

**UNITED NATIONS DEVELOPMENT PROGRAMME
GLOBAL ENVIRONMENT FACILITY**

Mid-Term Evaluation

Number: 00036307

Title: Caribbean Renewable Energy Development Programme

Duration: 4 year

Countries: Antigua and Barbuda, the Bahamas, Barbados, Belize, British Virgin Islands, Cuba, Dominica, Grenada, Guyana, Jamaica, Montserrat, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Turks and Caicos¹

ACC/UNDP (Sub) Sector: Environmental/
Climate Change (200/201)

GEF Focal Area: Climate Change

GEF Operational Programme: OP #6: Promoting the Adoption of Renewable Energy by Removing Barriers and Reducing Incremental Costs

GEF Implementing Agency: UNDP

Executing Agency: CARICOM Secretariat

Starting Date: May 2004

End date: May 2008

Brief Description/Objectives: Brief Description/Objectives:

This project aims to remove barriers to renewable energy use in the Caribbean. Through specific actions to overcome policy, finance, capacity, and awareness barriers, it is estimated that the contribution of renewable energy sources to the region's energy balance will be significantly increased. Currently, renewable energy provides less than 2% of the region's commercial electricity. Due to the planned barrier removal activities, annual reductions of CO₂ emissions is expected to be reduced by an estimated 388,159 tons by the year 2007. Part of the GEF funding will be used through non-grant instruments to remove incremental risks related to RE investments, thus improving the cost-effectiveness of the GEF resource use.

¹ British Virgin Islands, Montserrat, and Turks and Caicos are not eligible for GEF support and all the costs resulting from their participation will be borne by their respective governments.

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LIST OF ACRONYMS AND ABBREVIATIONS

ACS	Association of the Caribbean States
BMZ	Bundesministerium für Wirtschaftliche Zusammenarbeit, German Federal Ministry for Economic Co-operation and Development
CARICOM	Caribbean Community
CARILEC	The Association of Caribbean Electric Utilities (St. Lucia)
CAST	College of Art, Science and Technology (Jamaica)
CC	Climate Change
CCST	Caribbean Council for Science and Technology
CDB	Caribbean Development Bank
CEAP	Caribbean Energy Action Program
CEIS	Caribbean Energy Information System
CERMES, UWI	Centre for Resource Management and Environmental Studies (Barbados), University of the West Indies
CLGM	Commercial Loan Guarantee Mechanism
CREDP	Caribbean Renewable Energy Development Programme
CREF	Caribbean Renewable Energy Facility
CRETAF	Caribbean Renewable Energy Technical Assistance Facility
CSES	Caribbean Solar Energy Society
CTCS	Caribbean Technical Consultancy Service
DCA	Development Credit Authority
DSM	Demand Side Management
EE	Energy efficiency
ESMAP	Energy Sector Management Assistance Programme
FC	Financial Co-operation
GEA	Guyana Energy Agency
GEF	Global Environment Facility
GHG	Greenhouse Gas
GOJ	Government of Jamaica
GSEII	Global Sustainable Energy Islands Initiative
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (Germany)
GWh	Giga Watt-hour
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IPP	Independent Power Producers
KfW	Kreditanstalt für Wiederaufbau (Germany)
MME	Ministry of Mining and Energy
NFP	National Focal Point
NPV	Net Present Value
OAS	Organization of American States
OECS	Organization of Eastern Caribbean States
OLADE	Latin-American Energy Organization
PDF	Project Development Facility
PCJ	Petroleum Corporation of Jamaica

PIR	Project Implementation Review
PM	Project Manager
PMU	Project Management Unit
PSC	Project Steering Committee
PTR	Project Terminal Review
REAP	Regional Energy Action Plan
RE	Renewable Energy
RET	Renewable Energy Technologies
SHP	Small Hydropower Station
SHS	Solar Home System
SHW	Solar Hot Water
SRC	Scientific Research Council (Jamaica)
SWH	Solar Water Heater
TC	Technical Co-operation
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
UWI	University of the West Indies
WB	World Bank

1. Introduction

A. Background and Context

In 1998, 14 Caribbean countries and 2 British dependencies agreed to work together to prepare a regional project to remove barriers to the use of renewable energy (RE) and thereby foster its development and commercialization. The following countries were involved:

Antigua and Barbuda	Guyana
The Bahamas	Jamaica
Barbados	St Kitts and Nevis
Belize	St Lucia
British Virgin Islands	St Vincent and the Grenadines
The Republic of Cuba	Suriname
Dominica	Trinidad and Tobago
Grenada	Turks and Caicos Islands

The population of the countries in the region is small compared to the rest of the world. There is therefore a benefit for regional cooperation and regional delivery of some energy related activities. According to the 1998 census, the group of 16 Caribbean countries participating in the Caribbean Renewable Energy Development Programme (CREDP) has a total population of 18.5 million people, ranging from extremes like Cuba that accounts for 65% of this population (12 million people) to the small islands of Turks and Caicos with only 12,000 people.

The Caribbean region is currently heavily dependent on fossil fuel combustion, with petroleum products accounting for an estimated 93 percent of commercial energy consumption. Conventional methods of electricity production through fossil fuel plants are among the most significant contributors to air, land and water pollution. They are the primary source of greenhouse gas (GHG) emissions, and a major cause of a balance of payments problem. At the same time, the expansion of electricity generation is a key aspect to economic development in the Caribbean countries. Cuba and Trinidad and Tobago possess the largest installed capacities, 4300 and 1253 MW, respectively. Since the Caribbean region has relatively high electricity coverage, off-grid RE systems for rural electrification would apply only for a small group of countries such as Guyana, parts of Belize, and Suriname.

Caribbean countries are relatively small and insular which often indicates their vulnerability. This structural vulnerability affects Caribbean countries' productivity, development and cooperation policies that have brought special attention to Small Island Developing States. Most Caribbean countries are net importers of energy which is almost entirely in the form of petroleum. Income elasticities of energy demand are high which results in a faster growth of energy imports than Gross Domestic Product. This makes balance-of-payments management progressively difficult as the national economy expands. Energy imports have, therefore, become a critical element in the countries' of the Region balance of payments management. Generally, in the Region, the patterns of energy demand in the countries are largely influenced by the structure and stages of economic development.

In the business-as-usual scenario, renewable energy technologies (RETs) are likely to provide less than 2 percent of the region's commercial electricity by 2015. The baseline scenario showed that in 1997 the total commercial electricity generation in the 16 Caribbean countries was about 23,000 GWh of which 93% came from fossil fuels, resulting in emissions of approximately 21 million tons of CO₂. Despite the Caribbean's substantial RE resources, exploitation lags far below their potential, due to policy, financing, capacity and awareness barriers.

The Caribbean Renewable Energy Development Programme (CREDP) is a four-year project, financed by the Global Environmental Facility (GEF) with additional support provided by the Government of Germany through its aid agency the GTZ. The UNDP is the GEF Implementing Agency and the CARICOM Secretariat is the Executing Agency.

RET considered in CREDP include grid-connected renewable power (e.g. wind farm, bagasse cogeneration, and small hydro), renewable rural electrification (e.g. photovoltaics), and solar water heating. RET is particularly pertinent to developing countries, where climatic conditions, such as sunlight, and infrastructure arrangements favour its expanded use. Thus, some would argue that Caribbean countries could leapfrog across the entire stage of energy sources to a RET development path. The irony, however, is that while the more significant opportunities for utilizing RET now lie heavily in the developing countries, it is the developed countries that have access to the technology and financial resources to utilize RE sources. Few of the governments in the Caribbean region have developed policies to promote the use of RET, or have even assessed their inventories of renewable resources. Thus it is the aim of the project to provide the means of doing so.

The project has four immediate objectives as follows:

IMMEDIATE OBJECTIVE 1: Supporting the implementation of policies, legislation and regulations that create an enabling environment for renewable energy development

IMMEDIATE OBJECTIVE 2: Demonstrating innovative financing mechanism for renewable energy products and projects

IMMEDIATE OBJECTIVE 3: Build Capacity of select players in the renewable energy field

IMMEDIATE OBJECTIVE 4: Improved regional renewable energy information network

The Caribbean countries participating in the Project are: The Bahamas; Barbados; Belize; The Republic of Cuba; Dominica; Grenada; Guyana; Jamaica; St. Kitts and Nevis; St. Lucia; St Vincent and the Grenadines; Suriname; Trinidad and Tobago; and the Turks and Caicos Islands. These countries, according to the 1998 census, have a combined population of 18.5 million people.

B. Objectives of CREDP

The Project focuses on the removal of the barriers to renewable energy in the Caribbean Region. Among the main barriers highlighted were policy, finance, human and institutional capacities, awareness and information. These barriers were recognized to be interrelated and cannot be removed as independent components. The project is expected to contribute to the reduction of use of fossil fuels by allowing utilities and private investors to economically develop renewable energy projects in areas such as wind, hydropower, geothermal, biomass and to some extent solar options for power generation with significant impact on the national energy balance, thus reducing GHG emissions.

The main objectives of the Project are:

- Supporting the implementation of policies, legislation and regulations that create an enabling environment for renewable energy development;
- Demonstrating innovative financing mechanisms for renewable energy products and projects;
- Building the capacity of selected players in the renewable energy field;
- Putting in place an improved regional renewable energy information network.

II. Purpose of the Mid-Term Review (MTR)

A. Objective

The objective of the mid-term review is to enable the participating donor countries, UNDP, CARICOM Secretariat and the other partners associated with the Project; The Bahamas; Barbados; Belize; The Republic of Cuba; Dominica; Grenada; Guyana; Jamaica; St. Kitts and Nevis; St. Lucia; St Vincent and the Grenadines; Suriname; Trinidad and Tobago; and the Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (Germany) (GTZ), to assess the progress to date and to take decisions on the future orientation and emphasis of the project during its remaining time.

The evaluation attempts to determine, as systematically and objectively as possible, the relevance, efficiency, effectiveness, impact and sustainability of the project. The evaluation assesses the achievements of the project against its objectives, including a re-examination of the relevance of the objectives and of the project design. It also identifies factors that have facilitated or impeded the achievement of the objectives. While a thorough review of the past is in itself very important, the in-depth evaluation leads to detailed recommendations for the future.

B. Key Issues to be Addressed

The mid- term evaluation addresses the following issues:

- Review the relevance of the Project to regional development priorities and needs; clarity and feasibility of project objectives (including targets); prospects for sustainability; quality and adequacy of project strategy (including logical consistency, clarity of assumptions and risks, quality of external relationships, cost-effectiveness; and the quality of participatory processes and support to strengthening beneficiary countries/regional organizations);
- Make an overall assessment of Project cost effectiveness. Assess the achievements of the development objectives as well as the project's outputs in relation to the inputs, cost, and implementation;
- Appraise the effectiveness of the Project implementation actions in addressing the main barriers to renewable energy development in the Caribbean;
- Assess the appropriateness and effectiveness of the log frame in providing benchmarks for the management and implementation of the Project;
- Assessment of the approach to building partnerships in the implementation of the Project;
- Assess the efficiency of Project organization and management with respect to its size and composition, organizational structure, personnel management and policy, the qualifications of Project staff and consultants, reporting relationships, effectiveness of the M&E system (in defining performance indicators and collecting and analysing monitoring data on project progress);
- Assess the relevance and effectiveness of technical assistance and training given in relation to design objectives, and the extent to which they have been programmed based on needs assessment, and followed up on to determine their impact;
- Assess the quality of cooperation with key country and regional institutions and effectiveness of coordination mechanisms and contribution to timely decision making and problem solving;
- Analyse which factors and constraints have influenced project implementation, including technical, managerial, organizational, institutional and socio-economic policy issues, in addition to other external factors unforeseen during design;
- Assess the prospects of the primary and secondary stakeholders and host institutions for sustaining impacts after termination of the project, taking into account old and new assumptions and risks;
- Identify where Project design needs adjusting/reorienting in order to increase its effectiveness in reaching the target groups. This includes proposals to adjust the project objectives and strategy, activities, budget and inputs, project management, organizational/institutional set-up and implementation plan;

- Assess the role of CARICOM Secretariat as the Executing Agency in terms of quality of supervision, ability to anticipate problems and extent of implementation support, adequacy of reporting, recommendations and effectiveness of follow-up on recommendations. Identify how this has affected project performance;
- Assess the quality of monitoring and support provided by UNDP as the GEF Implementation Agency and other GEF units and make recommendations, as appropriate, for improvement;
- Highlight lessons learned from the activities and initiatives undertaken during implementation of the Project that can benefit the project in its remaining lifespan.

C. Methodology

Work plan and Initial Meeting

The MTR Team prepared a proposed Work Plan (See Appendix A) and circulated it to the UNDP, the CARICOM Secretariat, and the CREDP Project Management Unit (PMU) three working days prior to the initial meeting. The MTR Team presented their approach to the UNDP and CARICOM Secretariat at an initial meeting in Georgetown, Guyana on December 5, 2006.

Desk Review

The MTR Team reviewed the project documents, the project inception report, work plans, progress reports, audit reports, steering committee reports, and other relevant documentation to assess achievements to date (See documents reviewed in Appendix B).

In-person Interviews

From December 4 through December 20, the MTR team conducted interviews with key stakeholders in the CREDP Project. To maintain confidentiality and to allow for open frank exchanges at the data gathering stage the CREDP PMU, the executing agency and UNDP were not present during these meetings, video and teleconferences.

Personal interviews were held with the following groups and individuals:

1. The CARICOM Secretariat
2. CREDP Project Management Unit (PMU) in Guyana
3. The Chairman and members of the CREDP Project Steering Committee
4. The Project manager for the CREDP/GTZ companion program
5. The Secretariat of the Organization of Eastern Caribbean States, OECS,
6. The Caribbean Electric Utility Association, CARILEC

7. The University of West Indies
8. Country Focal Points

The MTR Team presented their interim findings and recommendations to UNDP Guyana Country Office, UNDP/GEF office, the CARICOM Secretariat, and the PMU on December 12.

III. Executive Summary and Key Recommendations

A. Overview

The Mid-Term Review (MTR) has found the CREDP project seriously behind schedule and in danger of failing to meet several fundamental objectives, milestones and outputs by project conclusion. After more than two years of operation, the PMU could not generate a critical mass of developers and sponsors for CREDP funds and resources and has yet to put into operation key components of CREDP project. To address this situation, the CARICOM Secretariat, PMU, CREDP Project Steering Committee (PSC) and UNDP must take immediate action to revise, refocus and reenergize the CREDP project.

The policy component of CREDP did not move forward as envisaged. After more than two years of operation, CREDP has yet to expend funding for policy initiatives in any of the CREDP participating countries. A Regional Policy Development Advisory Facility to assist participating governments in initiating coherent policies to promote RE has not been formally established. National Energy Policy Advisory Committees to be established in each country have not been created. Representatives from four countries expressed concerns that it is difficult to access policy funding and that regional resource personnel are not being utilized.

The innovative financing component of the Project is in similar condition. The Renewable Energy Project Development Facility (CRETAF), a keystone of the CREDP project, is not yet operational. The operational guidelines and accounting procedures have not been formally adopted, and none of the \$1.6 million established for Project development has been deployed since project inception². In contrast, the GTZ companion program has identified 6 projects for development, committed more than 65% of project development funds, and has established a clear path forward for implementation and financing of these projects.³

Two other elements of the innovative financing component of the Project, the Caribbean Renewable Energy Fund (CREF), and the Guaranteed Loan Program have not been established. Although discussions with possible sources of funding were engaged early in the CREDP program, no concrete action has been taken in several months and the likelihood of establishing a

² It was envisaged that the CDB was to implement this financing mechanism withdrew at the beginning of the project, thus resulting in a re-assignment of responsibilities to the PMU.

³ GTZ workload was lighter in volume and substance; (i) GTZ worked with 5 countries as against CREDP/UNDP's 13; (ii) GTZ pre-selected its technical consultants from a wider resource pool and, (iii) had direct management of project funds.

CREP or the Guaranteed Loan Program in the remaining 18 months of operation is very doubtful.

The capacity building component of the CREDP project is intended to target key actors in the field of RE development including government policy-makers, entrepreneurs, financiers, students and craftsmen such that RE technologies are considered as viable alternative options to conventional technologies, and that projects are developed within a facilitative business environment. Training activities have been undertaken in support of attainment of all of the outputs desired. Performance to date, as measured by the indicators in the Logical framework, reflects satisfactory progress with some targets exceeded in certain areas.

Efforts to establish an improved regional energy information network have progressed in certain areas and need additional focus in others. Efforts to transfer as much of this responsibility to CEIS should be pursued to allow the PMU to focus on other Project objectives.

B. Objective # 1: Policy and Regulatory Reform

This component contains activities to set up the institutional and other necessary arrangements for the removal of regulatory and policy barriers and to create an enabling environment for renewable energy (RE) development. The Project Document calls for the establishment of a Regional Policy Development Advisory Facility to assist participating governments in initiating coherent policies to promote RE. It also calls for the creation of National Energy Policy Advisory Committees, to be appointed by each government, to support implementation of the policy approaches suggested by the Regional Policy Development Advisory Facility. The PMU Project Manager together with consultants hired as required to act as the policy advisors and provide a wide range of advisory services to participating governments.

This element of the Project has been underutilized by participating countries, and progress toward institutional development has been limited. Only one country, Barbados, has made a formal request for policy assistance.

The fact that no National Energy Policy Advisory Committee has been established is attributed to two weaknesses in the implementation modality. First, there is a total reliance on local focal points to move the processes forward, rather than senior government officials at key Ministries. Second, CREDP/PMU's role is passive, as assistance is provided only in response to requests. It is to be acknowledged that policy development is ultimately the responsibility of national governments and that Letters of Commitment and interest were given prior to commencement of CREDP activities. However, a proactive stance is needed to help governments translate their interest in the project into effective demand for CREDP assistance in order to move the process forward. The National Committees are required to be important actors in energy policy development in their respective countries. Accordingly, unless these Committees are formed improvements in the enabling environment at the country level will be hampered. . The CARICOM Secretariat shares the view that dialogue should be strengthened with Member States on the further implementation of the project but would also like to highlight that the approach to national policy development is the prerogative of Member States.

Another major shortcoming in the project strategy is that it does not allow for the continuous dialogue between the CARICOM Secretariat/CREDP/PMU and the countries. This is a critical requirement for initiating and maintaining momentum, since policy development involves many stages including identification of needs, the definition of policy, decision by policy makers through various governmental procedures, consultation of stakeholders, and drafting and eventual passage of legislation. Finally while the Inception Report and the Logical Framework recognize the importance of the Ministries, the National Committees and the Focal Points, no provision has been made for ensuring their functional inter-relationships with CREDP/PMU. Several Focal Point representatives expressed a strong interest in greater attention to policy reform and legislative initiatives. The PMU has been working with the National Focal Points in the preparation of a Matrix on the status of “CREDP National Energy Policy Baseline Study”. The findings, as revealed in the matrix, showed that policy process does not necessarily begin with the establishment of a national energy committee.

The PMU and CREDP/GTZ have been collaborating on CREDP implementation. At present the PMU and CREDP/GTZ are collaborating with the OECS secretariat to convene a policy development workshop for OECS states.

Recommendations:

1. CREDP/PMU and the CARICOM Secretariat should take a more proactive approach to policy implementation initiatives.
2. Dialogue, led by the CARICOM Secretariat, should be initiated with member countries at the Ministerial level to secure commitment and support to policy development, the establishment of National Policy Advisory Committees and the focused involvement of the focal points.
3. The CREDP/PMU should assess each member country’s status with respect to the development of energy policy reform and strategic plans and identify specific initiatives CREDP could undertake to help move reforms forward.
4. CREDP/PMU should immediately compile a comprehensive list of national institutions, industry representatives and experts in each country that could be engaged in the National Advisory Committees.
5. The PMU should coordinate policy initiatives with GTZ/CREDP and focus on countries where GTZ/CREDP has not been active.
6. It is unlikely that significant policy reform can be initiated by CREDP in all participating countries by the end of the Project. The PMU should therefore focus reform expenditures in those countries that express the strongest interest in policy reform on a first-come, first-serve basis.

C. Objective # 2: Innovative Finance Mechanisms

This component relates to the financial barriers to RE project implementation in the region. At the end of the PDF Block B activities, it was concluded that there was a need for significant technical assistance in preparing projects for bank financing and that creative financial instruments could help facilitate implementation of RE projects.

Caribbean Renewable Energy Fund (CREF)

The purpose of this fund was to provide \$20 million in debt financing for RE projects in the region. Efforts to date have focused on discussions with the Inter-American Development Bank (IDB), the International Finance Corporation (IFC), the European Investment Bank (EIB) and other international financial institutions.

Recommendation:

Continued efforts to establish CREF should be terminated immediately for the following reasons:

- It is doubtful that such a fund could be created in the remaining timeframe for the CREDP project.
- Funding for clean energy and renewable energy projects has grown considerable since the project inception reducing the need for a special fund in the region.
- The Caribbean Development Bank has indicated an interest in funding RE projects in the region if they meet bankable standards.
- Continued efforts by the PMU on this activity diverts resources from more immediate and pressing needs of the CREDP project.
- Creation of investment funds is outside the core competence of the PMU and CARICOM Secretariat.

Guarantee Loan Program

This activity in the Project Document was predicated on the use of USAID's Development Credit Authority (DCA). Deployment of the DCA requires a commitment of resources from the USAID's regional budget which was been realigned to deal with HIV and related health matters. USAID is no longer in a position to provide support for this effort.

Recommendation:

This element of Objective # 2 should also be terminated to allow greater allocation of PMU resources to attainment of more immediate and achievable goals.

Caribbean Regional Energy Technical Assistance Facility (CRETAF)

This activity calls for the establishment of a \$1.6 million project development facility. It is the key element of the innovative finance component of the Project. To date no funds have been expended for this purpose and certain operational elements of the CRETAF remain to be resolved.

Recommendation:

CREDP should refocus considerable effort and resources to finalizing the operational elements of the facility in the very immediate future and generate deal flow for the CRETAF. In this regard, the PMU should focus activities in countries where the GTZ has not been active. Certain

modifications to the CRETAF design should also be implemented including the following:

- The limit on loan amounts should be increased from \$150,000 to \$250,000.
- The repayments terms should be standardized to avoid accusations of political favouritism as a result of variances in loan terms among applicants.
- The selection of technical advisors to perform CRETAF supported studies and activities should be done through the applicant/sponsor as a preferred method of procurement to expedite implementation of the CRETAF program.

Project Pipeline

The Project Document contained a list of 23 potential RE projects in the region. This pipeline was intended to be a representative sample of RE projects in the region and to serve as deal flow for the CRETAF and CREF. Some of these projects have advanced as a result of support from the CREDP companion program supported by the German government's GTZ program. None of the other project sponsors have approached CREDP for assistance.

Recommendation:

A project pipeline assessment report should be completed in the next 60 days that includes the following information:

- Status of project development
- Identified measures needed to move projects forward
- Specific assistance that CRETAF could provide to move projects toward financial closure

Clean Development Mechanism

This element of the CREDP program is moving forward effectively through a partnership arrangement with the IDB. The partnership between the PMU and IDA in this instance is an excellent example of leveraging CREDP resources to achieve Project objectives.

D. Objective # 3: Build Capacity of Selected Players in the Renewable Energy Field

The CREDP project calls for capacity building to deal with various aspects (both human resources and physical resources) in the area of RE including appropriate policy and financing mechanisms, renewable energy resource assessment, project development approaches, equipment design, installation and servicing, etc., using different kinds of teaching/lecturing such as summer schools, workshops, and post-graduate courses. The capacity building programs target different kinds of key players in the field of RE development, including project developers, financiers, engineers and technicians, government policy makers and planners, utilities staff, students, craftsmen, etc.

In the Project Inception Report and the Logical Framework four outputs are identified as the conditions that will lead to the achievement of Objective 3. They are as follows:

1. The capacity of the staff of utility companies and public sector agencies to evaluate and assess RE technologies strengthened;
2. Private companies, RE technology manufacturers and local banks trained in evaluating proposals;
3. A regional initiative to introduce solar water heater (SWH) into the Tourism Sector established;
4. Public educational institutions trained in RE technologies.

Training activities have been undertaken in support of attainment of all of the outputs desired. Performance to date, as measured by the indicators in the Logical framework, reflects satisfactory progress with some targets exceeded.

Recommendations

While the progress to date has been satisfactory, there is a need to maintain the momentum towards the achievement of the capacity building objective. It offers the potential for sustainability after the project comes to an end. Focus should be placed on expansion, and institutionalization, of training through those tertiary and secondary level institutions offering technical studies, and where curricula can be adapted or introduced. In this regard the Evaluation Team recommends that:

1. CREDP/PMU should engage in a dialogue with regional institutions at the tertiary and secondary levels, with a view to designing and establishing training courses in RE.
2. CREDP/PMU should adopt the use of a questionnaire for a course assessment at the end of each training session, and seek to establish a methodology for assessing the impact of the training provided in building capacity.
3. More avenues for training through apprenticeship should be explored.
4. CREDP/PMU should consider establishing a special intensive training program for public officials in the area of renewable energy policy and project implementation.

E. Objective #4: Improved regional renewable energy information network

This activity is designed to strengthen institutional support to and linkages with existing national networks such as sustainable development councils, climate change committees and appropriate national energy committees. It also calls for the creation of a Web page based RE access point including CEIS, CERMES, CARILEC, and CSES. The Project also calls for strengthening national energy agencies through training and related activities undertaken during Year 2 and 3.

A web page has been established by the PMU that contains relevant information regarding CREDP activities; a tool kit for RE projects; and a developer's questionnaire for CRETAF

assisted projects. Other efforts include the production of two (2) DVDs, two (2) brochures and six (6) technology briefs. DVDs have been shown on national television in The Bahamas, Guyana, Jamaica and Suriname. The CRETAF DVD, Securing Renewable Energy was distributed to attendees at the 2005 Caribbean Association of Indigenous Banks Annual Conference (over 200 people).

A User Needs Survey to assess base line status of information needs and resources has been developed and distributed to the CREDP PMU mailing list and to the CREDP Project Steering Committee (more than 1,000 entries).

Recommendations;

The PMU is in negotiations with CEIS to transfer major portions of Objective #4 to the CEIS. This effort should be accelerated and finalized in the near future to free up PMU resources for other activities.

F. Monitoring and Evaluation

The current system of reporting by the PMU to the Implementation and Executing Agencies and the Project Steering Committee is unsatisfactory. The PMU Quarterly Reports fail to distinguish between cumulative efforts and efforts for the reporting period. It is therefore difficult to determine what specific progress has been made to advance Project objectives during the reporting period. The Quarterly reports should be revised accordingly.

The PSC should designate an individual from the Committee to be responsible for providing feed back to the PMU on each quarterly report.

Reporting on Project expenditure is also in need of revision and improvement. At the last meeting of the Project Steering Committee, requests were made of the PMU to provide a more detailed budget with budgeted amounts, actual expenditures and variances with an explanation of variances. According to the PMU, Project expenditures are not tracked or reported by component or line item in the Project Document. It is therefore difficult to determine if funds for specific Project activities are being expended in a timely and appropriate manner. The PMU should work with the Secretariat accounting office to provide Project budget and expenditure reports by line items in the Project Document.

Evaluation of the role of the CARICOM Secretariat, as Executing Agency, and the quality of monitoring and support provided by UNDP, as the GEF Implementing Agency.

CARICOM Secretariat

As previously stated in this report, the reporting by the PMU to the Implementing and Executing Agencies is unsatisfactory. Hopefully this will be addressed in the immediate future to allow the Implementing and Executing Agencies greater information to perform their respective duties. The Secretariat is a policy based institution that seeks to work with member countries on a

number of policy initiatives and concerns. It is not a transaction based or banking institution that is designed to support the transaction components of the CREDP Project. While the Secretariat is fully capable of supporting the policy and dissemination components of the CREDP Project, it faces unique challenges serving as the executing agency for the transaction component of CREDP.

The Secretariat therefore needs to reach out to the Steering Committee and others more extensively for input on the transaction component of the CREDP in addition to the information received from the PMU. Greater consultation with practitioners in the area of renewable energy would help guide the Secretariat in the fulfilment of its project execution responsibilities.

This report identified a concern regarding the number of events that the CREDP PMU attended on behalf of CARICOM Secretariat in the capacity of “coordinator of the work of the Task Force on Regional Energy Policy.” It was also noted that PMU travel in the Region in this capacity did not appear to involve consultations with key stakeholders in the CREDP Project.

While there are potential synergies between the CREDP Project and the Task Force on Regional Energy Policy, time spent by the PMU on behalf of the Regional Energy Policy did not appear to establish such linkages. Moreover, time spent on the regional initiative drained resources necessary for a more pro-active implementation of the CREDP program.

This report recommends a revision of the workload of the PMU to remove the PMU from the direct responsibility as “coordinator of work for the task Force on Regional Energy Policy.”

This report, here and elsewhere, also recommends that the Secretariat, in its Executing Agency capacity, play a more active role in the promotion of the CREDP Project by initiating dialogue at the ministerial level to secure greater commitments and support for the CREDP Project from member countries.

Based on conversations with senior CARICOM Secretariat officials as part of the Mid-Term Evaluation it appears that a re-focus of attention by CARICOM Secretariat to the CREDP Project is in the works and should be very helpful in pushing the CREDP agenda forward.

UNDP

During the Mid-Term Review, the monitoring and support function of the UNDP was reviewed and found to be satisfactory. The UNDP has a much smaller presence in the Region than CARICOM Secretariat and can therefore only offer limited support for the promotion of the CREDP Project.

The PMU did provide e-mail documentation of the extensive dialogue between UNDP and the PMU regarding certain aspects of the CREDP Project. The PMU also pointed out on one occasion that the UNDP gave one set of instructions to the PMU and then contradicted those instructions some time later in a subsequent communication. While this was unfortunate, it is the only case where communication between UNDP and the PMU appeared to be problematic.

UNDP nevertheless, should seek to be as responsive to requests for directions from the PMU as possible within a timely fashion.

With improved reporting protocols by the PMU, the UNDP will be able to play a more active role in monitoring the CREDP Project.

G. PMU Staff Resources

The PMU has made a request for additional staff resources to undertake Project activities. The MTR team believes that the underperformance of the Project to date is not due primarily to a lack of staff resources but to a lack of focus, project design and execution. The MTR team takes note of the number of PMU trips outside the region and travel on behalf of the CARCOM Secretariat. The PMU has only recently combined trips on behalf of the CARICOM Secretariat with Project activities such as meetings with local country senior officials to discuss specific CREDP project efforts.

Recommendation

Given the proposal to terminate efforts to establish the CREF and the need to refocus the Project, PMU travel activities for the balance of the Project should be focused exclusively in the region and on specific Project activities.

H. Project Extension

It is clear from the findings of the MTR that many aspects of the Project will not be fulfilled by the projected completion date.

Recommendation:

The MTR will request a 6 month CREDP Project extension subject to the following conditions being met:

- A financial report is provided that tracks expenditures to date by line items in the Project Document and the appropriate financial official at the Secretariat certifies total expenditure to date for the CREDP project.
- All documents necessary to operationalize the CRETAF are finalized and in place by January 31, 2007.
- A survey of the existing project pipeline providing a status of each project, and specific actions that CRETAF could undertake to move each project forward is completed by February 28, 2007.
- A survey of national energy policy initiatives in each CREDP country is completed that provides the status of policy reform, next steps and specific action CREDP could take to move policy initiatives forward. This report to be completed no later than February 28, 2007.

If any of the conditions for extension are not meet, the UNDP will cancel the extension request and immediately begin planning for alternatives uses of remaining GEF funds upon the scheduled conclusion of the Project.

IV. Mid-Term Review

A. Objective #1: Policy and Regulatory Reform

Immediate Objective I, as indicated in the Project Inception Report and the Logical Framework is, “supporting the implementation of policies, legislation and regulations that create an enabling environment for renewable energy development.” This objective is predicated on three factors. First, there are regulatory and policy barriers to the development of renewable energy sources; Secondly, countries do not have a stated energy framework, Thirdly, countries do not possess the capacity to prepare energy policies and strategies, and specifically those related to Renewable Energy (RE).

In order to achieve Objective I, the strategic approach adopted involves a combination of institutional arrangements at both the regional and national levels. At the regional level, it is expected that a Regional Policy Development Advisory Facility would be established and functioning, This Facility’s role is to advice and consult individual governments on the development of their energy policies. At the national level, National Energy Policy Advisory Committees are expected to be appointed and operating in each participating country. These Committees are to assist governments in the formulation and implementation of energy policies.

According to the Project Inception Report, the Regional Policy Development Advisory Facility is intended to be a project tool operated by the CREDP Project Management Unit (PMU) as a response to requests from governments. It is envisaged that the Facility will be comprised of the PMU Project Manager and consultants, hired as required, who will be the policy advisors. Management and Supervision of the policy advisors are the responsibility of the PMU. A number of activities were identified for the establishment of the Facility, and to focus its functions in providing support to governments.

Activities required to establish the Facility are as follows:

- Design and finalization of generic Terms of Reference (TOR) for Regional Policy Advisors;
- Compilation of a comprehensive list of national institutions, industry representatives and experts as policy advisors; and
- Contracting professional regional policy advisors as and when requested by governments.

Activities identified for a functional Facility are:

- Reviewing existing legislation, regulations, policies and electricity pricing structures;

- Developing a Regional Energy Policy for Renewable Energy in collaboration with the CARICOM Secretariat Task Force on Regional Energy Policy;
- Adapting/creating legal documents for energy legislations, regulations and administrative procedures; and
- Disseminating regional policy and legal documents for energy legislations, regulations and administrative procedures.

The National Energy Policy Advisory Committee, to be appointed by each government, is intended to support implementation of the policy approaches suggested by the Regional Policy Development Advisory Facility. The Committee would, *inter alia*, assist in setting priorities and targets for Energy Efficiency and the use of RE, as well as determining appropriate pricing for electricity generated from RE sources. The Committee's composition would include the best technical expertise available in each country.

For the appointment of each Committee the following activities are required:

- Compilation of a comprehensive list of national institutions, industry representatives and experts that could be engaged in the Committee;
- Design for each government a draft TOR for a national Advisory Committee, specifying the modus operandi; and
- Establishment of the Committee.

The Activities for the functioning of each Committee identified are:

- Assisting National Committees in RE planning policy and legislation.
- Assisting National Committees in the dialogue with utilities.
- Assisting National Committees in updating of RE resource assessments.
- Assisting National Committees in medium and long-term energy strategy planning.
- Identifying gaps in CREDP Policy initiatives and raise additional donor funding.

Implementation Framework

As stated in the Inception Report, the institutional framework for implementing the activities outlined above requires the interactive involvement of the CREDP/PMU, the National Committees, the Regional Ministerial Committees, the Ministries and the National Focal Points. Central roles were assigned to the PMU and the National Focus Points. The former has overall responsibility for the implementation of activities, the latter's functions are pivotal for advancing activities and processes at the national level.

Progress to Date

Progress towards the achievement of Objective I has been limited both in terms of the institutional development elements as well as the policy development aspects.

In regard to the institutional development activities, the expected outputs and end-of-project results are as follows:

- A Regional Policy Development Advisory Facility established and functional; and
- National Policy Advisory Committees established in thirteen (13) member countries.

To date the Regional Policy Development Advisory Facility has not been formally established as outlined in the Inception Report and the adopted Logical Framework. While the generic TOR for the constituent Regional Policy Advisors have been designed, there is no comprehensive list of national institutions, industry representatives and experts all of whom should provide a broad based and extensive source of policy advisors. Nevertheless, the Task Force on Regional Energy Policy has performed ad hoc functions and two consultants were contracted for work which was intended for the Facility.

No progress has been made with meeting the targets of National Energy Policy Advisory Committees established and functional in thirteen (13) member countries. Indeed, the processes leading to establishment, such as compilation of comprehensive lists of potential members in each country and draft TOR specifying modus operandi, have not yet been initiated. The Government of Barbados alone has requested CREDP assistance after having, on its own accord, established a Committee.

The fact that no National Committee has been established is attributed to two weaknesses in the implementation modality. First, there is a total reliance on non-functional local focal points to move the processes forward. Second, CREDP/PMU's role is passive, as assistance is provided only in response to requests. The National Committees are required to be important actors in energy policy development in their respective countries. Accordingly, unless these Committees are formed, improvements in the enabling environment at the country level will be hampered

Policy Development

According to the Inception Report and the Logical Framework, the results expected at the end of the project will constitute a policy environment that is conducive to renewable energy development. They have been identified as benchmarks or indicators by which progress towards achievement of Objective I is to be measured.

- A Regional Policy Framework Established. A Regional Energy Policy for Renewable Energy is in the process of being developed in collaboration with the CARICOM Secretariat Task Force on Regional Energy Policy.

- A National Policy Framework customized and adopted by seven (7) member countries. Completion of a draft National Policy Framework is expected by February 2007. Requests have been received from four (4) countries – Barbados, Belize, Dominica and St. Kitts/Nevis for assistance with the development of a National Policy Framework in their respective countries.
- Policies and Legislation modified or introduced in thirteen (13) member countries. To date, no country has modified or introduced policies and legislation with CREDP assistance. Jamaica is in the process of revising its Energy Policy which was established in 1995. The Organisation of American States (OAS) is assisting Dominica, St. Lucia and St. Vincent and the Grenadines are in the process of developing policies and legislations.
- Thirteen (13) National Committees engaged in dialogue with electric utilities. No country has made a request to CREDP/PMU for assistance in dialogue with utilities.
- Renewable Energy Country assessments undertaken or updated. Twelve (12) assessments are projected to be completed by the end of the Project. To date CREDP/GTZ has conducted five (5) assessments in the area of hydro power in Jamaica, Dominica and St. Vincent and the Grenadines.
- Strategic plans developed and approved in twelve (12) countries. To date no country has requested CREDP assistance. However, it must be noted that, with OAS assistance, Dominica, Grenada and St. Lucia have developed sustainable energy plans. St. Lucia's plan has been approved, while those of Dominica and Grenada are to be revised.

It is evident from the foregoing that little progress has been made towards the achievement of Objective I. In the opinion of the Evaluation Team this slow progress is attributable to a number of factors. First, the approach to providing CREDP assistance is reactive in nature. It is to be acknowledged that policy development is ultimately the responsibility of national governments and that Letters of Commitment and interest were given prior to commencement of CREDP activities. However, a proactive stance is needed to help governments translate their interest in the project into effective demand for CREDP assistance in order to move the process forward.

Second, the project strategy does not allow for the continuous dialogue between the CARICOM Secretariat/CREDP/PMU and the countries. This is a critical requirement for initiating and maintaining momentum, since policy development involves many stages including identification of needs, the definition of policy, decision by policy makers through various governmental procedures, consultation of stakeholders, and drafting and eventual passage of legislation.

Third, while the Inception Report and the Logical Framework recognize the importance of the Ministries, the National Committees and the Focal Points, no provision has been made for ensuring their functional inter-relationships with CREDP/PMU.

Recommendations

If meaningful results are to be achieved by the end of the project, the abovementioned deficiencies should be expeditiously addressed. To this end, the Evaluation Team makes the following recommendations:

1. CREDP/PMU should take a proactive approach to implementation
2. Dialogue, led by the CARICOM Secretariat, should be initiated with member countries at the Ministerial Level to secure commitment and support to policy development, the establishment of National Policy Advisory Committees and the focused involvement of the focal points.
3. The CREDP/PMU should assess each member country's status with respect to the development of policy framework, policies and strategic plans.
4. On the basis of the assessment, the CREDP/PMU should prepare an implementation plan to assist each country to move the process forward. Each plan should identify the needs, indicate the steps that need to be taken at the various stages, and propose what assistance the CREDP/PMU will provide.
5. Given that sixteen (16) months remain for implementation, the CREDP/PMU should, on the basis of the assessment, propose realistic end-of-project targets.
6. On the assumption that Ministerial Commitment about the appointment and the role of each Focal Point, the CREDP/PMU should re-establish a framework for an interactive relationship, with an agreed agenda for implementation.
7. CREDP/PMU should immediately compile a comprehensive list of national institutions, industry representatives and experts in each country that could be engaged in the National Advisory Committee.

B. Innovative Finance Mechanisms

This component relates to the financial barriers identified during the PDF B phase.

The approach chosen to remove financial barriers in this Project consists of three stages. First, a pipeline of 27 projects was developed using a market driven approach to deal origination. This activity was conducted under PDF B Part II with input from national utilities, IPPs and other project developers. Second, innovative financial mechanisms were designed during the PDF B phase to be tested during the full Project. The third phase involves establishing and managing the institutional set-up for funding and implementing RE demonstration projects to be undertaken under the full Project.

Significant progress was made for the first two stages of the approach under the PDF Block B Part II stage of the Project. The design work was completed, and specific follow-up activities were identified to enhance, test and refine the mechanisms during the full Project.

At the end of the PDF B the following achievements had been made toward removing financial barriers:

- As a result of successful marketing efforts the CREDP PMU has identified significant developer interest in the region. More than 43 projects ideas were identified, and after preliminary analysis, 26 projects have been identified for further consideration.
- Two designs for financing mechanisms have been partially completed under the PDF B Part II. These are (a) The Caribbean Renewable Energy Facility (CREF) – a debt facility; and (b) A Commercial Loan Guarantee Mechanism.
- The PMU also retained the services of a consulting firm to prepare projects for bank financing. This PDF B Part II activity produced draft model bankable documents for each RE project in the pipeline that requires funding. These draft model documents were to be finalised under the Project with assistance from CRETAF.

As a result of the considerable effort expended on the design and operation of financial mechanisms during the PDF B Phase II report, it was anticipated that the financial programs would be operational by the end of the first year of the Project. In deed, the Project Work Plan contained in Annex III of the Project Document indicates that while development of a pipeline of RE demonstration projects and the funding of RE investments would occur throughout the life of the Project, the financial mechanisms would be established by the end of the 4th quarter of year 1.

While significant progress toward implementation of financial mechanisms was made during the PDF B Phase II stage of the Project, the momentum has not been sustained during the full Project implementation and this component of the Project has fallen well behind established benchmarks and objectives. A summary of the status of each element of this component of the Project is provided below.

Caribbean Renewable Energy Fund (CREF)

The purpose of this fund was to provide \$20 million in debt financing for RE projects in the region. The facility is designed to fund both on-balance sheet corporate finance projects, as well as off-balance sheet limited recourse projects. Corporate finance is well understood in the region, while project finance will require significantly more intervention by the Project. The design includes supporting collateral documents such as a summary promotional document, a term sheet, an application document, a model government loan agreement, a model commercial loan agreement, an acknowledgement template letter, a preliminary assessment template, and a referenced template letter. These collateral documents may be re-designed and tuned to the needs of any other comparable sources of debt or grant financing. The PMU was responsible for investigating alternatives sources of capitalization under the Project, and identifying a Facility Manager.

Efforts to date have focused on discussions with the Inter-American Development Bank (IDB), the International Finance Corporation (IFC), the European Investment Bank (EIB) and other international financial institutions. The PMU has taken several trips outside the region to

promote the CREF and other innovative financing mechanism involved in the CREDP project. In April of 2004, the IDB developed a term sheet for the CREF based on a certain level of equity funding in the CREF to mitigate IDB risk. In the last year, however, little progress has been made toward the creation of the CREF.

In September 2004, an advertisement for a CREF fund design consultant was posted with an October 1 submission deadline. Subsequent procurement issues were raised and resolved and Adica was ultimately selected as the consultant on November 9, 2004. Adica, however, was not informed of the selection until October 4, 2006 and has only recently begun to work on the project.

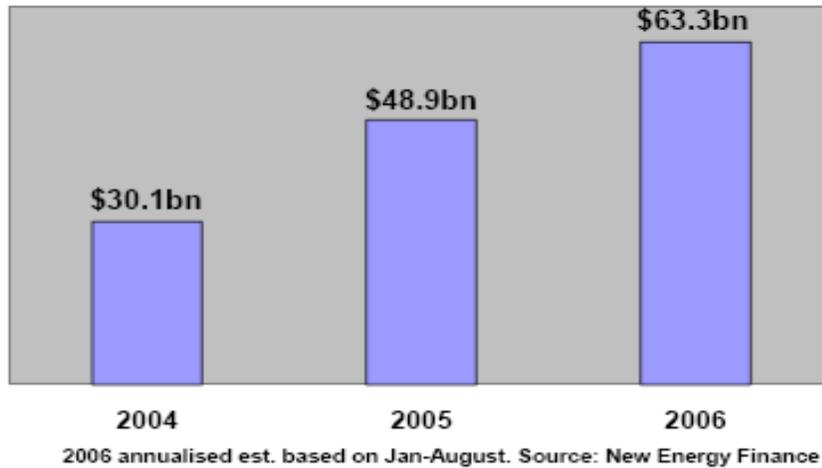
At the third meeting of the Project Steering Committee, May 9-10, 2006, members of the Committee agreed, “that the entire project Work Plan cannot be accomplished during the next two years and needs members to sit and rationalize the future activities of the PMU.”

Recommendation:

Continued efforts to establish CREF should be terminated immediately for the following reasons:

- It is doubtful that such a fund could be created in the remaining timeframe for the CREDP project.
- Global investments in clean energy and renewable energy projects has grown considerable, as demonstrated in Figure I below, since the project inception reducing the need for a special fund in the region to direct financial resources to this sector.
- Special financial investment funds for renewable and clean energy projects have also grown dramatically since project inception, as indicated in Figure 2 below, reducing the need for special financial funds in the region.
- The Caribbean Development Bank has indicated an interest in funding RE projects in the region if they meet bankable standards.
- Continued efforts by the PMU in this activity diverts resources from more immediate and pressing needs of the CREDP project.
- Creation of investment funds is outside the core competence of the PMU and CARICOM Secretariat.

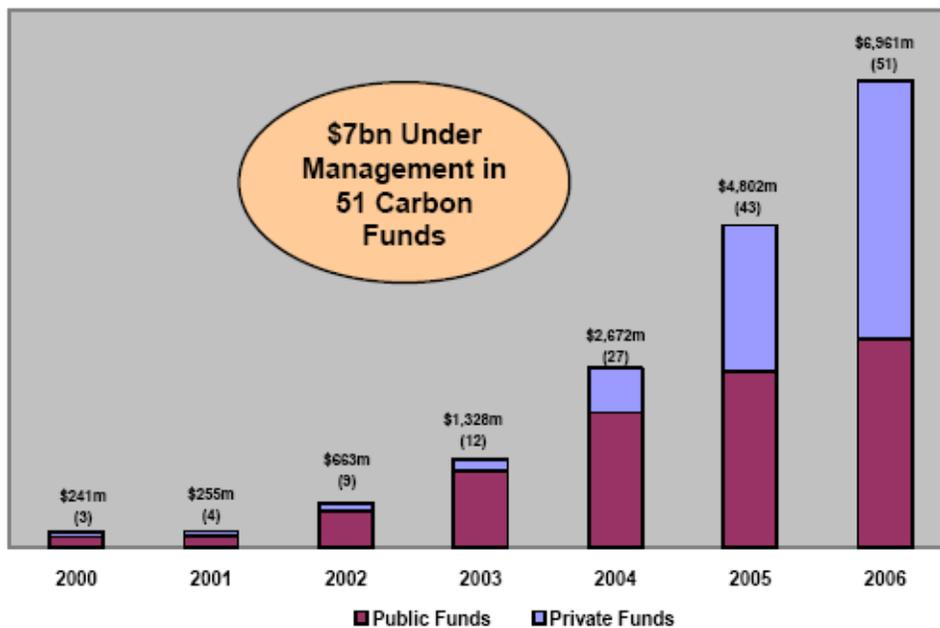
Figure 1. Global Investment in Clean Energy, 2004 to 2006



As Figure 2 indicates, the number of special funds dedicated to clean energy projects has more than doubled in the past two years with accumulated resources near \$ 7 billion. Several fund managers are aggressively seeking renewable energy projects for financing and would welcome projects from the Caribbean region.

Figure 2

Carbon Funds Under Management at Aug. 2006



Source: New Energy Finance

Guarantee Loan Program

This mechanism is designed to mitigate the reluctance of banks to make loans due to lack of adequate security or collateral. It is tailored to the needs of small renewable energy projects such as solar waters and photovoltaics. The design presumes the existence of a loss reserve fund which is yet to be funded.

This activity in the Project Document was predicated on the use of USAID's Development Credit Authority (DCA). In the Inception report, the CREDP PMU, USAID, CARICOM Secretariat were given the responsibility to tailor existing loan guarantee agreements available from donors, and enter into an agreement between donor and the CARICOM Secretariat. Deployment of the DCA, however, requires a commitment of resources from the USAID's regional budget which was been realigned to deal with HIV and related health matters. USAID is no longer in a position to provide support for this effort.

Recommendation:

This element of Objective # 2 should also be terminated as no other source of guarantee has been identified to replace USAID's initial interest. This recommendation is also based on the findings regarding the CREF above and is in concert with the PSC's concerns about completion of the Project's Work Plan during the balance of the Project. It will also Loan Management System allow greater allocation of PMU resources to attainment of more immediate and achievable goals.

Caribbean Regional Energy Technical Assistance Facility (CRETAF)

This activity calls for the establishment of a \$1.6 million project development facility to be funded by GEF during full implementation of the Project. It is the key element of the innovative finance component of the Project.

During the PDF B phase II, collateral documents for the CRETAF including a summary promotional document, the CRETAF operations manual, the application document, a contingent grant agreement, and a model RFP to retain desk study consultants were prepared. The CARICOM Secretariat agreed to be the Facility Manager for this Facility, to build on synergies with the CREDP PMU already located at the Secretariat.

Oversight of CRETAF is to be provided by an Advisory Board. The Advisory Board ("the Board") will provide the CRETAF Facility Manager with strategic advice guiding the overall direction of investment activities. This will include: 1) review of CRETAF strategic objectives and Investment Guidelines over time, 2) review of the Manager's investment recommendations for compliance with CRETAF strategic objectives.

The Board will be composed of one delegate from each of the following institutions: CARICOM Secretariat, donor representatives, UNDP Guyana Representative, CARILEC, and one additional member to be selected by the other four members. The Board will be chaired by CARICOM Secretariat.

The Advisory Board will meet at least every 6 months. Extraordinary meetings can be convened upon request of the CRETAF Facility Manager.

Progress to Date

To date no funds have been expended for this purpose and certain operational elements of the CRETAF remain to be resolved. Efforts to recruit a long term CRETAF Coordinator/Manager which began in 2004 have not resulted in the identification and selection of a suitable candidate for this position. An internal Loan Management System to track a CREFAT loan from application to final payment has not yet been finalized. A draft operational procedures manual for CRETAF has been developed but has not been finalized.

Notwithstanding the development of a project pipeline to prime the pump for CRETAF assistance, the demand for this facility has not materialized. This in contrast to the CREDP/GEZ experience to date where 6 projects have been identified for support, nearly 65% of project development funds have been obligated and projects are moving forward to financing and implementation.

Recommendation:

CREDP should refocus considerable effort and resources to finalizing the operational elements of the facility in the very immediate future and generate deal flow for the CRETAF. In this regard, the PMU should focus activities in countries where the GTZ has not been active. Certain modifications to the CRETAF design should also be implemented including the following:

- The limit on loan amounts should be increased from \$150,000 to \$250,000
- The repayments terms should be standardized to avoid accusations of political favoritism as a result of variances in loan terms among applicants
- The selection of technical advisors to perform CRETAF supported studies and activities should be done through the applicant/sponsor as a preferred method of procurement to expedite implementation of the CRETAF program.

Project Pipeline

The Project Document contained a list of 23 potential RE projects in the region. This pipeline was intended to be a representative sample of RE projects in the region and to serve as deal flow for the CRETAF and CREF. Some of these projects have advanced as a result of support from the CREDP companion program supported by the German government's GTZ program. None of the other project sponsors have approached CREDP for assistance.

Recommendation:

A project pipeline assessment report should be completed in the next 60 days that includes the following information:

- Status of project development
- Identified measures needed to move projects forward
- Specific assistance that CRETAF could provide to move projects toward financial closure

Clean Development Mechanism

This element of the CREDP program is moving forward effectively through a partnership arrangement with the IDB. The partnership between the PMU and IDA in this instance is an excellent example of leveraging CREDP resources to achieve Project objectives.

C. Objective 3: Capacity Building

Objective 3 is aimed at building capacity among selected players in the Renewable Energy (RE) field. Achievement of this Objective is expected to remove one of main barriers to RE in the Region. The objective is that RE technologies be considered as viable alternative options to conventional technologies, and that projects are developed within a facilitative business environment. Accordingly, the capacity building activities under this component are intended to target key actors in the field of RE development including government policy-makers and planners, entrepreneurs, financiers, students and craftsmen.

In the Project Inception Report and the Logical Framework four outputs are identified as the conditions that will lead to the achievement of Objective 3. They are as follows:

1. The capacity of the staff of utility companies and public sector agencies to evaluate and assess RE technologies strengthened;
2. Private companies, RE technology manufacturers and local banks trained in evaluating proposals;
3. A regional initiative to introduce solar water heater (SWH) into the Tourism Sector established;
4. Public educational institutions trained in RE technologies.

Progress To Date

Training activities have been undertaken in support of attainment of all of the outputs desired. Performance to date, as measured by the indicators in the Logical framework, reflects satisfactory progress with some targets exceeded as indicated below:

1. Training Workshops held for government, banking, utilities and industry personnel. The target level for this category of training was four (4) training workshops and, in the event, eight (8) were held in Wind Power, Hydro Power, RET and combined Heat and power for Bagasse Systems.

2. Suitable training mechanisms designed. It was expected that at least three (3) suitable training mechanisms would be used. To date the Seminar/Workshop has been the training method used.
3. Persons trained in writing bankable RE projects. It was projected that twelve (12) persons would be trained in this area. To date one hundred and seventy-three (173) persons have received training.
4. Professionals trained. The target level was thirteen (13) and this was substantially exceeded as ninety-three (93) professionals received training.
5. Private enterprise RE manufacturing and banking personnel trained. Training was provided to eighty (80) persons from these sectors, significantly exceeding the target level of twenty-four (24).
6. Courses in Solar Water-Heating designed. One (1) of the two (2) projected courses has been designed.
7. Courses on Solar Water heating implemented. The target level was six (6) courses, of which only one (1) has been implemented.
8. Public institutions receiving support and training in RE. The target number of institutions to receive this training was thirteen (13). To date personnel from six (6) institutions have participated in CREDP training activities – the University of the West Indies St. Augustine and Cave Hill Campuses, the University of Suriname, the University of Guyana, the Barbados Community College and the St. Kitts/Nevis Community College.

Recommendations

While the progress made has been satisfactory, there is a need to maintain the momentum towards the achievement of the capacity building objective. It offers the potential for sustainability after the project comes to an end. Focus should be placed on expansion, and institutionalization, of training through those tertiary and secondary level institutions offering technical studies, and where curricula can be adapted or introduced. In this regard the Evaluation Team recommends that:

1. A rapid needs assessment be conducted to identify windows of opportunity further training, including for lower level technicians.
2. The CREDP/PMU should engage in a dialogue with regional institutions at the tertiary and secondary levels, with a view to designing and establishing training courses in RE.
3. CREDP/PMU should adopt the use of a questionnaire for a course assessment at the end of each training session, and seek to establish a methodology for assessing the impact of the training provided in building capacity.

4. More avenues for training through apprenticeship should be explored.
5. Consideration be given to increasing the budget allocation for the capacity building component.

D. Objective #4: Improved regional renewable energy information network

This activity is designed to strengthen institutional support to and linkages with existing national networks such as sustainable development councils, climate change committees and appropriate national energy committees. It also calls for the creation of a Web page based RE access point including CEIS, CERMES, CARILEC, and CSES. The Project also calls for strengthening national energy agencies through the following training and related activities:

- Training of energy officers, information dissemination and package of RET.
- Short term training in renewable energy for relevant stakeholders;
- Training of energy officers, information dissemination and package of RET.
- Short term training in renewable energy for relevant stakeholders;

A web page has been established by the PMU that contains relevant information regarding CREDP activities; a tool kit for RE projects; and a developer's questionnaire for CRETAF assisted projects

A User Needs Survey to assess base line status of information needs and resources has been developed and distributed to the CREDP PMU mailing list and to the CREDP Project Steering Committee (more than 1,000 entries). The survey was conducted between June 2005 and January 2006. After a presentation of the initial findings of the survey, the PSC indicated that the survey needed to be redone in close collaboration with CEIS and that the PMU should work more closely with the CEIS on this matter.

With regard to the training programs for national energy agencies, the PSC recommend that these seminars and workshops be out-sourced to free up time of the PMU to focus on other project tasks.

Recommendations:

The PMU is in negotiations with CEIS to transfer major portions of Objective #4 to the CEIS. This effort should be accelerated and finalized in the near future to free up PMU resources for other activities. The training programs and work shops should be out-sourced as recommended by the PSC.

E. Monitoring and Evaluation

Monitoring arrangements for CREDP are inadequate and should be better structured to provide useful feedback about progress towards the achievement of objectives.

The current system of reporting by the PMU to the Implementation and Executing Agencies and the Project Steering Committee is unsatisfactory. The PMU Quarterly Reports fail to distinguish between cumulative efforts and efforts for the reporting period. It is therefore difficult to determine what specific progress has been made to advance Project objectives during the reporting period. The Quarterly reports should be revised accordingly.

Recommendations:

Monitoring arrangements should consist of two half-yearly PSC reviews and an annual CARICOM Secretariat/UNDP review. At the PSC, review provision should be made for stakeholder feedback possibly through video conferencing.

Monitoring tools should include the following:

- A revised Work Plan, indicating realistic timeframes for activities and outputs from initiation to completion;
- Quarterly Reports comprised of: (a) charts/tables indicating performance in terms of completed versus planned activities/outputs, by quarter and cumulatively; and (b) a narrative to include explanations for variances and responses to PSC recommendations from previous meetings.

Reporting on Project expenditure is also in need of revision and improvement. At the last meeting of the Project Steering Committee, requests were made of the PMU to provide a more detailed budget with budgeted amounts, actual expenditures and variances with an explanation of variances. According to the PMU, Project expenditures are not tracked or reported by component or line item in the Project Document. It is therefore difficult to determine if funds for specific Project activities are being expended in a timely and appropriate manner. The PMU should work with the Secretariat accounting office to provide Project budget and expenditure reports by line items in the Project Document as provided below:

CREDP Budget

Component	Budget Line	Total	2004	2005	2006	2007
10.00	PERSONNEL					
11.00	International Consultants					
11.01	Fundraising Specialist (2.3.1, 2.3.2)	105,000	65,000	40,000		
13.00	Admin Support					
13.01	Project Assistant	80,000	20,000	20,000	20,000	20,000
15.00	Monitoring and Evaluation					
15.01	Phase I Assessment	20,000	20,000			
15.02	External Evaluations, GEF Mid Term and Final Evaluations	30,000		15,000		15,000
15.03	Monitoring & Auditing of Sub-Projects	49,500	11,500	13,250	11,500	13,250
16.00	Mission Costs					
16.01	Travel Costs	115,000	40,000	25,000	25,000	25,000
16.02	Project Steering Committee	60,000	15,000	15,000	15,000	15,000
16.03	CREF and CRETAF Advisory Committee Meeting	48,000	12,000	12,000	12,000	12,000
16.04	Stakeholder Meetings in 14 CREDP Countries	34,000	34,000			
17.00	National Professionals					
17.01	Project Manager	400,000	100,000	100,000	100,000	100,000
17.03	Project Associate	160,000	40,000	40,000	40,000	40,000
19.00	<i>Component Total</i>	1,101,500	367,500	280,250	223,500	240,250
20.00	SUBCONTRACTS					
21.01	Regional Policy Advisory Facility(1.1)	250,000	50,000	100,000	100,000	
21.02	Project Identification and Feasibility Studies(2.1.2)	215,000	165,000	50,000		
21.03	Outreach Programme(2.3.3)	45,000		15,000	15,000	15,000
21.04	Training Material Design(3.1.1)	40,000	40,000			
21.05	Awareness Networks Strengthening(4.1.1)	25,000	15,000	10,000		
21.06	Virtual Regional Demonstration Centre(4.1.2)	19,000	10,000	3,000	3,000	3,000
21.07	Web-Based RE Access Point Development(4.2.1)	19,000	10,000	3,000	3,000	3,000
21.08	Establishing Virtual Communications Platforms(4.2.3)	14,000	5,000	3,000	3,000	3,000
21.09	Awareness Model(4.3.2)	40,000	10,000	10,000	10,000	10,000
29.00	<i>Component Total</i>	667,000	305,000	194,000	134,000	34,000
30.00	TRAINING					
32.01	Inception Workshop	20,000	20,000			
32.01	Utilities and Ministry Training(3.1.2)	100,000	50,000		50,000	
32.02	Training to Private, RET manuf., and Banks(3.2.2)	160,000	45,000	45,000	35,000	35,000
32.03	SWH Short Courses Development Workshops(3.3.1)	25,000	25,000			
32.04	Caribbean Technical Training(3.2.1)	20,000	20,000			
32.05	Supporting of Public Institutions(3.4.1)	25,000	25,000			
39.00	<i>Component Total</i>	350,000	185,000	45,000	85,000	35,000
40.00	EQUIPMENT					
45.01	Non-expendable Equipment	0	0	0	0	0
45.02	Expendable Equipment	1,500	375	375	375	375
49.00	<i>Component Total</i>	1,500	375	375	375	375
50.00	MISCELLANEOUS					
52.01	Reporting Costs	2,000	500	500	500	500
53.01	Sundries	4,000	1,000	1,000	1,000	1,000
59.00	<i>Component Total</i>	6,000	1,500	1,500	1,500	1,500
70.00	MICRO-CREDIT					
71.01	GEF Financial Assistance Fund(2.3.2)	1,600,000	600,000	600,000	200,000	200,000
79.00	<i>Component Total</i>	1,600,000	600,000	600,000	200,000	200,000
99.00	PROJECT TOTAL	3,726,000	1,449,375	1,121,125	644,375	511,125

F. PMU Staff Resources

The PMU has made a request for additional staff resources to undertake Project activities.

The MTR team believes that the underperformance of the Project to date is not due primarily to a lack of staff resources but to a lack of focus, project design and execution. The MTR team takes note of the number of PMU trips outside the region and travel on behalf of the CARICOM Secretariat.

Detailed below is a summary of travel of the PMU since project inception. Items highlighted in yellow indicate travel outside the region and/or travel on behalf of the CARICOM Secretariat. The PMU has only recently combined trips on behalf of the CARICOM Secretariat with Project activities such as meetings with local country senior officials to discuss specific CREDP project efforts. These meetings are highlighted in green.

PMU Meetings Attended

1st and 2nd QUARTERLY REPORTS – APRIL – SEPTEMBER 2004

1. The Project Manager has been coordinating the work of the Task Force on Regional Energy Policy. This Task Force was established by the Fourteenth Inter-Sessional Meeting of the Conference of Heads of Government of CARICOM to develop recommendations for a regional energy policy. To date, the Task Force has had four meetings, the first was held on 2-3 June 2003 in Trinidad and Tobago and the second on 2 July 2003 in Jamaica, the third on 23 – 24 October 2003 in Barbados, and the fourth on 5 – 6 February 2004 in St. Lucia. The fifth meeting is scheduled for 2-3 November 2004 in Georgetown, Guyana.
2. The Project Manager participated in the technical meeting and the second Caribbean Energy Ministers' Meeting held on 24 - 27 August 2004 in Jamaica. These meetings dealt with PETROCARIBE is an initiative which will include provisions for the establishment of bilateral, plurilateral, and commercial arrangements that could foster investments in exploration and production activities, refining, transportation, storage, distribution and retailing of petroleum products.

3rd QUARTERLY REPORT OCTOBER – DECEMBER 2004

1. The CREDP Project Manager attended Euromoney Energy Events' Renewable Energy Finance Forum on 23-24 June 2004 in New York. This conference provided an excellent opportunity for information gathering and networking.
2. The CREDP Project Manager made a presentation on CREDP and participated in the RET Screen International Training Workshop on 24-26 February 2004. This Workshop was sponsored by the Barbados Ministry of Energy and Public Utilities, Natural Resources Canada and USAID in collaboration with CREDP, Caribbean Energy Information System (CEIS), the Association of Caribbean Electric Utilities (CARILEC). RET Screen has been used by CREDP as a key analytical tool for assessing RE projects submitted by project developers. Thirty (30) persons were trained at this Workshop.

3. The Project Manager was an invited Discussant in the Roundtable titled “Energy: Regional vs. National Solutions” during the Caribbean Central American Action’s 28th Annual Miami Conference on the Caribbean Basin which was held on 6–8 December 2004.

4th Quarterly Report January - March 2005

1. The Project Manager was invited to and attended the World Bank Group Energy Week 2005 from 14- 17 March 2005. Follow-up action is intended to develop a Partnership with Energy Sector Management Assistance Programme, ESMAP, of the World Bank, in regards to its Renewable Energy ToolKit.
2. The Project Manager was invited to participate in a Project Bids Steering Committee for the Latin American and Caribbean Region, of the Renewable Energy and Energy Efficiency Partnership, REEEP. The Committee was chaired and hosted by the Organisation of American States on 18 March 2005.
3. The Project Manager also attended and acted as resource person at the Organisation of Caribbean Utility Regulators’ (OOCUR) Intermediate to Advance Training Course in Telecommunications and Electricity Regulation in St. Kitts on 25- 29 April 2005

5th Quarterly Report April - June 2005

1. The Project Manager was invited to and attended the Organisation of Caribbean Utility Regulators (OOCUR) sponsored course, “Intermediate to Advanced Training Course in Telecommunications and Electricity Regulation” 25 – 29 April 2005 in St. Kitts. The project manager gave a presentation on the renewable energy resources in the Caribbean.
2. The Project Associate attended and gave a presentation at the 4th International Conference for Renewable Energy, Energy savings and Energy Education, CIER, Cuba 25-28 May 2005. Three countries which are participating in the CREDP project (Barbados, Cuba and Trinidad & Tobago) attended the conference.
3. The CREDP PMU convened the Second Meeting under Full Implementation of the Project Steering Committee on 11-12 May 2005 in St. Vincent and the Grenadines. The Project Manager, Project Associate and Project Assistant attended this Meeting. The PMU wishes to, once again, express its gratitude to the Government of St. Vincent and the Grenadines for its hospitality and kind assistance in arranging this Meeting.
4. The Project Manager represented the Secretary-General, CARICOM Secretariat at the First Energy Summit of the Caribbean Heads of State and Government on PETROCARIBE on 29 June 2005 in Puerto la Cruz, Venezuela.

6th Quarterly Report July-September 2005

1. The Project Associate attended and made a presentation on CREDP to the Sustainable Applications for Tropical Islands States 2005 Conference on 14-17 August 2005 in Netherlands Antilles, Curacao. This Conference is the biennial conference of the Caribbean Solar Energy Society and useful contacts were made.

2. The Project Manager and the Project Associate were members of the CARICOM Secretariat's Team to the PetroCaribe Council of Ministers Meeting on 4-5 September 2005 in Montego Bay, Jamaica.
3. The Project Manager was invited to and attended the Regional Preparatory Meeting of the Renewable Energy and Energy Efficiency Partnership, REEEP, on 7 September 2005 in Mexico City, Mexico. CREDP is an active member of the REEEP network.
4. The Project Manager participated in the World Energy Engineering Congress organised by the Association of Energy Engineers on 14-16 September 2005 in Austin, Texas.

7th Quarterly Report October 2005 - March 2006

1. The Project Manager participated in the Regional Workshop "Barriers and Opportunities for Biomass based Energy Generation in Latin America and the Caribbean" held in Havana, Cuba on 12-14 October 2006.
2. The Project Manager made a presentation on RETScreen to the Windpower Planning Seminar held in St. Vincent and the Grenadines on 18-21 October 2005. This course was delivered by CARILEC in collaboration with CREDP, CREDP/GTZ and St. Vincent Electricity Services.
3. The Project Manager was invited to attend and make a presentation to the Platts 6th Annual Caribbean Energy Conference on 19-20 January 2006. The Project Manager took this opportunity to meet with IADB officials who also attended this conference.
4. The Project Manager at the request of the Secretary General of CARICOM attended from 7-11 February 2006, the 17th Inter-Sessional Meeting of the Conference of Heads of Government of CARICOM which was held in Trinidad and Tobago. The Project Manager was responsible for the agenda item dealing with the Task Force on Regional Energy Policy and PetroCaribe.
5. The Project Manager participated in the World Bank Energy Week on 6-9 March 2006 in Washington D.C.
6. The Project Manager was invited to and participated in IADB's "Regional Workshop on Clean Energy Investment Framework in Latin America and the Caribbean" which was held in Washington on 13-14 March 2006.

8th Quarterly Report April -June 2006

1. The Project Manager and the Project Associate attended the CREDP-sponsored Seminar "Combined Heat and Power Systems for the Caribbean Sugar Cane Industry" in Barbados on 18-20 April 2006. The Project Manager made a presentation entitled "Calculation of Payments for Renewable Energy Systems."

2. The Project Manager attended the DFID/EC Regional Roundtable on National Strategies for Adaptation to Sugar Reform in Barbados on 3 April 2006.
3. The Project Manager, in his capacity as Coordinator of the Task Force on Regional Energy Policy, participated in its Sixth Meeting which was held on 4-5 April 2006 in Trinidad and Tobago.
4. The CREDP Project Steering Committee held its Third Meeting under Full Implementation in St. Kitts on 9-10 May 2006. The Project Manager and Project Associate attended this Meeting. The Draft Minutes of the Meeting were circulated on 22 June 2006. The PMU requested that the PSC Members submit comments by 14 July 2006. Comments have been received from one PSC Member. The PSC recommended that sub-committees be formed, to assist the PMU in the implementation of the Work Plan (as defined in the Project Inception Report.) The PMU has since corresponded with the PSC Members were asking them to convene their Sub-committees and inform the PMU on how they intended to operate.
5. The Project Manager and the Project Assistant held a Consultation with stakeholders in St. Kitts on 11-12 May 2006.
6. The Project Manager made a presentation entitled at the CARILEC CEO Symposium held on 29-31 May 2006 in Tampa Florida.
7. The Project Manager attended and made presentation on CREDP to The Third Caribbean Environmental Forum and Exhibition, CEF3, in Antigua on 6 June 2006, the day that was dedicated to Renewable Energy.
8. A Presentation entitled "Alternative Sources of Energy and an Effective Implementation Policy" was made to Caribbean Connect-A High Level Symposium on the CSME. This Symposium was held on 28-30 June 2006 in Barbados.
9. The Project Manager used the opportunity afforded him by his attendance at Caribbean Connect to meet Barbados' Minister of Energy and the Environment to discuss how CREDP could be of assistance to Barbados' Energy sector on 30 June 2006.
10. The CREDP Project Manager attended the Twenty-Seventh Meeting of the Conference of Heads of Government of the Caribbean Community which was held in St. Kitts on 3-6 July 2006. Dr. Clarke attended the Meeting to facilitate the report of the Task Force under the agenda item "Issues related to Energy"
11. The Project Manager and the Project Associate attended the Seminar "Solar Water Heating for the Caribbean Hotel Sector". This Seminar was held by the CREDP PMU in collaboration with the Energy Division, Ministry of Energy and the Environment, Barbados on 11-13 July 2006 in Barbados.

12. The Project Manager and the CREDP Short-term Wind Energy Consultant, John Whittingham visited the Republic of Suriname from 17-22 July to prepare a pre-feasibility study for wind energy. The CREDP Project Manager met with Surinamese Government Officials, the CREDP Focal Point and other CREDP Stakeholders.

Recommendation

While travel outside the region may have been justified to identify possible partners/investors in the CREF and other financial mechanisms, it has failed to produce firm commitments of resources for these programs and has not moved these financial mechanisms forward. Given the proposal to terminate efforts to establish the CREF and the need to refocus the Project, PMU travel activities for the balance of the Project should be focused exclusively in the region and on specific CREDP Project activities.

G. Project Extension

It is clear from the findings of the MTR that many aspects of the Project will not be fulfilled by the projected completion date. This realization was also made by the PSC in its last annual meeting.

Recommendation:

The MTR will request a 6 month CREDP Project extension subject to the following conditions being met:

- A financial report is provided that tracks expenditures to date by line items in the Project Document and the appropriate financial official at CARICOM Secretariat certifies total expenditure to date for the CREDP project.
- All documents necessary to operationalize the CRETAF are finalized and in place by January 31, 2007.
- A survey of the existing project pipeline providing a status of each project, and specific actions that CRETAF could undertake to move each project forward is completed by February 28, 2007
- A survey of national energy policy initiatives in each CREDP country is completed that provides the status of policy reform, next steps and specific action CREDP could take to move policy initiatives forward. This report to be completed no later than February 28, 2007.

If any of the conditions for extension are not met, the UNDP should cancel the extension request and immediately begin planning for alternatives uses of remaining GEF funds upon the scheduled conclusion of the Project.

This recommendation is subject to the review and approval of UNDP Guyana and UNDP New York.