating center of the pool, a review of the SAPP agreements and an analysis of the potential legal status of the SAPP coordinating center. The SAPP Operating Committee needs additional external support to study the identified issues and to combine the analysis with the simulation works carried out with the University of Purdue (under US-DOE financial support) over the last six months. The remaining funding availability of the project will be used to support part of the jointly complementary effort. *A mission that was tentatively scheduled for November 1998 is foreseen for the first quarter of 1999 at the request of Africa Region because the timing will be more appropriate, its main objective will be to identify the future support requirements for the SAPP Executive Committee. It's clear that any further support will require additional funding.*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

ESMAP				
<i>of which</i>				
Trust Funds	130,000	111,051	111,051	18,949
Others	0	0	0	0
Total	130,000	111,051	111,051	18,949

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	SOUTHERN AFRICA
Activity Name	RENEWABLE ENERGY FOR RURAL ELECTRIFICATION
Theme	RENEWABLE ENERGY
Project Code	ZA-UE-41577
Origin of Funds	SWEDEN/NETHERLANDS/CORE
Source of Funds Code	UN007651/TF023851/UN007650
Task Manager(s)	ERNESTO TERRADO

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
12/95	06/30/98	n.a.	n.a.	03/30/99

2. Objectives:

To examine the potential for investments by the public and private sector in renewable energy in SADC member countries, achieve a focus on 2-3 selected countries where near-term investments are most likely, and determine further follow-up work that could advance the development into projects in the selected countries.

3. Principal Tasks:

- (i) Background Review. Develop an understanding of the goals, successes, and failures of existing renewable energy projects now under way.
- (ii) Define and provide technical assistance. A preference will be shown in providing technical assistance for projects that could stand-alone as World Bank projects or as components of such projects.
- (iii) Prepare a report of key findings, including conclusions as to investment prospects for the specific countries, types of investments, and Bank project vehicle for realizing the investment, and outstanding sector and market issues that need to be resolved.

4. Summary of Current Project Status, Issues and Actions:

Travel to Botswana revealed a very keen interest in engaging in studies and pilot efforts with the Bank. Bank regional staff and management are in agreement as to proceeding; the Botswana Power Corporation and the Ministry of Finance are in the midst of a decision to proceed.

Dialogue with RSA continues at a variety of levels, including a number of visits to the Bank by RSA officials.

The ESMAP Task Manager (Ron White) joined the Regional Task Manager in a mission to RSA and Botswana in July for the purpose of wrapping up the findings so far of this activity.

A new ESMAP Task Manager (Terrado) took over after Ron White left the Bank. It is planned to truncate the activity and prepare a report of findings so far. The possible use of the remaining project funds for a related purpose is being considered. A draft report of findings so far is being prepared by Ron White in Colorado.

Ron White was unable to deliver as promised. A research assistant has been hired to pull together all of the materials, particularly Ron White's mission Back-to-Office reports, and prepare a first draft of the completion report.

The Activity Completion Report has been completed and submitted to ESMAP management in early September 1998 for review and approval for final publication.

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
of which:				
Trust Funds	94,098	86,381	86,381	7,717
Others	0	0	0	0
Total	94,098	86,381	86,381	7,717



PROJECT IMPLEMENTATION FORM

Region: South Asia	Country: Sri Lanka
Project Title:	Energy Environment Review
Theme:	Energy and Environment
Project No. (Product ID Code):	LK-UE-63170
Origin of Funds:	CORE/SWEDEN/CORE/NETHERLANDS
Source of Funds Code:	UN007780/UN007720/UN007650/TF021629
Project Manager:	Mohan Munasinghe
Organizational Unit:	ENVDR

1. Development Objectives

Development Objective	Key Indicator
To develop an integrated strategy and identify practical policy options to address key energy-environment issues, develop appropriate analytical tools, and strengthen local capacity through collaborative work with stakeholders.	<ol style="list-style-type: none"> 1. Identify key institutional and regulatory linkages. 2. Develop energy-environment modeling network. 3. Analyze main energy-environment-economy links. 4. Quantity potential mitigation and damage costs. 5. Determine feasible policy options.

2. Expected Outputs

Outputs	Key Indicator
<ol style="list-style-type: none"> 1. Identify key institutional and regulatory linkages. 2. Develop energy-environment modeling framework. 3. Analyze main energy-environment-economy links. 4. Quantify potential mitigation and damage costs. 5. Determine feasible policy options. 6. Local capacity building. 	<ol style="list-style-type: none"> 1. Develop participatory approach 2. Build models 3. Gather data and run models 4. Gather data and run models 5. Response of policymakers to study results 6. Extensive training and use of local consultants

3. Implementation Progress: (State here the implementation schedule agreed upon in the Work Program Agreement (WPA) and any revisions or changes expected. State the reasons for revisions in Item 5 below)

Component	Start	End
4. Expected Dates for: (State the reasons for any revision in Item 5 below)	Original	Revised
Project Completion (all project activities completed):	June 2000	June 2000
Project Closing (all financial transactions executed):	August 2000	August 2000

5. Summary of Current Project Status, Issues and Actions: *(please include factors on which the above ratings for Items 1, 2 and 3, are based; where possible, refer to the key indicators)*

The launch workshop indicated in the work timetable (attached) was completed successfully in December 1998. It was attended by D. Lallement (ESMAP Manager) and M. Munasinghe (Task Manager) as well as consultants, senior decisionmakers from the energy and environment sectors, senior executives from the business community, and both consumer and NGO representatives.

6. Site Visit Dates: Last 5-18 December 1998 Next Early May 1999

7. Status of Funding as of 12/31/98

Funding Source	Project Cost	Funds Received	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D	E
ESMAP					
<i>of which:</i>					
Trust Funds	290,000	153,750	93,750	93,750	60,000
World Bank					
Others					
Total	290,000	153,750	93,750	93,750	60,000

ESMAP Project Summary Form
(as of December 31, 1998)

Country	SWAZILAND
Activity Name	SOLAR MARKET DEVELOPMENT
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	SZ-UE-56574
Origin of Funds	TF023858
Source of Funds Code	NETHERLANDS
Task Manager(s)	ROBERT VAN DER PLAS

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
05/30/97	n.a.	n.a.	n.a.	03/30/00*

*Consultant's report

2. Objectives:

To launch a program to develop the suppressed market for solar electric equipment as an alternative to extension of grid electricity into areas where this is not economically justified.

3. Principal Tasks:

- (i) Develop with the GOS the details of the program and contract a local project manager.
- (ii) Identify through ICB an equipment supplier to carry out the program.
- (iii) Monitor the program.

4. Summary of Current Project Status, Issues and Actions:

A mission took place in February 1998 to develop and agree on a work plan for the project. A coordinator has been brought on board locally. The tender documents for selecting a private firm were finalized in May and a *consortium of South African, Swazi and European firms were selected in August 1998. A contract was finally signed in December 1998 after a long delay in the administrative procedures and approval with Personnel Department after which the work started. The work*

program of the consortium should be discussed in detail and agreed with the Government, after which monitoring should be carried out. A mission is scheduled for April/May 1999.

A consultant report will be issued by the end of March 2000 and the project will be closed then.

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	175,000	158,387	33,287	141,713
Others	0	0	0	0
Total	175,000	158,387	33,287	141,713

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	TANZANIA
Activity Name	POWER LOSS REDUCTION AND DISTRIBUTION EXPANSION STUDY
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	TZ-UE-23710 (3TANUN014)
Origin of Funds	SWEDEN
Source of Funds Code	UN007720
Task Manager(s)	CHRISANTHA RATNAYAKE

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
08/28/89	06/07/91	03/04/92	05/31/93	06/30/98

2. Objectives:

- (a) To assist the Tanzanian electric utility (TANESCO) to identify and quantify sources of technical and nontechnical losses in the power system and to develop programs to reduce these losses to economic levels.
- (b) To help TANESCO develop a program for medium-term expansion of the distribution system in Dar-es-Salaam, Tanga, and Arusha/Moshi.
- (c) To train TANESCO staff in the methodologies employed in (a) and (b) above.

3. Principal Tasks:

- (i) The principal tasks are handled in three categories (leading to two separate reports: technical studies and non-technical losses):

- Immediate measures to improve system voltages (proposals for Reactive Compensation).
- Develop proposals to optimize technical losses and for the expansion of the distribution system.
- Develop programs to reduce nontechnical losses to more economic levels.

Training of TANESCO staff in all the above activities is a principal element of the project.

4. Summary of Current Project Status, Issues and Actions:

Both Green Cover reports have been completed and cleared by the World Bank Sector Operations Department. Funding for highly economical program of technical loss reduction is at various stages of finalization with Swedish International Development Agency (SIDA), African Development Bank (ADB), Japan International Cooperation Agency (JICA), and International Development Association (IDA) (the main component is to be included in IDA's VIth Power Credit were appraised). The reduction of nontechnical losses already realized by a special program instituted by TANESCO amounts to 4% of net generation. The review of the Green Cover reports with TANESCO took place in May 1993. Following discussions held in Tanzania in October 1993, a revised presentation of the network maps and spreadsheets were undertaken. *The reports have been published in June 1998. The project is now completed.*

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	765,331	765,331	765,330	1
Others	0	0	0	0
Total	765,331	765,331	765,330	1

ESMAP Project Summary Form

(as of December 31, 1998)

Country	TANZANIA
Activity Name	TA TO DOE AND TANESCO
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	TZ-UE-23711 (3TANUN018)
Origin of Funds	SWEDEN
Source of Funds Code	UN007721
Task Manager(s)	PIERRE SAVARY

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
01/30/93	03/30/97	n.a.	n.a.	03/30/99

2. Objectives:

- (a) Assist TANESCO in further consolidating, institutionalizing and expanding distribution planning techniques in zones not covered in the previous ESMAP project.
- (b) Assist TANESCO in hydro reservoir management.
- (c) Assist the Tanzania Department of Energy (DOE) and TANESCO in upgrading skills and awareness in electricity Demand Side Management (DSM) and assess the scope for DSM in selected large commercial/industrial installations.
- (d) Assist TANESCO and DOE in undertaking feasibility studies of mini-hydro projects in the isolated western and southwestern regions.

3. Principal Tasks:

- (i) Provide training to TANESCO staff in using computerized distribution planning techniques in other zones not covered under the ESMAP Power Loss Reduction and Network Development Project; identify hardware to be ordered and licenses to be obtained; enhance software to accommodate specialized tasks such as issuing construction work orders from the computerized mapping system, updating system maps and data retrieval.

- (ii) Review hydrological data and establish a credible data base; establish monthly operating policies for the operation of the Mtera-Kidatu reservoirs; establish practical procedures for medium-term reservoir management and hydro/thermal coordination.
- (iii) Review existing data and information on electricity use in large commercial/industrial buildings; conduct surveys if necessary; identify opportunities for DSM and evaluate cost and benefits and expected electricity demand reduction in the short to medium term.
- (iv) Investigate the technical and economic viability of already identified mini-hydro schemes; provide a preliminary screening and ranking of prospective schemes; prepare investment program for the development of economic projects.

4. Summary of Current Project Status, Issues and Actions:

- (i) An ESMAP mission reviewed TANESCO capability to operate computerized mapping and planning techniques. Although the area already computerized has been limited to a fifth of the medium voltage network and to a few low voltage network samples, the mission found that TANESCO staff had acquired satisfactory skills in those techniques. In order to make them profitable in the field, the mission decided to complement the equipment and the staff to apply computerization to the whole distribution network. The Power VI project will finance the equipment.
- (ii) The development of a Hydro Reservoir Management Model was discussed with TANESCO. Power & Water Systems Consultants Ltd. (UK) was selected to undertake this activity. Two PCs, peripheral equipment and software were bought and made available for TANESCO. PWSC delivered a first training session to TANESCO staff in July 1996. The TANESCO trainees could simulate short and long term operations before receiving the second training in November 1996. Consequently, they were able to ask for realistic improvements of the long-term and short-term programs. PWSC has implemented these final improvements. The software is now fully operational and provides Tanesco with estimates of power generation capability. Tanesco has consequently been able to schedule a load shedding programme well in advance of the very dry year anticipated for 1997.
- (iii) An ESMAP mission was fielded in February 1996 to review the status of TANESCO DSM activities following the conclusion of ESMAP's support in 1995. Together with TANESCO, the mission set up a proposal for follow-up assistance to translate the results of the strategy work into a comprehensive Project Implementation Plan for DSM. This Implementation Plan focuses on electricity demand management in Arusha, Dar-es-Salaam, Tanga, and Morogoro municipalities, and thereby establishes a rationalized basis for TANESCO to execute the DSM component of the ongoing Power VI Project. They also discussed the specific proposal that TANESCO will be presenting to the IEA-DSM Agreement (Annex V), including how the activities will complement capacity building requirement under the Power VI project. A mission was completed in Dar es Salaam and Arusha in May/June 1996. A program and a timetable were established to start DSM implementation in Arusha, Moshi, Tanga regions (power factor reduction, experimental time of use tariffs, energy conservation at industrial customers).
- (iv) A DSM training session was held in Arusha in June 1996 just before the IEA meeting took place. This training session included a practical training exercise to prepare DSM implementation in an industrial site. However, the October 1996 ESMAP mission made it clear that logistics and commitment were still missing to go farther on the way to DSM implementation. The mission

decided to widen the scope for DSM marketing to Dar es Salaam region large industries as a last chance to fulfill this DSM with TANESCO support. Not much progress was evident, however, at the time of the ESMAP mission in March 1997. Since early 1996, a Tanesco expert has been constantly participating in IEA Annex V on DSM technology in the marketplace.

(v) Sivaguru Water Systems Consultants from India were chosen to deliver the mini hydro prefeasibility studies. They collected data during a preparatory mission in June 1996. ESMAP and TANESCO finally decided to concentrate on isolated sites: Malagarasi, Mpanda, Ruvuma, Kikuletwa. Other sites will be briefly reviewed for a final checking as recent studies are already available for them. Three of the four sites were visited in October 1996. The initial reports show that these sites meet the required criteria for generation output at a cost of about \$1000 per installed kW. During the ESMAP mission in March 1997, the Consultant and Tanesco have agreed on the format of the final reports designed to meet the requirements of the financial community in order to secure project funding. Following a September 1997 field mission, the Consultant delivered draft feasibility reports on Malagarasi, Kikuletwa and Ruvuma sites. For this last river, they finally chose to concentrate on a Ruvuma tributary that would be less politically sensitive than Ruvuma, which is a border with Mozambique. A reconnaissance report was also provided for Mpanda. Two Tanesco engineers have received training in Bangalore. They have gone through the draft reports and made comments.

(vi) *The delay of the delivery of the submission of the mini-hydro report is due to the severe flood in the country that resulted to the delay of the final mission in the field by the mini-hydro consultant until November 1998. The report is now expected from the consultant and the task manager will be redrafting the report to produce the final report. Some of funds will be used for report writing, editing and production of the report.*

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=E-A-C
ESMAP				
<i>of which:</i>				
Trust Funds	757,284	741,056	724,556	32,728
Others	0	0	0	0
Total	757,284	741,056	724,556	32,728

ESMAP Project Summary Form

(as of December 31, 1998)

Country	UGANDA
Activity Name	POWER RESTRUCTURING IMPLEMENTATION STRATEGY
Theme	SECTOR REFORM AND RESTRUCTURING
Project Code	UG-UE-51581
Origin of Funds	CORE/SWEDEN
Source of Funds Code	TF023835/TF020618
Task Manager(s)	MANGESH HOSKOTE

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
7/98	3/99	n.a.	4/30/99	6/30/99

2. Objectives:

- (a) Assist the Ugandan Power Sector Reform Committee in assessing and evaluating commercial interfaces in a restructured power sector.
- (b) Assist the UPSRC in designing an implementation strategy for sector reform and regulation.

3. Principal Tasks:

- (i) Discuss the commercial interface between gencos, distcos, and transco and assess the regulatory implication of such interface.
- (ii) Assess the feasibility of incorporating employee share ownership plan into the capitalization of distcos.
- (iii) Conduct a prefeasibility study of integrating employee ownership including the valuation of a distco.
- (iv) Assess options to spin-off non-core activities currently performed by the incumbent electric utility. The region is awaiting Cabinet approval and this project will be launched soon thereafter.

4. Summary of Current Project Status, Issues and Actions:

An Energy Assessment was completed in 1997, and a workshop conducted in 1998. The Cabinet has reviewed the proposed Strategic Action Plan prepared by the Ministry of Natural Resources and requested assistance to review corporatization options through capitalization and employee ownership as an integral part of the power sector reform process. The Africa Region is *to determine what is the best strategy for this project.*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	99,932	5,132	5,132	94,800
Others	0	0	0	0
Total	99,932	5,132	5,132	94,800

ESMAP Project Summary Form

(as of December 31, 1998)

Country	UGANDA
Activity Name	RURAL ELECTRIFICATION STUDY
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	UG-JE-44561
Origin of Funds	SWEDEN/NETHERLANDS
Source of Funds Code	UN007055/TF023851
Task Manager(s)	ROBERT VAN DER PLAS

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
05/15/96	09/30/98*	n.a.	n.a.	04/30/99

* Consultant report.

2. Objectives:

To assist the Government of Uganda to develop a strategy in matters of rural electrification.

3. Principal Tasks:

- (i) carry out an energy demand survey
- (ii) determine needs and ability to pay for services provided by electricity
- (iii) determine the options for decentralized electricity supply
- (iv) develop a strategy to satisfy (ii) with (iii).

4. Summary of Current Project Status, Issues and Actions:

The draft report was circulated for comments within the World Bank but no comments were received. The delay is that the World Bank Africa Region fielded two missions in the energy field in Uganda, and this occupied most energy staff and the Ministry. Comments on the report are now promised by January 1999. The Government requested more time to discuss the document internally and promised to provide a new version of the document by the end of January 1999 that fully incorporates the findings and recommendations into its own sector policy. The activity completion report which

will include lessons learned will be issued upon reception of the comments and the project will be closed then.

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	170,000	170,143	170,143	-143
Others	0	0	0	0
Total	170,000	170,143	170,143	-143

ESMAP Project Summary Form

(as of December 31, 1998)

Region/Country	UKRAINE
Activity Name	INTEGRATED HEAT DEMONSTRATION PROJECT
Theme	ENERGY EFFICIENCY AND CONSERVATION
Project Code	UA-UE-53126
Origin of Funds	NETHERLANDS
Source of Funds Code	TF020796
Task Manager(s)	ANKE MEYER

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR
01/97	n.a.	n.a.	n.a.	07/28/99

2. Objectives:

Demonstration of cost-effective and energy-efficient measures within a limited part of the heat and hot water supply network as well as in residential buildings in the city of Dnepropetrovsk/Ukraine.

3. Principal Tasks:

The project consists of three phases of which ESMAP is managing Phases 1 and 3.

Phase 1

- Preparation of the detailed project cost estimates for the selected supply option and building energy efficiency measures;
- Information and education campaign for the building inhabitants and household energy consumption survey; and
- Measurement campaign in the two buildings to produce baseline energy consumption data against which future energy savings will be evaluated.

Phase 2

The actual implementation of the project will be done under a turnkey contract and will be supervised by the Dutch government agency "SENER". It will consist of:

- detailed engineering of the project
- preparation of tender documents

- preparation of the agreements with local subcontractors
- procurement of equipment and services (PSO)
- supervision of project implementation
- testing and commissioning of the equipment.

Phase 3

- Monitoring of equipment and evaluation of energy savings.
- Post-investment survey of participating households.
- Report on the results and the performance of the equipment and energy-efficiency, workshop in Ukraine to present and discuss the results of the demonstration project.

4. Summary of Current Project Status, Issues and Actions:

- *A progress report was issued after June 1998 mission. Installation of the equipment was finalized in July 1998.*
- *Phase 3, project monitoring and evaluation, started with additional training for staff of the district heating company. A measurement campaign in the apartments and a post-investment survey of the residents had been planned for the period October - December 1998. This had to be postponed for about two months to resolve disputes between the beneficiary, the international consultant and Senter, which revolve around acceptance of installations and additional budget. The results of the project will be presented and discussed during a seminar in Dnipropetrovsk, tentatively scheduled for late January 1999, with participants from national, regional and local government. Final report to be issued in July 1999.*

5. Site Visit Dates: Last Next

6. Project Completion Date (all project activities completed):
Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<u>Funding Source</u>	<u>Project Cost</u>	<u>Committed to Date</u>	<u>Disbursed to Date</u>	<u>Remaining Balance</u>
	A	B	C	B-A-C
ESMAP				
of which:				
Trust Funds	210,913	164,580	133,260	77,653
Others	0	0	0	0
Total	210,913	164,580	133,260	77,653

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	VIET NAM
Activity Name	ENVIRONMENTAL AND SAFETY ASPECTS OF THE DOWNSTREAM GAS INDUSTRY
Theme	ENVIRONMENT/ENERGY
Project Code	VN-UE-52300
Origin of Funds	DENMARK GENERAL CTF, CORE
Source of Funds Code	TF035519, TF023706, TF036494
Task Manager(s)	BENT SVENSSON

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
6/97	n.a.	n.a.	n.a.	n.a.

An article will be prepared Dec. 1998

2. Objectives:

The overall objective of the project is to transfer know-how and experience from the National Oil and Gas Company of Denmark (DONG) to Petrovietnam regarding environmental, socio-economic and safety aspects of the development and management of gas onshore treatment, LPG production, transmission, distribution and end-use. This objective will be met by carrying out the following main activities in a joint project group with participants from DONG and Petrovietnam. Since the contribution will be in the form of advice and training directly to the counterpart, no white, yellow, green or blue cover will be issued.

3. Principal Tasks:

- (a) Assess and update as appropriate to World Bank and international standards the environmental assessment reports carried out so far by Petrovietnam for the existing and

- projected gas infrastructure (this includes environmental, safety and socio-economic aspects of the downstream gas activities as well as mitigation measures).
- (b) Expand the scope of the environmental assessment to cover all projected infrastructure elements including extension of the pipeline system to industrial consumers in the Ho Chi Minh City area.
 - (c) Evaluate existing environmental and safety legislation/regulation (international and/or regional) applicable for the above-mentioned activities and facilities and recommend possible supplements of environmental and safety legislation/regulation and management systems including environmental and safety standards, technical codes and control measures.
 - (d) Evaluate existing institutional set-up related to environment and safety and recommend future institutional structure.
 - (e) Transfer of technology in environmental and safety management during execution of the above mentioned activities and by execution of a study tour and training course.

4. Summary of Current Project Status, Issues and Actions:

The project began in October 1997 and the following activities took place in the second and third quarter of 1998:

- *Study and Training Course for 17 Petrovietnam Managers in Denmark*
- *The draft report was presented to the Government and Petrovietnam in June 1998*

5. Site Visit Dates: Last: Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when all project activities are expected to be reported in Section 7 below):

7. Status of Funding: 12/31/98

<u>Funding Source</u>	<u>Project Costs</u>	<u>Committed to Date</u>	<u>Disbursed to Date</u>	<u>Remaining Balance</u>
ESMAP				
<i>of which:</i>				
Trust Funds	77,000	31,175	31,175	45,825
World Bank	0	0	0	0
Others	377,000	377,000	301,600	75,400
Total	454,000	408,175	332,775	121,225

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	VIET NAM
Activity Name	INSTITUTIONAL REFORM AND RESTRUCTURING OF PETROVIETNAM GAS COMPANY
Theme	SECTOR REFORM AND RESTRUCTURING
Project Code	VN-UE-50391
Origin of Funds	NORWAY OIL AND GAS TRUST FUND, SWITZERLAND CTF, CORE
Source of Funds Code	TF020769, TF035070, TF035071, TF022256
Task Manager(s)	BENT SVENSSON

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
6/96	n.a.	n.a.	n.a.	n.a.

Since the contribution will be in the form of advice and training directly to the counterpart, now white, yellow, green or blue cover will be issued.

2. Objectives:

The objective of the study is to prepare Petrovietnam Gas Company (PVGCC) - the company assigned the role as a Gas Trader - for the development of gas industry under the different phases of gas development. The study will focus on scenarios for the development of the gas sector, the legal and contractual framework and the organization of the company.

3. Principal Tasks:

Phase 1

A. Gas Sector

Define in detail how the downstream gas sector would develop under different scenarios for gas discoveries. This section would set a background for the organizational study.

B. PVGC: Petrovietnam Gas Company

1. Assist the Gas Company in project management, project planning and preparation.
2. Assist the gas company in the development of gas marketing, including introducing gas sales contracts to major consumers, power, fertilizers, and industries, and developing a market for interruptible gas.
3. Prepare a detailed assessment of the present organizational structure, management and procedures including performance indicators, managerial accountability and operational efficiency.
4. Assess the core business and auxiliary service units.
5. Analyze options for organizing the core business and recommend how to commercialize and corporatize the gas business subsidiary.
6. Prepare a training program for PVGC based on the team's finding during the mission. The training program should focus on improving the organization, management and operations of the company.

Phase 2

A Competence Development Program covering some key challenge areas is planned for Phase 2. An element in the program will be to link expert inputs with concrete PVGC business cases. Phase 2 will focus on three main areas: Gas commercial, Gas Infrastructure/technical expertise and LPG/Condesates. Within these areas training will be provided in natural gas sales and purchase negotiations, contracts for condensate sales and transport, LPG sales contracts and operational agreements for the terminal. Finally, an inter-functional competency, development of negotiation skills will be developed.

4. Summary of Current Project Status, Issues and Actions:

During Phase 1, training was provided in four areas:

1. Project management and planning
2. Market development, pricing and regulation
3. Marketing and gas sales contracts
4. Organizational and Institutional Development

Each subject was presented and discussed in separate groups of managers in PVGC. On-the-job training was new to the participants who were used to workshops and presentations and proved an efficient way to ensure full understanding of the subject. Discussions were directly related to their daily activities.

The company's organizational structure, management, procedures and core businesses were assessed and options for organizing the core businesses and commercializing and corporatizing the gas company were analyzed. A draft report containing recommendations on these issues was sent to Petrovietnam in September 1997.

Phase 2

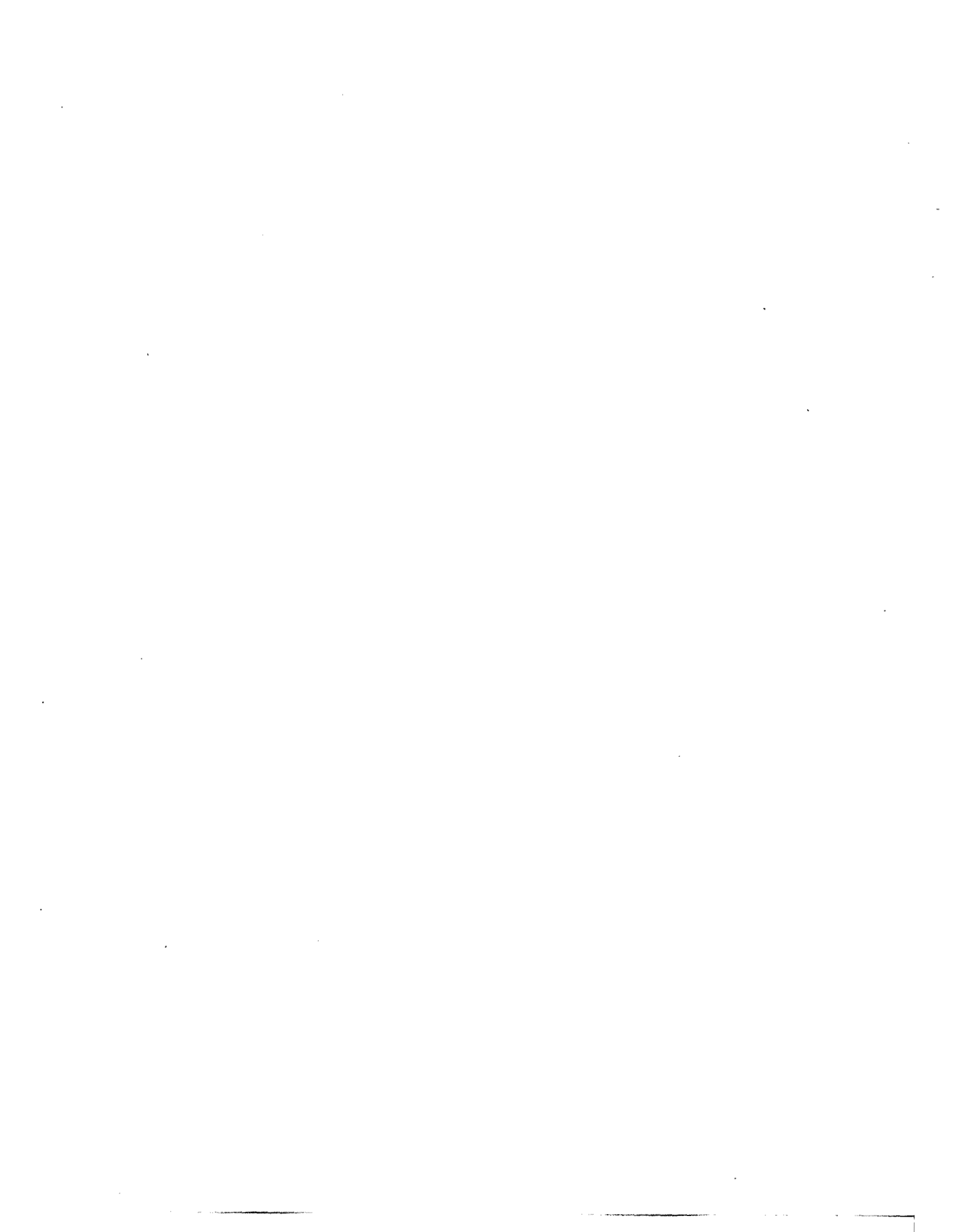
The priority areas for the second phase were discussed with Petrovietnam in June 1998. It was agreed that the second phase should focus on the areas described above. The second phase is scheduled to be implemented in January 1999.

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of: 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	66,000	43,262	40,797	25,203
World Bank	0	0	0	0
Others	131,303	84,883	84,883	46,420
Total	197,303	128,145	125,680	71,623



ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	VIETNAM
Activity Name	POWER SECTOR REGULATION AND ELECTRICITY LAW
Theme	SECTOR REFORM AND RESTRUCTURING
Project Code	VN-UE-45206
Origin of Funds	UNITED KINGDOM
Source of Funds Code	TF023712
Task Manager(s)	RANJIT LAMECH

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover.	ACR (final)
05/01/96	06/30/99*	n.a.	n.a	n.a.

*Final Draft Legislation --

2. Objectives:

To assist the Government in preparing a draft electricity law and secondary regulations. The Law will facilitate the implementation of separate arms-length regulation for the power sector.

3. Principal Tasks:

Tasks Completed

1. Formation of Steering Committee and working group
2. August -September 1996 — Drafting of Electricity Law outline and justification
3. September 1996 - Electricity Law outline completed. Law is included in the agenda for the March 1998 plenary of the National Assembly.
4. January 1997 - first draft of electricity law
5. February 1997 - second mission
6. March 1977 - second draft of electricity law
7. May 1997 - Study Tour by Vietnamese Working Group
8. June- July 1977 - Regional consultation with Provincial Peoples Committee's in Vietnam (HCMC, Danang, and Hanoi)
9. October 1997 - Review by the Legislative committee of the National Assembly
10. November, 1997 - Detail comment and Feedback received to be sent to Legal Advisers
11. End of November 1997 - Drafting of secondary legislation commences
12. April 1998 - Consultation workshop with the private sector

13. August 1998 - Mission to Vietnam with regulatory experts
14. *September 1998 - Eighth draft of the electricity Law prepared by the Working Group*
15. *October 1998 - 8th Draft under review by the Legislative Committee of National Assembly*
16. March 1999 – Revised draft prepared with a few key secondary regulations

4. Summary of Current Project Status, Issues and Actions:

The 8th draft of the Electricity Law is now under review by the Legislative Committee of the National Assembly. The initial draft of the following secondary regulations have been prepared;

- *Decree on Licensing Electric Activities*
- *Decree on Electricity Tariff*
- *Decree on Regulation of Electric Activities*
- *Decree on State Management and Professional Inspection for Electric Activities*
- *Decree on Handling Violations*

The assistance is being provided by a team of international and domestic consultants and World Bank Staff. A team of local Vietnamese lawyers will provide the necessary expertise on the Vietnamese legal system and undertake the final legal drafting. The advisory team include:

- Robert Fitzgibbons - Legal Advisor to EGAT Bangkok*
- John Rhys, Managing Director, NERA, London*
- Jon Stern, Director, NERA, London.*
- Rafael Moscote - Electricity Regulator, Panama*
- Winston Hay - Director General of Utilities Regulation, Jamaica*
- Manuel Dussan - Senior Regulatory Specialist, The World Bank*
- Ranjit Lamech - Restructuring Specialist, The World Bank (Task Manager)*

The project is now focusing on the preparation of the secondary regulations. Changes to the draft Law and additional policy advise will be provided based on the requirements of the Steering Committee. The Steering Committee has requested additional assistance to help on the secondary regulations. (see attached letter).

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	329,700	308,654	308,654	21,046
Others	0	0	0	0
Total	329,700	308,654	308,654	21,046

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	VIET NAM
Activity Name	RESERVOIR MANAGEMENT WORKSHOP AND UPSTREAM FISCAL SYSTEMS
Theme	SECTOR REFORM
Project Code	VN-UE-50390
Origin of Funds	CORE, FRANCE CTF
Source of Funds Code	TF022256, TF034924
Task Manager(s)	BENT SVENSSON

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	Blue Cover
1/97	n.a.	n.a.	n.a.	n.a.

Since the contribution will be in the form of advice and training directly to the counterpart, no white, yellow, green or blue cover will be issued. A note on issues and options will be prepared for the counterpart.

2. Objectives:

To assist the GOV in defining measures to enhance discoveries through technical and fiscal incentives. On the technical side the study will include improved reservoir management, international practice of reserve classification, and assessment and evaluation, including marginal fields. The fiscal incentives will require acceptable PSC fiscal terms, an efficient and transparent system for award and operation of contracts, and a clear, consistent gas pricing policy. Strategies for PSC terms to include: A flexible fiscal formula providing for a reasonable Government take, under a wide range of price scenarios and a Fixed Price linked to international petroleum price.

3. Principal Tasks:

Phase 1:

Oil and Gas Reserve Classification

- (a) Review of existing practices in reserve classification, assessment and evaluation.
- (b) Development of a system to express existing reserve classification into international reserve classification.
- (c) Development and implementation of a training program on reserve classification, assessment and evaluation.

Reservoir Management

- (a) An introduction to the concept of reservoir management.
- (b) A presentation of the tools available for reservoir management.
- (c) Evaluation of recovery mechanisms and reservoir development strategy.
- (d) Preparation and implementation of a program for implementation.

Phase 2:

Fiscal Incentives

The technical assistance on fiscal incentives include the following elements:

- (a) ***Analyze whether the total government take from profit sharing, royalties, taxes, and VAT is international competitive compared with fiscal terms in other countries.***
- (b) Explore the possibility of more flexible gas terms in PSC contracts to avoid delays in the exploitation of gas discoveries due to negotiations of fiscal terms for each discovery.
- (c) Analyze which of the following strategies for PSC terms that could provide the best incentives for exploration and production of oil and gas companies in terms of incentives for private exploration and development, government revenues and the development of reserves: a) a flexible fiscal formula providing for a reasonable Government take under a wide range of price and cost scenarios. The fiscal formula of subsequent gas fields could then be based on variations of this formula; and b) a fixed price linked to international petroleum prices.
- (d) ***International best practice for introduction of VAT in exploration, production of oil and gas and refining of oil products.***
- (e) Decide whether to base the contractual agreements on JV terms or PSC taking into account taxation of petroleum companies in different parts of the world and financing options for the government's share.
- (f) Identify ways to improve the transparency and timing of the bid award process.
- (g) ***How to give fiscal incentives to oil and gas development of small fields.***

Technical Incentives

The technical assistance include Reservoir management and evaluation, focusing on marginal fields:

- Analysis of reservoir properties;
- Reservoir characterization and elaboration of geological models;

- Estimates of oil and gas reserves;
- Review and definition of delineation requirement;
- *Analysis and optimization of reservoir development strategy of the various structures;*
- Preliminary estimates of field's development and operating costs;
- *Analysis of project's economics and prioritization of field development sequence; and*
- *Optimization of field development synergy.*

4. Summary of Current Project Status, Issues and Actions:

Phase 1

This phase is completed. Two workshops took place in May-June 1997.

Phase 2

The priority areas for the second phase were discussed with Petrovietnam in June 1998. It was agreed that the second phase should begin with a mission on fiscal incentives focused on the areas described above. The technical part will follow in spring 1999.

A possible combination of this project with the project on Institutional Reform and Restructuring of Petrovietnam Gas Company proved not possible because the counterparts are different: The counterpart for the fiscal systems is the Government and Petrovietnam HQ in Hanoi while the counterpart for Restructuring is the subsidiary PVGC in HCMC.

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of: 12/31/98

<i>Funding Source</i>	<i>Project Cost</i>	<i>Committed to Date</i>	<i>Disbursed to Date</i>	<i>Remaining Balance</i>
ESMAP		16,125	16,400	16,600
<i>of which:</i>				
Trust Funds	66,000	7,125	2,400	63,600
World Bank	0	0	0	0
Others	61,560	40,000	40,000	21,560
Total	127,560	47,125	42,400	85,160

ESMAP Project Summary Form
(as of December 31, 1998)

Region/Country	ZAMBIA
Activity Name	ENERGY SECTOR RESTRUCTURING
Theme	SECTOR REFORM AND RESTRUCTURING
Project Code	ZM-UE-23879 (3ZAMUN012)
Origin of Funds	SWEDEN/SWEDEN/SWEDEN/CORE
Source of Funds Code	UN007720/UN007055/UN007721/UN002005
Task Manager(s)	PIERRE SAVARY

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
06/93 **	n.a.	n.a.	n.a.	03/30/99

**Final draft Report No. ECP 009/93 was issued in September 1993. Since then, a number of technical reports have been completed (see Status of Tasks).

2. Objectives:

- (a) Following the results of the analyses conducted during a mission in June 1994 and the Government's policy to commercialize the energy sector, the objectives of this task have broadened to include:
- the design of a strategy to restructure the sector to respond to changes in the domestic, and in the case of electricity, international markets; and
 - initiate preparation of ZESCO Commercialization Study to implement required regulatory and institutional reforms and key commercialization activities.

3. Principal Tasks:

- (i) Evaluation of energy companies, fiscal revenues and consumers derived from the changes in the copper industry and external markets;
- (ii) Evaluation of regulatory framework in power and petroleum subsectors;
- (iii) Design of a sustainable strategy to respond to changes;
- (iv) Propose institutional requirements to implement agreed strategy;

- (v) Design key commercialization activity modules to restructure ZESCO; and
- (vi) Development of energy efficiency and conservation programs.

4. Summary of Current Project Status, Issues and Actions:

- (i) Preliminary working papers on the Petroleum Sector and financial situation of the Power Sector have been completed. A consultant visited Zambia in March 1994 to gather information on economic costs of supply in the power sector. An evaluation report on economic tariff levels and structure, based on cost of supply was completed in May 1994. A mission visited Zambia in June 1994 to review the current status and mechanics for future assistance. It was agreed that the proposed ZESCO Commercialization Study would review the ongoing efforts and identify key commercialization activity modules.
- (ii) It was agreed to proceed with the implementation of the DSM activity. As agreed the introductory visit of the ESMAP (DSM) Consultant took place in August 1994. ZESCO proposed to set up three DSM audit teams; one each for Northern, Southern and Lusaka Divisions.
- (iii) An ESMAP mission with a team of consultants from the Electricity Supply Board of Ireland (ESBI) visited Zambia in October 1994 to initiate the Phase I Commercialization Study. An ESMAP DSM mission visited Zambia to assist Zambian counterpart teams to implement DSM activities in February 1995 and completed the DSM activity Workshop.
- (iv) A joint ESMAP/Bank mission visited Zambia in February 1995. The mission discussed the commercialization Phase I report and identified commercialization activities for Phase II implementation that could possibly be incorporated in the proposed World Bank Power Rehabilitation Project. Final version of Phase I Commercialization Study was completed in June 1995.
- (v) A status report has been prepared on the activity has been sent for review to the Bank's Regional Office in April 1996. Implementation of financial and institutional restructuring activities would be incorporated in the power rehabilitation project being prepared by the Region. Follow-up work on DSM activity has been initiated.
- (vi) A draft activity completion report was prepared and sent to the Bank's Regional Office for review in April 1996. The World Bank Regional Office has issued comments on March 31, 1997. A report has now been prepared accordingly to be included in the white cover report.
- (vii) The DSM activity concentrates on: (a) DSM at households to accompany drastic tariff increases; (b) improvement of existing industrial boiler efficiency. International Consultants implemented surveys on each topic. The domestic survey clearly points at meter installation that should be coupled with customer's education and effort to improve quality of supply. The boiler survey were disappointing because of the incredibly low levels of fuel consumption that were registered in the national statistics. Local consultants have undertaken a sample survey and submitted a draft report by end of May 1997. This report shows that the privatization process would interfere with any large program on the boilers. It recommends that the program should be limited to carefully

selected factory now stabilized and should focus on operators' training and management awareness. Remaining questions regarding consumptions have been addressed in the consultant final report that was submitted on September 10, 1997.

- (viii) *The draft activity completion report will be submitted to EMTES in the beginning of October 1998 for review and approval for final publication of the report.*

5. **Site Visit Dates:** Last Next

6. **Expected Project Completion Date** (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. **Status of Funding as of 12/31/98:**

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
<i>of which:</i>				
Trust Funds	583,071	583,581	583,581	-510
Others	0	0	0	0
Total	583,071	583,581	583,581	-510



ESMAP Project Summary Form
(as of December 31, 1998)

Country	ZIMBABWE
Activity Name	DECENTRALIZED RURAL ELECTRIFICATION
Theme	RURAL AND HOUSEHOLD ENERGY
Project Code	ZM-UE-53421
Origin of Funds	TF023893
Source of Funds Code	BELGIUM
Task Manager(s)	ROBERT VAN DER PLAS

1. Report Preparation Stages:

(If a Blue Cover report will not be produced please indicate the type of report, e.g. Completion Report, Workshop Proceedings, to be produced and expected date of output.)

Activity Initiation Brief	White Cover	Yellow Cover	Green Cover	ACR (final)
5/96	n.a.	n.a.	n.a.	04/99*

* Consultant report

2. Objectives:

- (a) The project will develop a rural electrification strategy, and launch several small-scale pilot activities to test the feasibility of rural, decentralized electrification.

3. Principal Tasks:

- (i) Review of literature, existing experience on decentralized electrification in Zimbabwe.
- (ii) Organize pilot projects, in collaboration with NGO's, other donor agencies.
- (iii) Develop a rural electrification strategy.

4. Summary of Current Project Status, Issues and Actions:

The 6000 household survey has now been completed by a professional marketing firm in collaboration with ZESA (the national utility). A supply side survey was carried out by the Department of Energy Staff in July 1998 and preliminary reporting took place at the end of September 1998. However, much information is still forthcoming. The small rural and renewable energy fund (co-financed by the Embassy of the Netherlands) was set up on a test

basis in September 1998 to launch a few private sector demonstration projects on a commercial basis. The three pilot activities are now being implemented in the field. A draft strategy report incorporating the survey results is under preparation and is expected to be received in December 1998. Each of the three pilot activities has costs on the order of \$10K - \$40K; they are co-financed by the beneficiaries, equipment suppliers, and ESMAP/The Dutch Embassy. A small windfarm will supply electricity through a small isolated distribution grid to a business community and a school, and it will charge batteries for household use; a solar battery charging station will lease batteries for household use; and a solar system will be used to supply a tobacco curing farm and a tobacco training center with power and light.

The report will be circulated in the Bank and issued as an Activity Completion Report by February 1999.

5. Site Visit Dates: Last Next

6. Expected Project Completion Date (when all project activities are expected to be completed):
Expected Project Closing Date (when final commitments are expected to be reported in Section 7 below):

7. Status of Funding as of 12/31/98:

Funding Source	Project Cost	Committed to Date	Disbursed to Date	Remaining Balance
	A	B	C	D=A-C
ESMAP				
of which:				
Trust Funds	169,860	165,934	156,935	12,925
Others	0	0	0	0
Total	169,860	165,934	156,935	12,925

Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
E Africa **	Gas Training	2/1/97	9/97	273,000
E Africa **	Improving Efficiency of Petroleum Procurement and Dissemination	3/94	5/97	148,000
E Africa **	Regional Electricity Demand Management TA Phase II	1/15/96	3/98	100,000
E Africa	Review of Efficiency of Petroleum Pricing	3/94	7/97	50,000
E Bolivia	Household Energy Strategy Study	3/20/89	9/15/92	484,070
E Brazil	Procel T.A.	4/96	n.a.	53,300
E Brazil **	Bahia End-Use Energy and Effluent Management Strategy TA	3/96	9/97	64,400
E Brazil **	Energy Efficiency TA Phase II - FINEP	1/15/96	9/97	90,000
E Brazil **	Special Initiative on Energy Efficiency	2/97	n.a.	135,000
E Bolivia**	Energy Efficiency and Environment	3/15/94	n.a.	405,931
E Bolivia	Tax and Pricing Study	10/92	8/23/93	22,683
E Bolivia	Taxation and Pricing Study/Institutional Restructuring of Energy Sector	10/92	n.a.	381,682
E China	Commercialization of Decentralized Power Companies	11/20/93	n.a.	180,000

* Activity was completed during the current quarter.

** Activity has reached Green Cover or equivalent but continues to be reported on.

† Subsector: E = Power and energy efficiency; G = Gas and oil; H = Household and renewables; R = Reform; S = Strategy and review; T = Trade.

‡ An ESMAP activity normally starts with an Initiation Brief and is considered completed only after a Green Cover Report, or equivalent, is finalized.

n.a. = not available.

Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
E China	Energy Conservation & Pollution Control in TVE-Phase I	2/29/92	12/30/93	142,098
E China **	Institutional Strengthening and TA in the Rural Power Sector: Power Efficiency Pilot Study	3/1/92	11/30/97	317,887
E China	Zhejiang Private Power Seminar	1/22/94	None	20,000
E Central & Eastern Europe	District Heating II	12/95	n.a.	90,000
E Central & Eastern Europe	Power Sector Reform	10/96	7/7/97	34,976
E Colombia	Power Subsector Restructuring - Phase II	7/18/91	1/30/94	88,103
E Côte d'Ivoire	Power Technical Assistance	6/04/90	1/30/92	1,022,801
E Ecuador	Power System Efficiency	9/06/90	5/01/92	298,907
E Ecuador	Pricing, Interfuel Substitution, and Social Mitigation	11/20/92	3/30/94	280,000
E Ecuador	Private Sector Mini-Hydro	4/30/90	n.a.	187,483
E Ghana	Energy Efficiency TA - Phase II	1/30/94	1/30/94	100,000

* Activity was completed during the current quarter.

** Activity has reached Green Cover or equivalent but continues to be reported on.

† Subsector: E = Power and energy efficiency; G = Gas and oil; H = Household and renewables; R = Reform; S = Strategy and review; T = Trade.

‡ An ESMAP activity normally starts with an Initiation Brief and is considered completed only after a Green Cover Report, or equivalent, is finalized.

n.a. = not available.

Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
E Ghana	Industrial Energy Efficiency	3/30/89	6/09/92	321,031
E Global ^a	Argentina and the Netherlands – CNG-LNG Experience	7/97	n.a.	12,524
E Global	Carbon Backcasting Study	11/1/96	4/18/97	100,000
E Global	Empower Infobase Phase I	10/20/94	n.a.	15,000
E Global **	Energy, Transport, Environment Study	2/15/96	n.a.	28,000
E Global **	Environmental Manual for Power Development	n.a.	n.a.	455,700
E Global ^b	Environmental Pricing of Methane Release in Gas Transmission Lines	9/1/97	n.a.	0
E Global ^c	Gas Leakage from Natural Gas Operations in Developing Countries	11/1/97	n.a.	44,550
E Global **	Increasing Efficiency of Gas Distribution Networks	4/96	n.a.	124,452

^a Dropped from the work program due to not enough funds to continue the project.

^b Dropped from the work program.

^c Project closed due to not enough funds remaining to do additional work.

* Activity was completed during the current quarter.

** Activity has reached Green Cover or equivalent but continues to be reported on.

† Subsector: E = Power and energy efficiency; G = Gas and oil; H = Household and renewables; R = Reform; S = Strategy and review; T = Trade.

‡ An ESMAP activity normally starts with an Initiation Brief and is considered completed only after a Green Cover Report, or equivalent, is finalized.

n.a. = not available.

Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
E Global	1997 Energy Efficiency Roundtable	2/20/97	6/97	82,538
E Global	1997 Rural Energy Roundtable	3/13/97	6/97	62,112
E Guinea	Household Energy Strategy Study	5/1/89	9/30/92	272,132
E India	Environmental Issues in the Power Sector	3/6/95	6/30/98	1,963,066
E Kenya	Power Loss Reduction Study	03/31/91	08/31/95	408,000
E Kenya	Power Sector Reform TA	2/94	n.a.	238,000
E LAC Region	LAC Energy Pricing	n.a.	6/28/91	15,000
E Latin America	Energy Management Services	06/95	n.a.	89,789
E Malawi	Power Loss Reduction	5/16/90	9/30/92	237,406
E Mexico	Energy Efficiency Management Assistance	06/15/95	n.a.	107,587
E Mongolia **	Energy Efficiency Program	1/16/96	9/97	590,150
E Morocco	Energy Sector Restructuring Project	3/7/94	9/30/94	502,500
E Morocco	Gas Pricing Study	1/94	10/97	188,089
E Nepal	Energy Efficiency & Fuel Substitution Study	6/30/91	3/15/93	316,493

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Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector†/Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
E Nigeria	Energy Assessment	12/26/91	4/12/93	430,486
E Pakistan **	Energy Efficiency Technical Assistance to ENERCON	3/95	9/97	290,100
E Peru **	Training: Energy Management Services	10/15/95	n.a.	307,198
E Peru/Colombia**	End-Use Energy and Effluent Management Strategy Study	3/96	6/97	50,000
E Philippines	TA in Electricity End-Use Efficiency & Conservation Options (Energy Conservation)	1/6/92	n.a.	297,072
E SADC	Regional Power Interconnection Study - Phase II	6/30/91	n.a.	651,651
E Senegal	Industrial Energy Conservation	6/01/87	2/15/93	3,976,329
E Slovak Republic**	Energy Efficiency Technical Assistance - Monitoring and Targeting and Feasibility of Third Party Financing	8/94	12/97	301,659
E Tanzania	Power Loss Reduction and Distribution Expansion Study	6/07/91	5/30/93	765,331
E Tanzania **	TA to DOE and TANESCO	1/30/93	3/98	757,284
E Vietnam	Domestic Fuels Efficiency T.A.	6/1/94	9/30/97	238,950
E Vietnam	Power Sector Reform and Restructuring - Phase I	7/7/94	n.a.	446,957
E Zimbabwe	Energy Efficiency T.A.	5/30/92	4/30/94	400,000

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Completed ESMAP Activities: October 1, 1991 to December 31, 1998

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Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
G Bolivia	Natural Gas Strategy	11/30/90	12/31/92	534,961
G Bolivia	Implementation of Natural Gas Strategy	1/30/94	2/29/96	316,000
G Bulgaria	Gas Development Plan	10/93	5/31/96	349,588
G China	Gas Sector Restructuring Workshop	10/01/91	8/30/92	80,000
G Côte d'Ivoire	Gas Sector Review	8/15/91	3/31/92	131,949
G Egypt	Gas Pricing Study Phase II	3/1/94	09/30/95	92,355
G Global	Development of Small Uses of Gas	1/31/91	4/15/93	189,230
G Hungary	Gas Imports Plan	6/01/91	5/26/92	120,000
G India	Gas Import Study	9/93	n.a.	99,802
G Latin America	Lead Elimination in the Americas	2/15/96	12/31/96	396,200
G Morocco	Gas Development Plan	6/29/90	1/23/92	516,219
G Morocco	Gas Development Plan, Phase 2	3/31/93	7/97	525,407
G Mozambique	Gas Development & Environmental Impact	12/15/90	1/28/92	203,689
G Mozambique	Gas Development Plan - Phase II	10/01/92	8/01/93	270,670

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Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
G Pakistan	Natural Gas Reserves Assessment & Import Strategies	12/20/92	11/15/93	500,000
G Regional	Eastern European Gas Workshop	1/30/91	9/30/92	237,406
G Romania	Gas Development Strategy and Gas Pricing Study	10/93	8/96	637,769
H Angola	ESMAP Country Paper (ECP)	9/23/93	n.a.	29,096
H Bolivia **	Energy Strategy for Rural Sector	9/16/94	3/98	330,000
H Bolivia **	Renewables for Rural Electrification	04/01/96	6/98	85,000
H Bolivia	Household Energy Strategy	3/20/89	9/15/92	484,070
H Brazil**	Northeast Renewable Energy Identification	3/96	3/98	96,500
H Cameroon ^d	Energy Strategy	04/30/93	n.a.	426,467
H Cameroon	Household Energy Strategy Study	11/15/89	9/30/92	569,000
H Central Asia Republics	Renewable Energy	12/13/95	3/31/97	143,187
H Chad	Household Energy Strategy Study	4/15/90	5/30/93	478,478

^d Project closed. Redirect the efforts to rural energy issues through a new activity.

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Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
H China	Assessment of Opportunities for Investment in Renewable Energy	01/31/96	06/30/96	170,871
H Côte D'Ivoire	Household Gas Utilization	2/15/95	n.a.	35,000
H Ecuador	Pricing, Interfuel Substitution, and Social Mitigation	5/92	3/30/94	280,000
H Egypt **	Renewable Energy Strategy and Institutional Strengthening Study	12/22/95	3/98	113,029
H Egypt**	Solar Thermal Power Options	3/1/97	5/98	51,203
H Global	Biomass Gasifier Monitoring	5/01/86	9/30/92	962,766
H Global**	Costs of Grid Extension for Rural Electrification	6/97	n.a.	85,000
H Global	Fuelwood Pricing	1/10/89	9/30/92	e/
H Global**	Lighting Services for the Rural Poor	2/1/96	n.a.	120,100
H Global	Monitoring of Biomass Gasifiers Phase II	5/1/86	n.a.	962,766
H Global **	Solar Initiative Regional Strategy	3/1/95	9/97	161,300

e Activity conducted with World Bank's in-kind resources.

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Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
H Global	Techniques for Financing Photovoltaics	8/30/96	9/97	29,618
H India **	Urban Energy Study	8/15/93	11/15/97	198,280
H India	Windfarm Preinvestment	7/15/88	10/30/91	237,250
H Indonesia	Biomass Utilization/Rural Energy	7/01/89	12/30/93	187,135
H Jordan ^f	Renewables Assessment	6/30/98	n.a.	0
H Kenya Regional	Private Power Seminar	^g	n.a.	46,915
H Lao PDR**	Decentralized Rural Electrification	4/96	11/98	198,000
H Lao PDR	Urban Energy Demand Assessment Study	4/30/90	7/30/92	130,000
H Malawi**	Rural Energy Development	2/12/96	6/15/98	250,000
H Mali	Household Energy Strategy Study	3/15/89	2/11/92	384,615
H Mozambique	Energy Pricing and Household Energy: Electricity Tariffs Study	12/93	10/30/95	142,000

^f Project cancelled due to lack of interest in the part of the country.

^g Seminar held February 26–29, 1996.

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Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
H Mozambique	Energy Pricing and Household Energy: Sample Survey of Low Voltage Electricity Customers ^h	12/93	6/97	-
H Peru**	Rural Energy Electrification	9/1/95	n.a.	178,668
H Philippines	Household Energy Strategy	6/01/90	9/30/92	377,097
H Philippines	Non-conventional Energy Assistance Program	3/24/89	9/15/93	188,860
H Southern Africa**	Renewable Energy (RE) Strategy Study	12/95	n.a.	94,098
H Swaziland	Household Energy Strategy Study	1/30/96	10/96	77,050
H Tunisia	Renewable Energy (RE) Strategy Study	5/05/95	11/30/96	32,053
H Uganda	Energy Assessment	7/30/93	3/31/96	366,430
H Uganda	Kikagati Mini-Hydro Rehabilitation	8/30/89	6/30/92	130,000
H Uganda**	Rural Electrification Study	5/15/96	12/98	170,000
H Vietnam	Energy Strategy/Rural Development	2/28/92	9/30/93	475,800

^h A separate report was published which covered the small household expenditure survey.

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Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector†/Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
H Vietnam	Energy Strategy/Rural Energy	2/28/92	9/30/93	532,000
R Africa	Commercialization of Marginal Fields	2/97	10/97	145,656
R Africa	Power Sector Reform Symposium	3/15/95	n.a.	502,304
R Bolivia**	Assisting Regulatory Agencies following the Capitalization of the National Oil Company	1/97	n.a.	388,210
R Bolivia	Development of Regulations for the Hydrocarbon Sector	3/4/96	9/97	408,573
R Bolivia**	Power Sector Reform	2/26/93	9/12/95	359,800
R Bolivia	Preparation of Capitalization of the Oil and Gas Sector	3/22/94	4/03/95	400,000
R Brazil	Hydro and Thermal Power Sector Study ⁱⁱ	1/97	6/97	149,800
R Bulgaria	Gas Development Plan	10/31/93	5/31/96	367,200
R China ^j	Natural Gas Development Strategy	2/95	n.a.	80,924
R Egypt	Energy Sector Institutional Development	9/01/92	9/15/95	407,450

ⁱ The original title of this project was "Gas To Power".

^j Dropped from the work program; scope of work need to be changed.

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Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
R Global	Impact of Power Reform on International Electricity Trade	03/15/95	03/15/96	222,640
R Peru	Institutional Restructuring	1/31/96	4/30/96	124,000
R Poland	Energy Sector Restructuring Program	2/93	12/31/97	1,168,212
R Poland	Natural Gas Upstream Pricing	1/97	1/98	134,000
R Romania	Gas Development Strategy and Gas Pricing Study	10/31/96	8/31/96	724,200
R Slovenia**	Workshop on Private Participation	5/97	3/98	54,000
R South Africa ^k	Gas Regulation Study		n.a.	919
R Vietnam	Energy Sector Reform and Restructuring - Phase I	7/7/94	n.a.	399,435
R Vietnam ^l	Gas Development Contract Provisions	n.a.	n.a.	149,800
R Vietnam**	Power Sector Regulation and Electricity Law	5/1/96	n.a.	329,700
R Zambia **	Energy Sector Restructuring	6/93	12/97	583,071
S Bolivia	ESMAP Country Paper	n.a.	4/15/92	45,000

^k Dropped from the work program.

^l Workshop held May 20–22, 1996.

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Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
S Bolivia	(1)Taxation and Pricing Study (2) Institutional Restructuring of Energy Sector	10/92	(1) 8/23/93 (2) 9/95	381,682
S China	Assessment of Opportunities for Investment in Renewable Energy	1/96	06/96	170,871
S Colombia	ESMAP Country Paper	n.a.	4/30/92	45,000
S Ethiopia	Energy Assessment Phases I and II	1/93	4/30/95	437,252
S Gambia	Energy Sector Review	12/93	5/95	40,000
S Global	Bulk Pricing - Phase I ^{m/}	1/01/94	n.a.	95,000
S Global	Clean Coal Initiative Roundtable	12/22/95	n.a.	70,881
S Global	Empower Infobase	10/20/94	n.a.	15,000
S Global	Independent Power Projects (IPP) Roundtable	10/30/95	n.a.	33,600
S Global	Regional Interconnection ^{n/}	1/01/94	n.a.	197,000

^m Studies carried out by London Economics.

ⁿ Studies carried out by London Economics.

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(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
S Guatemala	Energy Assessment II	1/01/92	7/28/93	100,000
S India	Seminar on Power Sector Reform	07/15/93	n.a.	142,785
S Indonesia	Energy/Environment Review -Phase I	6/14/92	7/01/93	35,902
S Kenya	Power Sector Reform T.A.	11/93	n.a.	238,000
S Mongolia	Energy Sector Review	7/1/94	06/95	108,703
S Morocco	ESMAP Country Paper	n.a.	4/30/92	45,000
S Mozambique	ESMAP Country Paper	n.a.	8/20/93	45,000
S Namibia	Energy Assessment	7/31/91	9/30/92	400,000
S Pakistan	Natural Gas Study	3/1/93	n.a.	192,750
S Peru	ESMAP Country Paper	n.a.	9/30/93	65,366
S Uganda	Energy Assessment	7/93	3/6/96	366,430
S Poland	ESMAP Country Paper	n.a.	4/30/93	0 ^o

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Completed ESMAP Activities: October 1, 1991 to December 31, 1998

(by subsector—amounts in U.S. dollars)

Subsector† /Country	Activity	Initiation date	Date of Green Cover Report or equivalent ‡	Budget financed by donors
S Zambia	ESMAP Country Paper	9/01/92	4/02/93	45,000
T Central Asia	Gas Trade	11/15/95	05/15/97	1,467,079

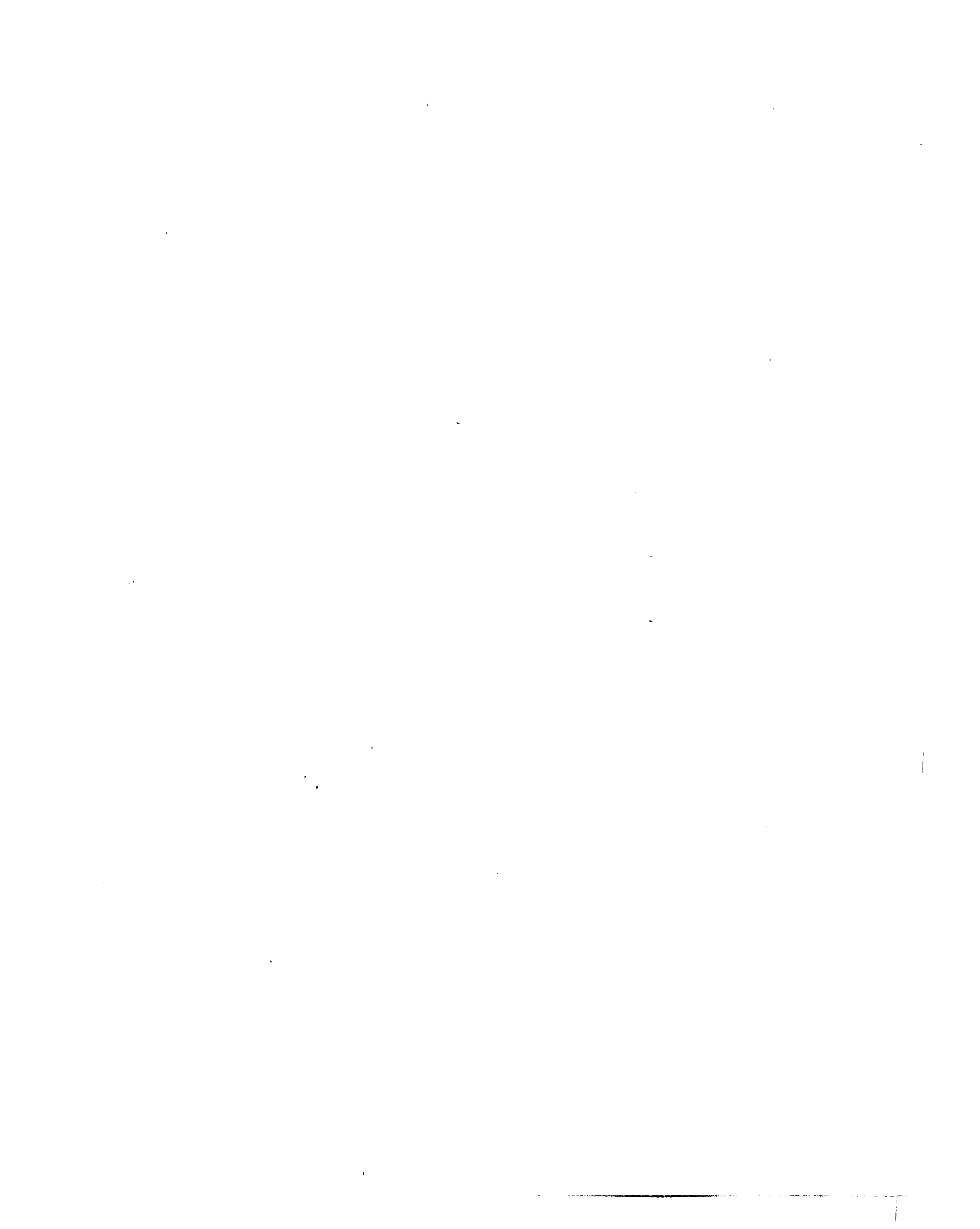
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