

May 5, 2008

**UNITED NATIONS DEVELOPMENT PROGRAMME  
GLOBAL ENVIRONMENT FACILITY**

**Report on a Proposed Reformulation of CREDP  
(Caribbean Renewable Energy Development Programme)**

**Table of Contents**

Executive Summary	2
List of Acronyms and Abbreviations	5
Project Data Sheet	6
Chapter 1 Introduction & Background	8
Chapter 2 Project Design and Relevance	9
Chapter 3 Status and Performance of Project Implementation	17
Chapter 4 Project Financial Balances and Status Per Outcome	22
Chapter 5 The Need or Not for a Project Extension	24
Chapter 6 Proposed Institutional Organization for Project Extension	29
Chapter 7 Outline of Model Financial Facility for RE	31
Chapter 8 Partnerships and Coordination Roles	33
Chapter 9 Critical Issues and Risks	34
Chapter 10 Key Findings & Recommendations & Lessons Learned	36
Annex 1 Terms of Reference for this Reformulation Assignment	39
Annex 2 List of Persons Interviewed	51
Annex 3 New Zealand to Offset its GHG Production	54

## EXECUTIVE SUMMARY

This report and recommendations are based on a visit to Guyana and Barbados during the week of February 4, 2008, as well as on a review of the relevant documents prior to the visit and further in-person contacts and analysis after the visit. This work was to establish whether a reformulation and extension of CREDP (Caribbean Renewable Energy Development Programme )makes sense and, if so, how. The terms of reference for this assignment are presented in Annex 1. The list of persons interviewed appears in Annex 2. Thanks are given to all those persons who provided their guidance, cooperation and assistance.

CREDP aims at removing barriers to RE (renewable energy) and promoting RE projects in the Caribbean (see Chapter 1 below for CREDP's background). The barriers relate to policy, finance, capacity building, and information/awareness. Total project cost is US\$ 22.3 million of which US\$ 10 million was to be mobilized from sources outside the project and applied for equity investments in and loans to RE projects identified and prepared by CREDP. CREDP's two main components are as follows:

- one component located in Guyana, implemented by UNDP/GEF, executed by the CARICOM Secretariat, funded mainly by GEF and covering 13 countries

- another component located in St. Lucia, implemented by GTZ of Germany, executed by a consortium of Projekt-Consult of Germany and ENTEC of Switzerland, funded by GTZ, and covering 5 countries (included in the above 13)

Although CREDP's **design** in the Project Document was extensively developed, a number of issues appeared during project implementation. These issues include: simultaneous barrier removal vs in sequence; demand driven services vs proactive approach; capacity building targets; own website vs expanding an existing one; regional vs local perspective; bottom up vs top down approach; 13 vs 5 countries; 1 vs 2 locations; lack of an Energy Unit at the CARICOM Secretariat; reporting; and are presented in Chapter 2.

The mid-term evaluation reviewed CREDP's performance and resulted in extensive recommendations for its improvement. In contrast, this reformulation assignment focuses mainly on the present and the future, and only reverts to the past when seeking to benefit from the lessons learned. Chapter 3 presents a summary of CREDP's accomplishments (including since the mid-term evaluation) and implementation. Chapter 4 shows CREDP's finances and its under-performance as to cost effectiveness. While progress is noted since the mid-term evaluation, the conclusion is that it does not warrant an extension of the project without a profound reformulation that focuses on key needs and how to address them effectively.

The recommendation that flows out of the present assignment (see Chapter 5) is for CREDP to be **reformulated and extended** for an additional year beyond the original completion date of April 26, 2008, for the following **reasons**:

- (1) It has taken considerably longer than originally anticipated for the countries to introduce the changes in the policies, laws and regulations needed for the renewable energy (RE) projects to be launched. The proposed extension should compensate for this delay and permit CREDP to provide substantial support for the introduction of those changes at the country level, as well as for completing the preparation of actual RE projects and their financial arrangements.
- (2) RE is of much greater priority for the Caribbean Region today than at the start of the project, and CREDP is a unique instrument for the promotion and implementation of RE projects.
- (3) CREDP's execution since 2004 has shown what works and not, and this should permit the proposed reformulated/extended project to utilize the remaining funding with effectiveness and efficiency in delivering CREDP's intended purpose.

Of CREDP's 4 areas for barrier removal to RE projects (policy, financing/project preparation, capacity building and information/awareness), the first two areas are behind the original schedule, while the latter two areas were found to be either exceeded or substantially achieved during the mid-term evaluation of the project. It is therefore proposed that the reformulation **emphasize** barrier removal mainly in the former two areas (policy and project preparation/financing); with some limited attention given to the latter two areas (capacity building and information/awareness).

In accordance with the above-proposed emphasis, it is recommended that the extended and reformulated CREDP focus on the following **actions**:

- (a) Provide assistance to the individual countries for introducing the changes in their energy policy, laws and regulations, and in their energy strategies/action plans, that are necessary at the country level for the launching of RE projects.
- (b) Provide assistance for the preparation of RE projects and for arranging their financing.
- (c) Update the February 2005 joint study with CARILEC on "The Status of Energy Policy in Selected Caribbean Countries" and extend it from 5 to all of the 13 countries that participate in CREDP.
- (d) Provide support to the forthcoming Energy Unit of the CARICOM Secretariat especially in its work relating to the approval and dissemination of the draft regional energy policy and related regional initiatives.
- (e) Facilitate and support the transfer of the CREDP website and other information materials to the Caribbean Energy Information System (CEIS) seeking to provide sustainability of effort in this information area.

- (f) Facilitate and support limited capacity building events on an exception basis.
- (g) Facilitate and support the final meetings of the National Focal Points and Project Steering Committee.
- (h) Carry out the orderly winding down of the CREDP project and facilitate its final evaluation.
- (i) Facilitate the analysis of whether it makes sense to consider a second phase for CREDP.

It is **recommended** in Chapter 6 that actions (a) through (c) above be executed through CREDP's St. Lucia Component, and that part of the team of the Guyana Component be retained to carry out or support actions (d) through (i). To avoid potential delays and complications, the work done by the St. Lucia Component is to be executed as per the same procedures, contracting rules and reports that have been used by that component in the past 4 years. Both CREDP components shall provide reports to the CARICOM Secretariat and UNDP of the progress of the extension and the expenditures on a monthly basis. The preliminary budget numbers for the above proposals should be finalized once there is a firm estimate of the funds available as at the original project completion date.

The priority for RE projects and the availability of project finance for them have greatly increased since CREDP was originally designed. Given this progress, it is argued in Chapter 7 that there is no need for a specialized loan facility or other mechanisms for the financing of RE projects. However, even though the availability of funding for project preparation has increased as well in recent years, it is found in favor of continuing to support that activity as well as the approach to financial institutions seeking finance. This is mainly because the international sources of funds for project preparation sometimes favor larger projects than those typical of the Caribbean region.

Suggestions for partnerships and coordination appear in Chapter 8; critical risks and issues in Chapter 9; and key findings and recommendations in Chapter 10.

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**Proposed CREDP Reformulation of 2008**

List of Acronyms and Abbreviations

CARICOM	Caribbean Community
CARILEC	The Association of Caribbean Electric Utilities (St. Lucia)
CC	Climate Change
CDB	Caribbean Development Bank
CEHI	Caribbean Environmental Health Institute
CEIS	Caribbean Energy Information System
CREDP	Caribbean Renewable Energy Development Programme
CREF	Caribbean Renewable Energy Facility
CRETAF	Caribbean Renewable Energy Technical Assistance Facility
CSES	Caribbean Solar Energy Society
DSM	Demand Side Management
EE	Energy efficiency
ESMAP	Energy Sector Management Assistance Programme
GEF	Global Environment Facility
GHG	Greenhouse Gas
GSEII	Global Sustainable Energy Islands Initiative
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (Germany)
IADB	Inter-American Development Bank
IFC	International Finance Corporation
IPP	Independent Power Producers
NFP	National Focal Point
OAS	Organisation of American States
OECS	Organisation of Eastern Caribbean States
PDF	Project Development Facility
PIR	Project Implementation Review
PM	Project Manager
PMU	Project Management Unit
PPA	Power Purchase Agreement
PSC	Project Steering Committee
RE	Renewable Energy
RET	Renewable Energy Technologies
SWH	Solar Water Heater
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
UTECH	University of Technology (Jamaica)
UWI	University of the West Indies
WB	World Bank

**UNITED NATIONS DEVELOPMENT PROGRAMME**  
**GLOBAL ENVIRONMENT FACILITY**  
**Proposed CREDP Reformulation of 2008**  
Project Data Sheet

This report recommends a reformulation of the Caribbean Renewable Energy Development Programme (CREDP) and an extension of this project beyond its original April 26, 2008 completion date. The report is based on a visit to Guyana and Barbados during the week of February 4<sup>th</sup> and other analysis and work done in accordance with the terms of reference presented in Annex 1. Thanks are given to all the persons who provided their guidance and cooperation. A list of those persons appears in Annex 2.

**Original Number:** RLA/00/G31/A/1G/99 (PIMS 1437)

**Title:** Caribbean Renewable Energy Development Programme (CREDP)

**Duration:** 4 years original (plus a proposed 1 year extension)

**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 Caicos<sup>1</sup>

**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

**Contact:** Dr. Roland Clarke,  
CARICOM  
([rclarke@caricom.org](mailto:rclarke@caricom.org));

**Original UNDP and Cost-Sharing  
Co-Financing (in US\$):**

**TOTAL:** 22,337,050

**UNDP/GEF:**  
Project 3,726,000  
PDF B I and II 700,000  
*Sub-total GEF:* 4,426,000

**Co-financing:**  
Governments, regional/ national  
Institutions, CARICOM 5,131,050  
Other donors (GTZ): 2,200,000  
Other donors (GSEII): 500,000  
UNDP TRAC Funds (PDFB) 80,000

**Leveraged financing:**  
Equity (private/public): 6,000,000  
Loans (CDB etc.): 4,000,000  
*Sub-Total Co-financing and leveraged:*  
17,911,050

<sup>1</sup> British Virgin Islands, Montserrat and Turks and Caicos are not eligible for GEF support and all the costs resulting from their participation were to be borne by their respective governments. These states are not members of GEF.

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**Timeline and Dates of the UNDP/GEF-funded project component:**

1998	Initial meeting of 14 Caribbean countries and 2 British dependencies
1998-2000	PDF-B Part I activities identify barriers that prevent increased exploitation of the Caribbean's renewable energy resources
2002	PDF-B Part II activities concentrate on the development of financial mechanisms to promote investment in RE projects and the development of a pipeline of projects to be supported by CREDP
April 26, 2004	CREDP UNDP/GEF project component begins
April 26, 2008	Original completion date of CREDP UNDP/GEF project component
April 26, 2009	Proposed extended completion date for the reformulated CREDP UNDP/GEF project component

**Timeline of the GTZ-funded project component:**

Q1 2003	the CREDP GTZ Project Component begins
Q1 2008	Completion date of CREDP GTZ project component (GTZ and the CARICOM Secretariat are currently considering a second stage of this project component)

**Brief Description/Objectives:**

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This project aims to remove barriers to renewable energy (RE) use in the Caribbean. Through specific actions to overcome policy, finance, capacity, and awareness barriers, it was estimated at the outset that the contribution of RE sources to the region's energy balance would be significantly increased. In 2002, renewable energy provided less than 2% of the region's commercial electricity. Due to the planned barrier removal activities, annual CO<sub>2</sub> emissions were expected to be reduced by an estimated 388,159 tons by the year 2007. Part of the GEF funding was to be used through non-grant instruments (i.e., contingent loans) for project preparation/removal of incremental risks related to RE investments, thus improving the cost-effectiveness of the GEF resource use. The GTZ component used grants to cover part of the costs of project preparation.

## 1. Introduction and Background

(This chapter is partly based on sections A and B of CREDP's Project Document)

1.01 Preparatory work for CREDP started in 1998, when "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 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"

1.02 The justification for CREDP grew out of the Caribbean's high dependence (98%) on fossil fuels for its electricity and the consequent air, land and water pollution. It was considered that fossil fuel prices might increase in the future, causing balance of payment problems and constraining private consumers. RE was viewed as a means of preventing such future constraints while reducing the region's primary source of greenhouse gas (GHG) emissions and enhancing its energy security. CREDP was envisaged as the mechanism to help remove the barriers and make RE a reality in the Caribbean.

1.03 "Renewable energy technologies (RET's) considered in CREDP include grid-connected renewable power (e.g. wind farm, biomass cogeneration, geothermal, and small hydro), renewable rural electrification (e.g. photovoltaics), and solar water heating." The Caribbean Region is well-endowed with resources for these RETs. The under-exploitation of these resources was attributed to barriers, which CREDP would address.

1.04 CREDP's preliminary activities consisted of PDF-B stages I and II in which extensive consultations were carried out from 2000 through 2003 among the representatives of all the major stakeholders (including the regional and international institutions, national authorities, utilities, financiers, petroleum companies, NGOs and others in the private sector). Based on these consultations and on field studies, several expert consultants assessed the potential for RE in the Caribbean and designed CREDP to address policy, financial, capacity building and information/awareness barriers to RE.

1.05 CREDP aimed at "creating an enabling environment under which the key actors, the private industry and energy entrepreneurs (IPPs) as well as electric utilities can implement RE projects that are financially viable. As a result, the participation of renewable energy projects for electricity generation is expected to increase the use of RET from the current 2% of commercial electricity generation to 5% by 2015. It will also mean a substantial reduction in CO<sub>2</sub> emissions, since the energy production in the Caribbean countries relies mainly on fossil fuels. More than 388,159 tons of CO<sub>2</sub> emissions would be avoided annually by the end of the project in 2007."

## 2. Project Design and Relevance

(This chapter is partly based on section C of CREDP's Project Document)

### Components and Funding

2.01 CREDP's components and funding are summarized as follows:

Project Headquarters	Implementing Agency/funding	Executing Agency	Countries where the work of each component is carried out (or where funding originates)	Financing US\$ MM
Guyana	UNDP/GEF	CARICOM Secretariat	13 countries: Bahamas, Barbados, Belize, Cuba, Dominica, Grenada, Guyana, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & Grenadines, Suriname, Trinidad & Tobago	4.426
St. Lucia	GTZ	Consortium of Projekt-Consult of Germany and ENTEC of Switzerland	5 countries: Dominica, Grenada, Jamaica, St. Lucia and St. Vincent & the Grenadines.  During project execution, work has also been done in Barbados and St. Kitts & Nevis	2.200
Co-financing			From Governments, CARICOM, GSEII, UNDP TRAC Funds	5.711
Leveraged financing for RE projects		Investors & Lenders	Equity (private/public) Loans (CDB, etc.) (for financing RE projects)	6.000 4.000
Total				22.337

### Objectives

2.02 "The **global environment and development objective** of the Project is:

"To remove barriers to the increased use of renewable energies and reduce implementation costs thus reducing the Caribbean region's dependence on fossil fuels and contributing to the reduction of GHG emissions."

"This Project is consistent with the GEF Operational Strategy, in particular with Operational Programme No. 6 aiming at promoting the adoption of RE by removing barriers and reducing implementation cost."

“The Project is designed to contribute to the global objective by achieving **four immediate objectives**:

	<b>US\$ million</b>
1.Supporting the implementation of policies, legislation and regulations that create an enabling environment for RE development	5.531
2.Demonstrating innovative financing mechanisms for renewable energy products and projects.	13.565
3.Building the capacity of selected players in the renewable energy field.	0.920
4.Putting in place an improved regional renewable energy information network.	0.367
Project administration costs	1.024
PDF-B Phase I and Phase II	0.700
Other	0.230
<b>Total</b>	<b>22.337”</b>

#### Relevance

2.03 There is unanimity among the persons interviewed for this reformulation assignment that RE and CREDP are **more relevant** today for the Caribbean than at any previous time during project preparation and execution. Beyond today’s heightened concern for climate change, this increase in relevance flows from the harsh impact of record petroleum prices on the balance of payment of the countries in the Caribbean (except for Trinidad & Tobago which is an energy exporter). Hence the enthusiastic support among the persons interviewed for CREDP’s extension.

#### Design

2.04 CREDP’s **design** was based on comprehensive and lengthy preparatory work. A team of experts visited the region during PDF-B Phases I and II and interacted with stakeholders to identify the barriers and to prescribe the strategies and actions to overcome them. As with all projects, several issues arose during CREDP’s implementation which called for flexibility and adaptation of the original design.

#### Simultaneous vs In Sequence

2.05 There appears to be some confusion regarding whether the four immediate objectives were to be pursued **simultaneously or in a certain sequence** and with varying emphasis over time. Consider:

- Project Management has indicated that it pursued the four objectives simultaneously based on the conclusion reached during PDF-B Phase I that all four types of barriers are interrelated and it is not effective to try to remove one without the others as well

--The Project Document calls for a sequence in CREDP's work as for instance: "Changes in energy legislation as well as in the legal and fiscal framework, do **necessarily require** the increased awareness of not only policy makers, but also utilities, commercial and development banks, private industry and end-users. Capacity-building measures need to accompany these changes to build up the required human resource basis and awareness at all levels including the general public. **Once** such an enabling environment is created, the identification and implementation of bankable RE projects become possible. With appropriate equity in place, GEF funding incremental costs, and government support mechanisms and/or guarantees (or other collateral), obtaining a commercial loan will no longer be a barrier."

2.06 The above apparent contradiction is not unusual in complex regional projects such as CREDP, which addresses several barriers in numerous countries. Project Management must retain the flexibility to handle varying situations with sensitivity to local needs and opportunities. The elements of project design often require interpretation and adaptation during execution in order to achieve the objectives of the project.

2.07 The fact that no CREDP-supported RE projects are yet under implementation confirms that policy barriers must be addressed early and intensely, given that most projects need the changes in policies, laws and regulations in order to move forward toward preparation, financing and construction. The examples of a wind farm in Jamaica and hydro projects in Belize confirm this finding; however, CREDP was not significantly involved in the policy or the preparation of the projects in those countries. Those projects which are in CREDP's pipeline have been delayed mainly because of the time it has taken to remove policy/legal/regulatory barriers to RE at the country level.

#### Demand Driven vs Proactive

2.08 During CREDP's preparation "the main barrier found in most of the countries is the **lack of awareness** among political decision-makers of the potential contribution of RE to national development objectives and of the actions needed to promote it." It appears that the design of CREDP relied on the "Government Letter of Support" sent by each country as evidence that governments would request CREDP's services. For instance, the benchmark for Output 1.1 of the policy objective as of the end of year 1 is defined as "At least 2 countries have requested the services of the regional policy advisory facility." The assumption was that CREDP would be responsive to the demand of the region's countries. However, it appears that no such demand was received and that CREDP's "**demand driven**" design was not changed to a more proactive approach until after the mid-term evaluation (which was completed in December 2007). With hindsight, the design of the project and its execution ought to have relied less on the "Government Letter of Support" and, instead, carry out frequent visits to the countries' authorities to understand needs and promote policy advice and other services.

### Other possible business barriers

2.09 CREDP's final evaluation should confirm **whether there were barriers of a business nature that were not given sufficient focus during the design stage**. For example:

--the Project Document mentions that the international **petroleum companies** operating in the Caribbean "have committed to developing renewable energy technology options," and yet there seems to have been no RE initiatives on their part in the region in the past 5 years. CREDP's design did not contain specific initiatives to pursue the development of RE technologies in cooperation with those companies. Understanding their lack of RE progress in the Caribbean may shed light on possible disincentives other than removing policy barriers (e.g., protecting their oil supply and service contracts).

--the Project Document refers to the high price paid for electricity by Caribbean consumers (the exception being Trinidad & Tobago, which subsidizes fuel for electricity). However, CREDP's design did not contain specific initiatives to work with **utility companies** (to address the factors that produce the high electricity price) through the use of RE technologies (it may be that utilities enjoying a monopoly and a set return on their investment would have little or no incentive to promote RE projects).

--given the record low petroleum prices when CREDP's preparations started in 1998, and the generally low cost efficiency of RE technologies at the time, it is possible that RE projects would have needed a **subsidy** in order for RE projects to be financially viable at the time. If so, this issue should have been addressed directly during project preparation and in its design.

2.10 The suggestion is to check out the above-mentioned potential design issues through interviewing the business stakeholders (for instance, during the updating, proposed in Chapter 5 below, of the February 2005 joint study with CARILEC on "The Status of Energy Policy in Selected Caribbean Countries" and its extension from 5 to all of the 13 countries that participate in CREDP).

### Capacity Building Targets

2.11 CREDP has conducted numerous seminars and similar events intended to familiarize and train government officials, officers of electric utilities, bankers and other relevant stakeholders in RE and how to make it a reality. Several of the persons interviewed, while noting the value of these activities, considered better to do more to raise the awareness of the **key decision makers**, whether ministers, permanent secretaries, CEOs and the like. It has also been mentioned that perhaps the National Focal Points, while diligent and proactive, did not carry enough influence to precipitate the necessary policy changes in support of RE, or could not propel RE projects with the necessary effectiveness in their respective institutions. The suggestion is to look further into this issue and check how similar RE projects have resolved it.

### Why a CREDP website if CEIS already had one

2.12 The Project Document points out that “There are two major agencies involved on a full-time basis in the collection and dissemination of information on renewable energy” namely CEIS and CARILEC. Given this, there is a question as to why CREDP needed to develop its own separate website and could not have cooperated with the two existing websites. An alternative approach would have been to sub-contract the work on information to one or both of these two agencies rather than CREDP do the work.

### Financial barriers

2.13 CREDP’s design in the financial area was also nurtured by extensive contacts with potential project developers and financiers in the region and abroad. Out of these contacts the barriers were identified and the strategies to remove them were developed. The result was a comprehensive **package of initiatives** for CREDP to:

- (i) develop and screen a pipeline of RE projects that furthers the work started during the PDF-B Stage II preparations
- (ii) establish **CREF** (Caribbean Renewable Energy Facility) to provide loans to RE projects. CREF’s funding was initially envisaged to come from the Caribbean Development Bank. Later on, when CDB decided to finance RE projects on a case-by-case basis, rather than setting up a dedicated facility, the funding for CREF was expected to come from the Inter-American Development Bank (IADB) through a “private regional development bank.” Also, CREDP was to work on facilitating the completion of a partial guarantee facility for commercial loans to RE projects which would be funded by USAID/DCA scheme
- (iii) prepare “best bet” RE projects (e.g., through resource assessments, feasibility work) with assistance under **CRETAF** . “It is expected that at the end of a four year period, the participating countries would have planned and carried out at least one and perhaps several RE projects” out of the project pipeline already identified during the PDF-B Part II Stage and with at least US\$ 10 million investments in that (those) projects
- (iv) consider several fall-back initiatives to pursue as alternatives in case the initiatives mentioned under (ii) above did not materialize.

2.14 **CREF and CRETAF did not materialize.** During CREDP’s execution, work continued to further develop and prepare some of the RE projects which were identified and screened during the PDF-B Stage II. Since CRETAF was not operational, this project preparation work was done mainly at CREDP’s St. Lucia Component. However, the policy/ legal/regulatory work has not been concluded and this has delayed the financing and construction of the prepared projects (at least 5 are deemed to be ready for financing). This means that even if CREF and CRETAF had been launched, no RE projects would likely have moved toward financing (i.e., investors and bankers need to know the rules of the game before they commit). This further emphasizes the advisability of focusing early and intense efforts on attaining the policy component, so that projects can then move forward toward financing and construction.

2.15 With hindsight, it appears that the expectation was too high during PDF-B Stage II about international institutions funding **CREF**. Also, since the end of PDF-B Stage II, the international development finance institutions mentioned in the Project Document have increased their priority for RE projects and, in some cases, for their preparation. Hence it can be said that **CREF is not needed today**, as opposed to the conclusion reached in the period 1998-2002, when CREDP was prepared.

2.16 Regarding **project preparation**, the relatively small size of most RE projects in the Caribbean can result in a handicap (the international institutions tend to favor the larger projects), and it appears that the need for RE project preparation support remains. This applies especially to the early preparation work (resource assessment, pre-feasibility); it may also apply to the more advanced preparation work (including feasibility/ engineering/ environmental impact study), although the project sponsors are expected to fund a growing proportion of those latter-stage preparation expenses. It likely applies as well to the specialized assistance in the negotiation of PPAs and in obtaining project financing. The track record and experience in these tasks relating to project preparation reside in CREDP's St. Lucia Component.

2.17 The **fall-back initiatives** in item (iv) are deemed comprehensive and promising from a design standpoint. However, they did not lead to actual replacements for CREF or CRETAF during CREDP's implementation.

#### Regional vs Local

2.18 CREDP's design combined both regional and local initiatives aimed at removing the (policy, financial, capacity and information) barriers to RE. It can be argued that a greater emphasis should have been placed first to remove the barriers at the **local** level, because only then can the "enabling environment" exist for the RE projects to be implemented. Then, the progress at the regional level could have resulted from the initiatives at the local country level through a "**bottom up**" approach. In contrast, it appears that CREDP's initiatives emphasized the regional work first (e.g., the development of the draft regional energy policy; the meetings related to PetroCaribe) and an approach perceived as "**top down**" was followed. With hindsight, emphasis on the bottom up approach appears to be more practical than the top down approach, although a combination of both probably makes the most sense.

#### 13 vs 5 countries

2.19 CREDP's Guyana project headquarters was to serve all 13 countries in the CREDP project, while its St. Lucia headquarters focused on 5 countries (Dominica, Grenada, Jamaica, St. Lucia and St. Vincent & the Grenadines), all but one in the Eastern Caribbean. During the in-person interviews, there was a comment to the effect that the St. Lucia Component might have been pursuing the "low hanging fruit" apparently because Jamaica already had its policy work in place when CREDP started its operations, and the OAS had done prior policy work in the Eastern Caribbean. However, the St. Lucia Component had less than half the budget resources than the Guyana Component and it appears it went for greater focus at the local country level (rather than a regional focus). Whatever the rationale, and with hindsight, it can be said that CREDP has been

enriched by this variety of approaches (one more country-focused and the other more regional) and can now benefit from choosing for its reformulation that approach which works best for the tasks ahead.

### 1 vs 2 Locations

2.20 The Project Document indicates that both components (the one funded by UNDP/GEF and the other funded by GTZ) would be headquartered at the CARICOM Secretariat in Guyana. This design element was changed when the GTZ-funded component moved its location to the offices of the Caribbean Environmental Health Institute (CEHI) in St. Lucia, apparently to be closer to the countries on which its work would be focusing. CEHI is a specialized CARICOM institute which looks after environmental health throughout the Caribbean region. From a design standpoint, a case can be made for one location on grounds of greater coordination and less potential overlap/duplication. On the other hand, and given that there were two geographical focus (13 vs 5 countries) and different approaches (top down vs bottom up), and that there seems to have been good coordination, one can say that having two locations contributed to enrich the project and generate valuable lessons on what works or not that can benefit future project work.

### No Energy Unit at the CARICOM Secretariat

2.21 The CARICOM Secretariat informs that it is now in the process of setting up its own Energy Unit to be in charge of this priority sector. CREDP could have benefited from the existence of such Unit throughout its implementation, and not just near its completion. A Project Steering Committee, such as the one CREDP has, can only do so much oversight in once-a-year meetings and lacking full time monitoring and governance capabilities. The lesson learned is in favor of having a dedicated unit to be responsible for the guidance, oversight and accountability to results of the project's management on a full time basis.

### Reporting

2.22 One can argue that in a project of CREDP's complexity and scope (13 countries, regional and local approaches, a multitude of stakeholders, contrasting kinds of barriers) there is a need for performance reporting, monitoring and supervision activities with a greater frequency than on a quarterly basis. This is especially so in the early stages of the project, when patterns are formed and when it ought to be relatively easy to make design adjustments through project execution. CREDP should consider monthly reports which are simpler and shorter than the quarterly reports, and which permit quicker adjustments as needed to ensure that the project's initiatives deliver the intended performance.

### Conclusion

2.23 A large effort and major preparatory work over six years went into CREDP's design which was clearly relevant and valuable. As in all projects, things changed between preparation time (started in 1998) and execution time (started in 2004) and this called for close monitoring, guidance and oversight to ensure that the necessary adjustments were made swiftly during CREDP's implementation. The above review of

issues suggest lessons for the design of this kind of project in the future. These lessons have been incorporated in the reformulation proposed in Chapter 5 below.

### 3. Status and Performance of Project Implementation

3.01 Following is a summary of CREDP's achievements through its Guyana Component:

Outcome	Indicator	Target Level	Level at 12/31/2006	Level at 1/31/2008
Reduce GHG	MT of GHG avoided	388,159	131,350	183,890 (but Wigton not a CREDP project)
Hydro projects	MW installed	5.030	0	0
Wind projects	MW installed	65.7	20 Wigton, Jamaica	20 (but Wigton not a CREDP project)
Biomass projects	MW installed	161.4	13.5 Belize 10 Guyana	10 Guyana (in process)
<b>Objective 1</b>	<b>Removal</b>	<b>of Policy</b>	<b>Barriers to RE</b>	
Outcome 1.1 Regional Policy Development Advisory Facility (RPDAF) established and functioning	Number of countries requesting advice of RPDAF	2 countries requesting advice by the end of year 1	RPDAF did not become operational.  CREDP received no country request for RPDAF's type of advice.	CREDP is giving policy advice to the participating countries through, for instance, the February 2008 meeting on the development of harmonized legislation for the reform of the electric sector
Outcome 1.2 National Energy Policy Advisory Committee (NPAC) operating in each country	Number of NPACs operating in each country	NPACs in all countries by year 3	NPACs did not become operational	Same as above  See next item
Activity 1.2.6 Assisting in energy strategy planning	Number of countries adopting national energy policy (NEP)	7	Draft NEP completed. Requests received from 4 countries (Barbados, Belize, Dominica, St. Kitts)	Draft NEP in CREDP's website. Barbados has used it. Draft Regional Energy Policy ready for consideration by CARICOM ministers Assistance to Belize in designating minister responsible for energy.
	# of policies and laws modified or introduced	13	5	6 (Jamaica, Dominica, St. Lucia, Barbados, St. Vincent & Grenadines, Grenada) jointly with the

				St. Lucia Component
Outcome	Indicator	Target Level	Level at 12/31/2006	Level at 1/31/2008
<b>Objective 2</b>	<b>Removal of</b>	<b>Financial</b>	<b>Barriers</b>	
Outcome 2.1 Develop RE project pipeline	# of projects in RE pipeline	12	12	12 projects screened with RETscreen software which was disseminated
Outcome 2.2 Establish CREF, a loan guarantee mechanism, and CRETAF	Entities operating (2 financing & 1 preparing projects)	3	0 No funding was raised for CREF or the guarantee mechanism	0 Stopped the CREF work and negotiations with a potential sub-contractor for CRETAF
Activity 2.3.2 At least US\$ 10 million invested in RE projects	US\$ million in RE investments	At least US\$ 10 million	0	0 but 5 projects are in advanced stage of preparation by St. Lucia Component
	# of projects assisted in bank approach	13	0	(5 projects being assisted to access financing by St. Lucia Component)
<b>Objective 3</b>	<b>Removal of</b>	<b>Capacity</b>	<b>Barriers</b>	
	# of training workshops held	4	11	15
	# of persons trained	12 plus 24	251 plus 91	309 plus 118
	# of professionals trained	13	160	191
	# of courses designed on SWH	2	1	3
	# of SWH courses implemented	6	1	3
	# of public institutions receiving RE training	13	6	9
<b>Objective 4</b>	<b>Removal of</b>	<b>Barriers to</b>	<b>RE Awareness &amp;</b>	<b>Information</b>
	Website on RE templates	No	Yes	Yes
		7	6	6

	posted on W			
Outcome	Indicator	Target Level	Level at 12/31/2006	Level at 1/31/2008
	# of outreach activities	13	13	14
	# of collateral documents created	12	5	5 (2 DVDs, 1 commercial, 2 brochures)

### CREDP's Implementation

3.02 CREDP's implementation through its Guyana Headquarters Component was the subject of an extensive mid-term evaluation whose September 2007 report included several recommendations to catch up and deliver CREDP's targets which were found significantly behind schedule. The table above shows a summary of CREDP's progress through January 2008, or 3 months prior to the original project completion date of April 26, 2008.

3.03 CREDP has exceeded its targets for its objective # 3 on capacity building; it appears close to reaching its targets for its objective # 4 on information/ awareness; and it has under-performed regarding its targets for objectives #1 on policy barrier removal and #2 on financial barriers. There are many apparent reasons for this under-performance, and one can debate whether they arise from design flaws (see Chapter 2 above), weakness in governance, shortcomings in execution, or other factors both internal and external to CREDP. What is clear is that any CREDP extension should devote the remaining resources to those initiatives that are most needed and those methods which have accumulated clear progress toward making RE a reality in the region.

### Policy

3.04 The above table shows that CREDP's Guyana Component has increased its **policy** pro-activity since the mid-term evaluation. This makes sense, given that it has been found that the main obstacle to the progress in the financing and implementation of RE projects is the delay in the introduction of changes in the RE policies, laws and regulations at the country level. However, the in-person interviews pointed at insufficient engagement by CREDP in working with the local stakeholders at the country level; as well as a perception that CREDP is still too inclined to follow a top-down rather than a bottom-up approach (see Chapter 2 above for a summary of this issue). The conclusion here is that CREDP's Guyana Component should not extend its policy work beyond April 26, 2008 except:

- (a) to complete any ongoing work in an orderly manner;
- (b) to support the forthcoming Energy Unit at the CARICOM Secretariat; and
- (c) to cooperate and coordinate with the policy work of CREDP's St. Lucia Component at the country level.

### Finance-CREF and Guarantees

3.05 CREF (a loan facility for RE projects) and the loan guarantee mechanism did not materialize and, as mentioned in par. 2.15 above, there is today an excellent disposition among the sources of project finance to invest in and lend to viable RE projects. This confirms the former conclusion that no further CREDP efforts are needed regarding financial instruments dedicated to RE projects.

### Finance-CRETAF

3.06 CRETAF (CREDP's technical assistance fund for the preparation of RE projects) did not materialize either and the project preparation work was executed through CREDP's St. Lucia Component.

3.07 The Project Document had as an element of design that CRETAF would lend to cover a developer's project preparation services but the loan would become a grant in case the project did not materialize. This meant that the moneys disbursed by CRETAF for project preparation services would be recovered contingent upon the implementation of the RE project. This approach was intended to extend the life of CRETAF and provide sustainability to it, aside from discouraging potentially frivolous demand for CRETAF's funding.

3.08 During project execution, the following relevant **experience** has been accumulated:

- Introducing RE projects into the Caribbean region has proven to be much more challenging and time consuming than anticipated at CREDP's design stage.

- CRETAF was originally envisaged to be administered by CDB. Then, when CDB declined, the CARICOM Secretariat agreed to run CRETAF. CCS, however, is not a financial institution and hence a financing mechanism was not harmonious with its normal operations.

- It was not possible timely to recruit a competent executive to administer CRETAF. The alternative of sub-contracting the administration of CRETAF to a private financial institutions took a long time to negotiate. The high-level team from UNDP/GEF during a visit to Guyana in December 2007 recommended suspending those negotiations.

- CREDP's St. Lucia component has tried a different approach which consists of providing grants to cover **only a portion** of the cost of a project's preparation with the other portion being covered by the project sponsor. This has proven satisfactory in deterring frivolous demand for project preparation services and in extending the funds available for this purpose.

- The multilateral development finance institutions and many bilateral finance institutions have accepted the need for using grants in the preparation of high impact and challenging projects. These grants are funded by donor trust funds.

--IFC started with grants in its project preparation facilities and gradually moved to charging fees for its own project preparation services contingent upon the project being financed. IFC has since moved from fees to grants along the lines followed by CREDP's St. Lucia Component.

3.09 As mentioned in par. 2.16, there is a sound case in favor of supporting project preparation services through CREDP. Given the experience mentioned in the previous paragraph, it is concluded in favor of CREDP use the approach followed by the St. Lucia Component (i.e., partial grants for the funding of RE project preparation services). Since the experience in project preparation work has been accumulated at the St. Lucia Component, it is reasonable to conduct future preparation work through that component. CREDP should seek letters from project sponsors committing to reimburse CREDP for its grants contingent upon the financing and execution of the project.

#### Capacity Building

3.10 CREDP's Guyana Component has continued working in the capacity and information areas where targets have been either exceeded or substantially met. The initiatives in these two areas should cease as of April 26, 2008.

#### St. Lucia Component

3.11 CREDP's achievements through its St. Lucia Component are being evaluated separately by GTZ. The annual report for 2007 is expected to be available in late March 2008. 5 projects are reported to be ready for financing and two of them are awaiting proposals from financial institutions. The in-person interviews confirmed the contributions by and satisfaction with this component.

#### Conclusion

3.12 The work of the Guyana Component on capacity building, finance and information should finish as of the original project completion date of April 26, 2008. Activities beyond April 26<sup>th</sup> should be limited to (a) completing any ongoing policy work as of that date; (b) to supporting the Caricom Secretariat's forthcoming Energy Unit; and to cooperating and coordinating with the work of St. Lucia Component on policy at the individual country level and for project preparation.

#### 4. Project Financial Balances and Status Per Outcome

4.01 Following is the CARICOM Secretariat's information on the US dollar project financial balances and status per outcome for CREDP's Guyana Component:

Project Document Budget	Outcome	CCS Budget	Spent through 2007	Funds Available 12/31/07
250,000	1.1 Removal of Policy Barriers	250,000	52,620	197,380
215,000	2.1 Develop pipeline of RE projects	202,000	23,381	178,619
150,000	2.3 Funding & running RE investment projects	150,000	18,307	131,693
1,600,000	CRETAF funds	1,600,000	---	1,600,000
370,000	3. Capacity Building	370,000	296,669	73,331
117,000	4. Information/awareness	117,000	30,448	86,552
<b>2,702,000</b>	<b>Total Objectives 1-4</b>	<b>2,689,000</b>	<b>421,425</b>	<b>2,267,575</b>
	OTHER COSTS (administration)			
60,000	Project Steering Committee	58,000	94,069	(36,069)
20,000	Inception Workshop	28,000	40,158	(12,158)
34,000	Stakeholder Meetings	34,000	6,322	27,678
48,000	CREP/CRETAF Committee meet.	48,000	0	48,000
115,000	Travel costs	109,000	77,913	31,087
1,500	Equipment (expendable & non)	10,500	4,679	5,821
6,000	Miscellaneous Costs	6,000	0	6,000
400,000	Project Manager	400,000	375,424	24,576
160,000	Project Associate	164,000	143,322	20,678
80,000	Administrative Support	80,000	71,085	8,915
99,500	Monitoring & Evaluation	99,500	25,177	74,323
<b>1,024,000</b>	<b>Total Other Costs</b>	<b>1,037,000</b>	<b>838,149</b>	<b>198,851</b>
<b>3,726,000</b>	<b>Total CREDP excl. PDF-B</b>	<b>3,726,000</b>	<b>1,259,574</b>	<b>2,466,426</b>

4.02 Through December 31, 2007, CREDP's Guyana Component had deployed about US\$ 0.50 in project expenditures for each US\$ 1 of Other Costs (i.e., administration). In contrast, the budget anticipated deploying about US\$ 2.60 in project expenditures for each US\$ 1 of project costs. This is explained mainly by (a) CRETAF not becoming operational and hence the project preparation services not being funded; and (b) the

demand driven (rather than proactive) approach taken by CREDP's Guyana in regard to its providing policy advice to countries. The result is a level of cost effectiveness sharply below the budget's.

4.03 Cost effectiveness is only a part of the picture, and in some projects it is possible to be on the low side of the budget in project expenditures and yet attain a high level of impact. This is not the case in this project, based on the feedback received in the in-person interviews.

4.04 Aside from covering the project expenditures and costs through the August 26, 2008 project completion date, the remaining total of US\$ 2,466,426 (**this figure needs confirmation**) at December 31, 2007 is available for either funding the extension of CREDP or returning it to UNDP/GEF. This is the subject of the next chapter.

## 5. The Need or Not for a Project Extension

### Alternatives

5.01 The main alternatives for the consideration of UNDP/GEF in regard to the extension or not of CREDP are

- to conclude project activities on or about the original project completion date of April 26, 2008 and return the remaining project funds to UNDP/GEF; or
- to undertake an extension of the project as well as its reformulation in order to gain from what has been learned in the past 4 years about what it works or not

### Issues and Logic

5.02 The main issues that were assessed in connection with the extension/reformulation were:

- whether CREDP remains relevant
- whether sufficient funds would be available for the extension to be of impact
- how the project should be reformulated to gain optimal impact for the inputs to be deployed in the extended/reformulated CREDP

5.03 As mentioned in Chapter 2 above, the persons interviewed for this assignment were unanimous in that RE and CREDP are **more relevant** today for the Caribbean than at any previous time since project preparation and start of execution, and that a CREDP that can be effective should be **extended**. The main reasons behind this unanimity are (a) today's heightened concern for climate change and (b) the negative impact of record petroleum prices on the balance of payment of the countries in the Caribbean (except for Trinidad & Tobago which is an energy exporter). In addition, practically all those persons interviewed made insightful comments and suggestions regarding how CREDP ought to be **reformulated**. Those comments and suggestions, along with the analysis in Chapter 3 above, have informed the recommendations in this chapter.

5.04 From Chapter 4 above, close to US\$ 2.5 million were reported to be available as at December 31, 2007. Even when deducting the project expenditures and costs of the first four months of 2008, the remaining funds should be sufficient to permit the extension of the project. Yet an extension can only be justified if the remaining project funds are effectively utilized. **If they were to be used as in the period through December 31, 2007, then the recommendation would be to let CREDP expire as of its original completion date of April 26, 2008 and return the remaining funds to UNDP/GEF.**

5.05 If CREDP can be reformulated so as to being effective, then there would be a an opportunity to catch up and compensate for the delays during the past 4 years in barrier removal and to have the Caribbean benefit from the promotion of renewable energy and its starting to become a reality through implemented projects. The proposed extension and reformulation seeks a CREDP that is effective and takes advantage of such opportunity.

## Recommendations

5.06 It is recommended that UNDP/GEF reformulate CREDP (Caribbean Renewable Energy Program) and extend the execution of this project for an **additional year** beyond the original completion date of April 26, 2008 for the following **reasons**:

- (1) It has taken considerably longer than originally anticipated for the countries to introduce the changes in the policies, laws and regulations needed for the renewable energy (RE) projects to be launched. The proposed extension should permit CREDP to provide substantial support for the introduction of these policy and related changes, as well as for the preparation of RE projects and their financial arrangements.
- (2) RE is of much greater priority for the Caribbean Region today than at the start of the project, and CREDP can be essential for the promotion and implementation of RE projects, especially for the smaller projects and in the early stages (resource assessment, pre-feasibility), and in specialized areas such as negotiation of PPAs and in obtaining project financing.
- (3) CREDP's execution since 2004 has shown what works and not, and this should permit the proposed reformulated/extended project to utilize the remaining funding with effectiveness and efficiency in delivering CREDP's intended purpose.

5.07 Of CREDP's 4 areas for barrier removal to RE projects (policy, project preparation/ financing, capacity building and information/awareness), the first two areas are behind the original schedule, while the latter two areas were found to be largely achieved during the mid-term evaluation of the project. It is therefore proposed that the reformulation **emphasize** barrier removal mainly in the first two areas (policy and project preparation/ financing); with some limited attention given to the latter two areas (capacity building and information/awareness) on an exception basis.

5.08 In accordance with the above-proposed emphasis, it is recommended that the extended and reformulated CREDP focus on the following **actions**:

**(a) Provide assistance to the individual countries for introducing the changes in their energy policy, laws and regulations, and energy strategies/action plans that are necessary at the country level for the launching of RE projects.** The approach for this assistance would be as follows:

- this assistance would be available to all 13 countries participating in CREDP
- it would be focused on specific countries which present the best prospects for utilizing the assistance effectively during CREDP's extension
- it would be provided mainly through short-term expert consultancies with an effort made to pair international and regional consultants already known to CREDP, seeking both effectiveness and a potential transfer of knowledge

--the assistance to the countries would be on a grant basis

**(b) Provide assistance for the identification and preparation of RE projects and for arranging their financing.** The approach for this assistance would be as follows:

--this assistance would be available to RE projects in all 13 countries participating in CREDP

--it would be focused on specific RE projects which present the best prospects for utilizing the assistance effectively during CREDP's extension (i.e., for making progress toward their implementation)

--it would be provided mainly through short-term expert consultancies with an effort made to pair international and regional consultants already known to CREDP, seeking both effectiveness and a potential transfer of knowledge

--the assistance to the projects would be on a contingent grant basis and would cover only part of the cost of the preparation work (see pars. 3.08 and 3.09 above).

**(c) Update the February 2005 joint study with CARILEC on "The Status of Energy Policy in Selected Caribbean Countries"** and extend it from 5 to all of the 13 countries that participate in CREDP. The main purpose of this initiative is to take a snapshot of the energy situation in the Caribbean and be able to understand how progress was achieved over the past 4 years. The emphasis should be on RE and identifying the available RE resources and the next steps to make RE a reality in the region.

**(d) Provide support to the forthcoming Energy Unit of the CARICOM Secretariat** including its policy work on the energy sector at the regional level and its compatibility with the policies of the individual countries.

**(e) Facilitate and support the transfer of the CREDP website and other information materials to the Caribbean Energy Information System** seeking to provide sustainability of effort in this area.

**(f) Facilitate and support limited capacity building events on an exception basis.**

**(g) Facilitate and support the final meetings of the National Focal Points and Project Steering Committee.**

**(h) Carry out the orderly winding down of the CREDP project and facilitate its final evaluation.**

**(i) Facilitate the analysis of whether it makes sense to consider a second phase for CREDP.**

5.09 It is further recommended that actions (a) through (c) above be executed through CREDP's St. Lucia Component, and that only a part of the team of the Guyana Component be retained to carry out actions (d) through (i). The rationale for this recommendation is as follows:

--The kind of work involved in actions (a) through (c) in the previous paragraph has been done by CREDP out of its St. Lucia Component for over 4 years. This work has been done mostly in the field and in close collaboration with the authorities, utilities and other stakeholders in each of the countries focused by the St. Lucia Component. The results are perceived as useful and satisfactory by those interviewed for this reformulation assignment. Hence the reformulated CREDP would concentrate the country policy work and project preparation in that location which already has the experience and track record.

--This recommendation would avoid extended negotiations with new entities for the administration of CRETAF as well as the inefficiencies of starting up its administration with a new team of unknown capability and requiring time to come up to speed. In contrast, the recommended approach would use the rules and procedures which have guided the St. Lucia Component over the past 4 years and hence the reformulated CREDP would require no new procedures or time for gearing up its operations.

5.10 Both Guyana and St. Lucia components would provide their reports to CARICOM Secretariat and UNDP/GEF on their activities, progress and expenditures on a monthly basis.

5.11 The preliminary work plan and budget numbers for the above proposals are as follows:

	US\$ thousand
(a) Policy/legal/regulatory assistance to 6 countries through short-term consultants (6 international consultant months plus 6 regional consultant months including travel and per diem)	250
(b) Project identification and preparation work resulting in an increase by 6 projects in the current 18 project pipeline and in an increase by 3 projects in the current 5 projects ready for presentation to banks and investors (six international consultant months plus six regional consultant months including travel and per diem)	250
(c) Review and updating of the study on the status of energy policy in 13 countries and the identification of next steps for the promotion of RE, to be done in collaboration with CARILEC (4 person months and travel)	70

Administration cost for the above activities out of Credp's St. Lucia Component	250
(d) Support for the forthcoming Energy Unit at CARILEC	500
(e) Transfer of CREDP website to CEIS along with support for portal	130
(f), (g), (h) and (i) activities at CREDP's Guyana component in the winding down of current activities of this component; in the remaining PSC and NFP meetings and evaluations; and for cooperating and coordinating with the St. Lucia Component during the extension (Project Associate, Project Assistant and travel and office costs)	200
Contingencies and escalation	100
Total	1,750

The above estimates assume that there are no delays or costs in the launching of the reformulated CREDP. They also leave room for the expenditures by the CREDP Guyana component in 2008 up to April 26th.

## 6. The Proposed Institutional Organization for Project Extension

6.01 The reformulation and extension proposal in Chapter 5 is based on a minimum of organizational change and seeks to

- focus resources on attaining policy change at the country level and on the preparation and financing of RE projects
- increase country policy and project activity in the field through the use of short-term consultants
- minimize delays and reduce administrative costs.

6.02 The above would be accomplished partly by doing the country policy and project preparation work (i.e., actions (a) through (c) in par. 5.08 above) out of the St. Lucia Component with the **same rules, procedures, reporting requirements and modus operandi** which this component has used in the past 4 years. Also, the information work would be transferred from the Guyana Component to CEIS and the Guyana Component would conclude its activities as of April 26, 2008 except to cooperate and coordinate with the St. Lucia Component and to support the forthcoming Energy Unit at the CARICOM Secretariat (see pars. 5.08 and 5.11). The resulting institutional structure for the proposed one-year extension of CREDP beyond April 26, 2008 is summarized below:

Component	Main Activities	Staffing	Budget US\$ 000
Guyana	--transfer information work to CEIS --complete the past work of the PMU; and cooperate and coordinate with the St. Lucia Component; plus evaluation work --support for the forthcoming Energy Unit at the CARICOM Secretariat	One Coordinator and one person as Administrative Support	130 ..200 500
St. Lucia	--policy work at country level --project preparation work --updating of study on country energy status jointly with CARILEC --administering above	Increased use of short-term consultants and staff for all activities	250 250 70 250
	Contingencies/escalation		100
Total			1,750

6.03 CREDP's coordinator in Guyana would function as liaison between the CARICOM Secretariat and CREDP's St. Lucia Component, the National Focal Points, and the Project Steering Committee. The coordinator would also: carry out the remaining activities of CREDP's Guyana Component (e.g., the transfer of the website and other information materials to CEIS); receive the monthly reports of the St. Lucia Component, and monitor the progress of CREDP's extension and report to the CARICOM Secretariat and UNDP. UNDP would disburse CREDP's funds to both components under the

existing procedures (respectively those used by the Guyana Component with UNDP; and by the St. Lucia Component with GTZ).

#### Avoiding new elements

6.04 At this stage in CREDP's execution, and given the lags discussed in chapters 3 and 4 above, care should be taken to avoid introducing new elements of institutional organization which add complexity and take away from focusing on project outputs and effective use of resources. The objective should not be to pursue the ideal institutional organization (that should be left for a possible Stage II of CREDP) but to simplify and emphasize the mechanisms that work, while ensuring adequate reporting and monitoring.

An option that was mentioned for consideration during the visit to Guyana and Barbados the week of February 4<sup>th</sup> is the sub-contracting of the administration of CRETAF to an outside institution, such as the Caribbean Development Bank (i.e., the original candidate in 2002-3); or to a private financial institution such as the Caribbean Financial Services Corporation of Barbados, with which the PMU had conducted negotiations until the mid-term evaluation. This kind of approach is not recommended for the following reasons:

- introducing an unknown entity at this advanced stage of project execution runs the risk mentioned above of complicating and delaying the remaining activities

- it always takes time for a new entity to come up to speed and become efficient in an activity

- given the recommendation in Chapter 5 to use contingent grants rather than loans, a private financial institution would not be needed

- given that the St. Lucia component has accumulated valuable experience in the making of the proposed partial grants, the going outside for a financial institution to prepare projects appears as a less attractive option.

#### Reporting and Monitoring

Under the recommendation for the proposed extension and reformulation, both Guyana and St. Lucia components are to provide reports to the CARICOM Secretariat, UNDP/GEF, and the UNDP Country Office on the progress of the extension and its expenditures on a monthly basis. In addition, monthly meetings with CARICOM and UNDP are recommended to ensure that everyone agrees with the work plans of each component, and that there is accountability for results.

## 7. Outline of Model Financial Facility for Renewable Energy

7.01 Today, there seems to be no need for a specialized **CREF-like model financial facility**, such as CREF, for renewable energy because of the following:

Since the time of PDF-B, the priority given to RE projects by the multilateral and bilateral development financial institutions has greatly increased. These institutions are committed to contributing to the prevention of climate change through projects that reduce GHG emissions and hence they have assigned high priority to RE projects.

At one point in the recent past, when RE projects were relatively scarce, some of the international institutions complained that they were being sidetracked by subsidized financing provided by some of the other institutions.

The international commercial banks are also keen to show that they are financing RE projects and hence contributing to the environment.

The rise in oil prices to record levels has attracted venture capital funds and other equity investors to RE projects.

Specialized funds that invest in carbon credits and clean energy projects are eager to look into the financing of well prepared RE projects.

The supply of funds appears to greatly exceed the demand for financing by well prepared projects .

Whenever a project is delayed, the chances are that it is not because of lack of funds but rather because:

- the necessary legislation is missing at the country level;
- the sponsor is weak or inexperienced;
- the RE resources have not been well researched;
- the order backlog from engineering and equipment suppliers keeps adding to procurement delays;
- the PPA negotiations take longer than expected;
- the sponsor tries to pass on to the financier risks which are not theirs to assume;
- the country's investment climate is poor and deters investors in general, and not just those looking at RE projects.

7.02 Even when there are a multitude of **project preparation facilities** (e.g., grant-based trust funds at the multilateral financial institutions; IFC's facility for the preparation of infrastructure projects), the case against a **CRETAF model facility** is weaker, especially for the Caribbean. This is mainly because the trust funds and project preparation facilities are often remote and complicated and can discourage the sponsor of a relatively small project. Also, those trust funds and project preparation facilities tend to favor the larger projects in the larger countries than what are typically found in the Caribbean. Hence one can argue credibly in favor of a project preparation facility for RE and energy efficiency projects in the Caribbean. The suggested approach is as follows:

- keep the facility focused on the **early preparation work**, such as resource assessments and pre-feasibility work
- operate through short-term consultants that can be considered as global **best practices**
- pair** these consultants with regional consultants to promote dissemination of knowledge on how to do the actual preparation work
- consider providing **partial** assistance with the more advanced preparation work, such as feasibility studies, environmental impact assessments, structuring of proposals and presentations to financiers, negotiations with suppliers and financiers, project oversight and problem solving
- provide **partial** grants and get the project sponsor to fund the other part of the preparation costs out of sponsor equity
- work to get **reimbursed** for the grants if the project gets financed and implemented
- ensure that the sponsor is of high quality and owns the project and is committed to it**
- keep **close contact** with project sponsors (this calls for a frequent presence in the field)
- minimize report writing and emphasize obstacle removal and obtaining the financing and ensuring there is a strong **management** team for project implementation
- consider assisting in problem solving during implementation

## **8. Partnerships and Coordination Roles**

8.01 The Project Document identified many stakeholders who contributed to CREDP's preparation and design and who were expected to cooperate during its implementation. Below are suggestions on the main partnerships and coordination roles.

### CARICOM Secretariat

8.02 With its convening power, the CARICOM Secretariat was identified at the outset and remains the major potential force for the promotion of RE policies and projects among its member states. The effectiveness of this promotion has been below its potential due mainly to the low priority given to energy by the CARICOM Secretariat during the past 4 years. This is evidenced by the absence of an Energy Unit at CARICOM and of a ministers meeting to approve the draft regional energy policy. The reportedly forthcoming Energy Unit at the CARICOM Secretariat should be a source of leadership for energy matters at the regional level as well as for cooperation with the countries' authorities. Also, the CARICOM Summit Meeting in the Bahamas in March is expected to raise the profile of energy in the region and to address other issues, including the relations among member countries on energy matters and other issues such as PetroCaribe and ALBA.

### CEIS

8.03 The close cooperation with CEIS during the proposed extension should permit the continuity of CREDP's efforts in the information/awareness area. This includes transferring the CREDP website to CEIS along with capacity building materials.

### Country Authorities

8.04 The Project Document included supporting the country authorities in their policy changes by means of the establishment of a regional policy development advisory facility and of national energy policy advisory committees. These initiatives did not materialize reportedly because of no demand from the countries (see the section on Demand Driven vs Proactive in Chapter 2). It appears that the most effective means of partnering with country authorities has been through the provision of expert advice on policy/legal/regulatory matters by short-term consultants. These efforts should be continued and the lessons learned in each country should be disseminated among all 13 countries that participate in CREDP.

### Universities, NGOs and the Private Sector

8.05 There is potential for further cooperation with these entities during the proposed extension. The suggestion is to conduct a detailed review of those partnerships that have worked best and consider additional cooperation.

### Regional and International Financiers

8.06 Since the time CREDP was designed, there is great interest among the regional and international development finance institutions and private banks and investors in the financing of RE projects. The suggestion is to focus on the work to make projects ready for financing and on assisting project sponsors in accessing those financiers.

## 9. Critical Issues and Risks

(This chapter is partly based on section E of CREDP's Project Document)

9.01 The issues that relate to the original **design** were presented in Chapter 2 above and include: simultaneous barrier removal vs in sequence; demand driven services vs proactive approach; capacity building targets; own website vs expanding an existing one; regional vs local perspective; bottom up vs top down; 13 vs 5 countries; 1 vs 2 locations; lack of an Energy Unit at the CARICOM Secretariat; and reporting.

9.02 The **main issue** concerning the proposed extension and reformulation is whether it is possible to avoid getting entangled in **procedural complications and delays** which detract from and dilute project work and from which CREDP has suffered, as reviewed in previous chapters. The proposed reformulation seeks to resolve this issue. The main risk is that the necessary policy/legal/regulatory work that is necessary at the country level for RE projects to proceed will continue to be delayed. This risk is moderated by focusing on field work through proven methods, procedures, consultants and rules which have produced results over the past 4 years.

9.03 Below is a review of the risks that were identified in CREDP's Project Document:

- **Lack of government support of the participating countries.**

9.04 The Project Document identified as a project risk the possibility of a drop in country drive and support for the project. As a means of mitigating this risk, a Government Letter of Support was obtained from each country which participated in CREDP "in order to demonstrate commitment to the Programme and to enhance an investment climate supportive to CREDP."

9.05 From today's standpoint, participating governments have continued to voice support for the project. However, their demand for CREDP's policy services has generally been below original expectations and the process of change in policies that are conducive to RE has been slower than originally projected. Demand for policy services appears to strengthen whenever CREDP has taken a more proactive approach at the individual country level. The **lesson** is that a complex project such as CREDP, which aims at introducing new energy technologies, ought to favor close and frequent contacts with each country's authorities and other stakeholders in order to ensure a continuity and intensity in the efforts required to remove the policy barriers that hinder the RE projects. Clearly, a regional RE policy and access by CARICOM to each country's energy minister are necessary but not sufficient conditions for RE projects to be implemented and the intense and pro-active work at the local level is indispensable.

- **Project may not catalyze sufficient private sector participation to ensure local and regional supply of RE equipment and associated services.**

9.06 The Project Document identified as CREDP's main risk the possible absence "of around US\$10 million for actual RE project implementation" from reluctance by banks to lend to and sponsors to invest in the equity of RE demonstration projects. This risk was deemed to be low "since a preliminary list of projects already exists" and it included "RE

projects at different stages, ranging from pre-feasibility stage to ready-for-implementation.”

9.07 This risk never materialized because of the delay in the changes to the policies, regulations and electricity acts needed to be introduced in order to permit RE projects to proceed. Given the priority assigned by the development finance institutions (e.g., World Bank, IADB, IFC, IIC, bilateral institutions), it is likely that sufficient funding would have been available for sound projects which were well prepared.

- **Interest rates may increase and may constrain RE investments.**
- **Drought or low-wind conditions could reduce financial viability of RE projects.**

9.08 None of these risks materialized either. Even in Belize and Jamaica, where the policy work has been completed and RE projects have been implemented, neither interest rates nor resource scarcity have constrained the viability of RE projects. On the other hand, private investors (independently of whether national or foreign) are very sensitive to the country’s business climate and regulatory environment when making their investment decisions.

- **Project timing in 2004 and currently**

9.09 In 1998, when PDF-B preparations started, oil was at record low prices and CREDP’s priority was based mainly on its capacity for reducing greenhouse gas emissions. Today, however, and except for energy-exporting Trinidad & Tobago, the countries of the Caribbean suffer from record high oil prices. Hence CREDP’s current priority is highest because of its potential not only to reduce GHG emissions but especially to reduce oil imports and even for reducing energy costs to the consumer. Now that the work to change energy policy at the country level is well advanced, and that CREDP has identified what works and not, it makes sense to extend CREDP beyond its original project completion date and use the remaining resources in a focused and effective way.

## **10. Key Findings and Recommendations and Lessons Learned**

(This chapter is based partly on the in-person interviews)

10.01 The lessons that pertain to design matters were presented in Chapter 2 above and include: simultaneous barrier removal vs in sequence; demand driven services vs proactive approach; capacity building targets; own website vs expanding an existing one; regional vs local perspective; bottom up vs top down; 13 vs 5 countries; 1 vs 2 locations; lack of an Energy Unit at the CARICOM Secretariat; reporting. Following are other lessons which should be confirmed during the final evaluation of the project.

### The High Moral Ground

10.02 Tourism is the main economic activity and source of employment in the Caribbean region. Tourism can suffer substantially from the effects of climate change. Clean energy can help reduce these effects. The Caribbean should be a model of how energy can be clean and how everyone can do its part to prevent climate change. It is hard to get foreign visitors motivated about clean energy when the Caribbean, which has excellent potential for RE, utilizes so little of that potential. In order to gain the high moral ground and make its message heard, the Caribbean needs to set an example. This calls for a major thrust toward making RE a reality in the region and making the region a paragon of clean energy. New Zealand provides a good example and inspiration (see Annex 3). CREDP can and should do more in order to bring to everyone's attention the top priority that RE deserves and how to move toward its swift implementation. Once it practices, the Caribbean can preach.

### The Economics

10.03 When CREDP started to be prepared (1998), oil prices were at historic lows and RE was seldom the prime economic energy solution in the Caribbean and elsewhere. This suggests that RE required subsidies in order for many of its projects to be financially viable. Since that time, however, RE technologies have become much more efficient and investment costs have dropped. Today's record high oil prices mean that many of the countries of the Caribbean can save money and hard currency and avoid unsustainable debt when they use RE technologies. Yet it is not well known how much each country and its consumers could benefit from RE projects. This calls for greater dissemination of the economics of RE in each country and for the national energy strategy and action plan.

### Local Presence

10.04 Changes in policies, laws and regulations require a local presence and activist lobbying. CREDP should sponsor the preparation of a strategy for RE in each of its 13 countries and should support the deployment of local and regional talent to facilitate making the country strategy a reality and building the enabling environment for RE.

### All Hands

10.05 The Project Document contains a long list of stakeholders among which there is only one NGO. These institutions have proven to be effective lobbyists and mobilizers of public opinion and should be considered for enlisting in the promotion of RE and support for the necessary policy and legal changes.

### Best Practices

10.06 CREDP should disseminate examples of other countries which have succeeded in introducing the right policy context and implementing RE projects. For instance, Belize and Jamaica are understood to have a favorable enabling environment for RE. Dominica, St. Lucia and other Caribbean countries are deemed to be close to attaining such context as well, even when the last 5% of the work to change policy is often the hardest. UNDP/GEF should share recent best practices from its experiences with similar projects in other regions.

### Time for Project Preparation

10.07 Even when the policies/laws/regulations are in place, and the enabling environment for RE becomes a reality, it still takes a lot of time and effort and know-how to prepare an RE project and have it ready for financing and construction. This is normal for RE projects and CREDP and its stakeholders should not be discouraged if the going is difficult. CREDP should intensify its efforts and focus on those projects that have best chances of becoming a reality. It should consider retaining a network of top experts and deploying them in order to facilitate the timely preparation and launching of the RE projects, particularly in the initial stages of a project.

### Network

10.08 CREDP has created a valuable network of National Focal Points and members of its Project Steering Committee which is not being utilized in its full potential. Thought should be given to how to use this network in a more productive manner and give it continuity beyond CREDP.

### PSC and Governance

10.09 Because not every country is represented in the Project Steering Committee, its effectiveness is limited. It may be worth considering to merge the PSC with the National Focal Points and to have two (rather than one) meetings during CREDP's proposed one-year extension. The PSC has been more effective as a source of advice than as a governance body, and it ought not be viewed as a substitute for adequate reporting, monitoring, supervision, oversight and performance accountability for Project Management.

### Sustainable Energy

10.10 Since the preparations for CREDP started, the concept of RE has evolved into the practice of sustainable energy which integrates RE with energy efficiency. The Project Document indicated this trend, but CREDP's actions focused only on RE. For the future, consideration should be given to including both RE and EE approaches in each country's strategy for sustainable energy.

### Regional initiatives

10.11 To be effective and well perceived, regional initiatives have to show their contribution to practical results at the country level. The forthcoming Energy Unit at the CARICOM Secretariat should earn its credibility through such contributions. Otherwise it might be better to consider other venues for future CREDP-like sequels.

### Carbon Credits

10.12 Given the Caribbean's reliance on fossil fuels for its energy, the region's RE projects ought to benefit from the sale of carbon credits. CREDP should look into this possible benefit when preparing RE projects.

### The Utilities

10.13 Since the time CREDP started its preparations, the world's leading private utilities and investors have become aware of the new business opportunities in clean energy, as well as the need to reduce GHG emissions and to promote sustainable energy. Present among the owners of Caribbean utility companies are some of these global utilities and investors who want to be perceived as concerned with the environment and are prepared to take action to improve it. For instance, Fortis of Canada is an investor in the main electricity company of Belize. Also, in mid-2007 Mirant (which is coming out of bankruptcy proceedings in the United States) sold its utility investments in the Bahamas, Curaçao, Jamaica and Trinidad to Marubeni of Japan. This growing "green" conscience and corporate social responsibility presents an opportunity to engage the utilities and their investors at the top level in a dialogue to explore how to make better progress in clean energy in their operations in the Caribbean region. CREDP should seize this opportunity.

### The Market Approach

10.14 Barbados already has several companies manufacturing solar water heaters and competing globally in this field. CREDP has supported SWH through capacity building initiatives (e.g., for setting standards and for training installation and maintenance technicians) and by means of organizing a market promotion seminar in Belize. There seems to be further scope for CREDP to cooperate with private sector companies and hotels in SWH, and CREDP should focus its attention in this area during the proposed extension.

### Rich experiences

10.15 CREDP has accomplished a lot of good work even when much more and better could have been attained. One impression during this assignment is that there are many CREDP initiatives and accomplishments over the past 4 years that deserve to be better known, documented and disseminated. CREDP is rich with experiences of what works and not in terms of making RE projects a reality. The present reformulation/extension assignment had limited time to learn about such experiences and extract the lessons. CREDP should consider deepening this kind of evaluation and extraction of lessons during the proposed extension period. The recommendation is to have a consultant with experience in the evaluation of similar projects in other regions as a member of the future evaluation team.

### Next Stage

10.16 A further recommendation is to consider a second stage for CREDP in cooperation with the CARICOM Secretariat, the GTZ and other donors.

## **Annex 1**

### **TOR for Reformulation of the Caribbean Renewable Energy Development Programme (CREDP)**

#### **I. Background**

The Caribbean Renewable Energy Development Programme 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.

The Caribbean countries participating in the Project are: Antigua and Barbuda; The Bahamas; Barbados; Belize; The British Virgin Islands; 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, ranging from Cuba with 12 million people (or 65 per cent of the population) to the Turks and Caicos with a population of 12,000 people.

Most Caribbean countries are net importers of energy which is almost entirely in the form of petroleum and petroleum products. This situation is further compounded by many countries being small and of a sub-critical size for optimum development of the energy sector due to small volumes of fuel imports, and high transport costs and margins per unit. Income elasticities of energy demand are also high for these countries 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. At the same time however, the expansion of the energy sector is a key aspect to the economic development of the region.

#### **II Objectives of CREDP**

CREDP 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 green house gas (GHG) emissions 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. 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.

In December 2006 consultants were engaged to initiate a Mid Term Evaluation and presented a number of findings<sup>2</sup> for consideration by the UNDP, the CARICOM Secretariat and the Project Steering Committee to assess the results and the future direction of the project. The UNDP CO and the CARICOM Secretariat developed a joint management response to the consultant's Mid Term Evaluation report, which was subsequently presented to the Project Steering Committee in September 2007. The Project Steering Committee "... agreed that the development of energy policy and finance mechanisms for renewable products would comprise the priority areas which the CREDP should pursue for the remaining life of the project."

"The Mid-Term Report (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 has failed to generate a critical mass of clients 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 has failed to move forward. 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. Focal Point representatives 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 inception. 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.

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<sup>2</sup> See final MTE report for more information

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 CREF 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”.

Based on the above findings and recommendations a management response plan was prepared (see list of reading materials) that propose remedial actions for the project.

In August 2007 a project implementation report (PIR) was prepared and submitted to UNDP-CO and UNDP RCU. The report showed very limited progress subsequent to the MTR made by the project to meet its objective.

In September 2007 a meeting of the Project Steering Committee was held in Belize, based on the progress made on the implementation of the project the Project Steering Committee suggested the need to extend the project based on GEF and UNDP’s rules.

In December 2007 a high-level mission from UNDP HQ and UNDP RCU was carried out to evaluate the progress made to date by the project, analyse the possibilities of extending the project, discuss with CARICOM Secretariat, the CREDP PMU and project stakeholders and participate in a project Tripartite meeting to decide the best course of action for the project.

The tripartite meeting recognized the progress made by the project but also identified the gaps in its implementation. It recommended the project be reformulated through an independent assessment and evaluation.

The following section presents the key purpose of the reformulation exercise.

### **III. Reformulation of CREDP**

The purpose of this reformulation is to:

- a. Assess the log frame of the Project and the effectiveness of the approaches to implementation and achievement of the objectives
- b. Identify implementation gaps, overlaps and other risks to Project Implementation and suggested remedial actions;
- c. Assess the validity of project assumptions and where necessary describe new market conditions and the new operating environment for energy providers in the Caribbean.
- d. Based on the analysis of the Project's main strengths, weaknesses and any constraints to implementation propose new project structure, methodology, operational modality, length of extension period and best use of the remaining resources to achieve the project's objectives.

#### **Organization of the Reformulation**

The Reformulation will take place during January 2008 and be completed no later than 7 March 2008, including time for preparatory work by the Reformulation Consultant(s) and submission of final report. The Consultant(s) will undertake the desk reviews during the week of 28 January 2008 in their home countries and be in Guyana and Barbados to conduct on-site interviews and other data gathering during the week 4 February 2008 and present the interim findings no later than 11 February 2008.

The **Reformulation** Consultant(s) will be answerable to UNDP and will work closely with the CARICOM Secretariat and the Project Manager to undertake the review. The UNDP, CARICOM Secretariat and the Project Management Unit (PMU) will provide key background documentation to the REFORMULATION Consultant(s) (progress reports, M&E reports and special studies, background information on the project area, audit reports etc.). Full access will be allowed to the Project's documentation and information sources. Generally, the UNDP and CARICOM Secretariat, particularly the Project staff, will be available as required for discussions and supplying information.

#### **General Responsibilities and Tasks of the Consultant(s)**

- Before starting, be thoroughly familiar with the Project (objectives, outputs, previous phases including previous activities, outputs, budget, time schedule, context, etc.);

- Consult with the Implementation Agency, UNDP CO and UNDP RCU, the Executing Agency CARICOM Secretariat, and the CREDP Project Manager on how the reformulation mission will be best conducted.
- Discuss the timetable for fieldwork and reporting, and how feedback on the conclusions will be organized.

### **Specific Tasks of the Consultant (s)**

- a. Review the relevance of the project to regional development priorities and needs as well as the feasibility of project objectives (including targets);
- b. Make an overall assessment of project achievements, progress made after the submission of the consultant's MTE report and suggest corrective measures to move towards meeting the project's objective.
- c. Analyse the factors and constraints that have influenced project implementation, including technical, managerial, organisational, institutional and socio-economic policy issues, in addition to other factors unforeseen during design and propose remedial actions for the eventual project extension;
- d. Evaluate and identify the most effective operational modalities for advancing the future implementation of the project including possible institutional linkages with the CARICOM Secretariat's new energy programme, potential donor support and the GTZ funded project;
- e. Assess the appropriateness and effectiveness of the log frame and recommend a new framework for the project extension based on b.
- f. Analyse, discuss and justify, if required, the need for a project extension;
- g. Identify where project design needs adjusting/reorienting in order to increase its effectiveness in reaching its objectives during a possible extension period. This includes proposals to adjust the project objectives and strategy, activities, budget and inputs, project management, organisational/institutional set-up and implementation plan;
- h. Assess the efficiency of project operational structure and management with respect to a possible extension and based on the available balance of funds;
- i. Based on the financial balance of the project, proposed a new structure and redefine targets for the project extension;
- j. Assess and revalidate the need for each project outcome and recommend key projects outputs and activities to be carried out during a potential

- project extension and making the best use of the remaining financial resources;
- k. Highlight lessons learned from the activities and initiatives undertaken during implementation of the Project that can benefit the project in its remaining lifespan;

With regards to a Regional Finance Mechanism (formerly CRETAF)

- l. Assess the relevance and effectiveness of financial mechanism and revalidate the need for addressing the barriers to renewable energy in the Caribbean;
- m. Evaluate the current design of the financial mechanism and if necessary propose a more relevant model;
- n. Evaluate the nature of the mechanism in terms of the product to be offered (grants, contingent loans or loans) and recommend the best solution based on existing market potential;
- o. Assess the operational modalities of the mechanism and propose the most effective design;
- p. Assess the prospects of involving a regional financial institution in the management of the fund and if appropriate recommend the most suitable one;
- q. Based on a comprehensive analysis of the national legal frameworks, local capacities, potential for RE market development, and concrete project proposals, and information and discussion with the parallel project GTZ identify target countries for the fund;
- r. Analyse other efforts in the region, including GTZ to assess its effectiveness, draw the lessons that could help in the design of CRETAF and look for opportunities of synergies;
- s. Based on UNDP's rules and regulations regarding financial mechanisms propose the best operational modality for the fund.

## **Methodology**

### **Workplan and Initial Meeting**

- o The REFORMULATION Consultant(s) will prepare a proposed Work Plan and circulate it to the UNDP, the CARICOM Secretariat and the CREDP PMU which will include (a) a detailed schedule of proposed meetings, (b) a

questionnaire to evaluate programme process issues and (c) advance questions and requests for information, which would be submitted in advance of the initial meeting. The REFORMULATION Consultant(s) will present his/her approach to the UNDP and CARICOM Secretariat at an initial meeting in Georgetown, Guyana. At the end of the meeting it is anticipated that expectations would be clarified; logistic issues addressed; responsibilities and roles clearly delineated; and data gaps identified. A revised work plan, if required, should be submitted within one working day.

### **Desk Review**

- The REFORMULATION Consultant (s) will conduct Desk Reviews of the project document, project inception report, work plans, progress reports, financial and expenditure reports, audit reports, steering committee reports, and other relevant documentation to assess achievements to date. The CREDP PMU will supply the REFORMULATION Consultant(s) with all relevant documentation for the Desk Review

### **Data Collection**

#### **In-person Interviews**

The CREDP PMU will provide logistical support and facilities to the mission to conduct video and teleconferences as appropriate. To maintain confidentiality and to allow for open frank exchanges at the data gathering stage the CREDP PMU, the executing agency and UNDP will not be present during the video and teleconferences.

The interviews will include but not be limited to the following groups:

1. The CARICOM Secretariat and the CREDP Project Management Unit (PMU) in Guyana
2. The UNDP Country Office in Guyana
3. The Caribbean Development Bank (Barbados)
4. CREDP/GTZ
5. The Chairman and members of the CREDP Project Steering Committee

## 6. Country focal points for RE/the CREDP project

### **Feedback on Interim Findings/ Report**

- The CREDP PMU will provide logistical support and facilities to the REFORMULATION Consultant (s) to conduct tele-conferences and/or video conferences with the Country Focal Points for RE/CREDP, and the Project Steering Committee. The purpose is to discuss the interim findings and to obtain immediate feedback on the draft report.
- The REFORMULATION Consultant (s) will present the interim findings and recommendations to UNDP Guyana Country Office, UNDP/RCU office, the CARICOM Secretariat, the CREDP Project Management Unit for comments and feedback.

### **Reporting**

- The REFORMULATION Consultant(s) will conduct a debriefing with the Resident Representative UNDP Guyana at a date prior to departure.
- The REFORMULATION Consultant(s) will finalize the REFORMULATION Report based on comments received as per the format outlined below.
- An electronic version in MS Word of the final report should be submitted to UNDP within two weeks of receiving comments on the Draft Report, and in any event no later than 7 March.

### **Format of the Reformulation report**

- Table of Contents
- Executive summary 2-3 pages providing an overview of the report and a summary of the findings and recommendations
- List of abbreviations
- Project data sheet
- Chapters (not necessarily in the order stated)
  1. Introduction and background
  2. Project design and relevance
  3. Status and performance of project implementation – *describe project achievements and provide evidence of progress made after MTR consultant's report. Briefly describe: Implementation*

arrangements; Management systems, Procedures, and Operational issues.

4. Analyse and present the project financial balances and status of implementation per outcome.
5. Discuss and recommend the need or not for a project extension, including a revised log frame,
6. Present the proposed institutional organization for project extension
7. Outline of model Financial Facility of Renewable Energy
8. Partnerships and coordination roles
9. Critical issues
10. Key findings and recommendations and lessons learnt
11. List of persons interviewed
12. List of documents and references used

### **Qualifications and experience required**

The REFORMULATION exercise can be conducted by a single consultant or a team consisting of not more than 2 persons having expertise and competence in project formulation and evaluation, renewable energy, financial mechanisms for RE, knowledge of the Caribbean region, the GEF, and UNDP project implementation modalities.

### **Timeline**

<b>Task/output</b>	<b>Time Period</b>	<b>Level of Effort</b>
Desk Reviews/telephone interviews	29 January – 3 February	4 days
Field visit /desk reviews/telephone interviews (cont'd) Guyana Barbados	4 – 8 February	3 days (excluding travel days) 1day (excluding travel days)
Presentation of interim Findings	8 February	1day
Preparation and Submission of draft report Comments to be submitted to the Consultant by 20 February	16 February	6 days
Submission of final report after feedback from UNDP/CARICOM Secretariat/PMU	7 <sup>th</sup> March	2 days

Note: All telephone charges for this exercise will be re-imbursed by the UNDP on the submission of bills for the same.

## **List of Materials for Review**

1. The Mid-Term Report (MTR)
2. Project implementation report (PIR)
3. Project Steering Committee Meeting Reports
4. Tripartite meeting Notes
5. Progress reports
6. M&E reports
7. Audit reports
8. Project document
9. Project inception report
10. Work plans
11. Financial and expenditure reports

	NAME	DESIGNATION	ORGANISATION	ADDRESS	TELEPHONE
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<b>Donor Representative - OAS</b>	Mr. Mark Lambrides	Project Coordinator	REIA/OAS	1889 F St. NW, Washington DC 20006	202 458 6261
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<b>OECS Secretariat Representative</b>	Mr. Keith Nichols	Programme Officer	ESDU, OECS Secretariat		758 453 6208
<b>Non-OECS Representative - Jamaica</b>	Ms. Keva Steadman	Economist	Ministry of Industry, Commerce, Science and Technology with Energy	PCJ Building, 36 Trafalgar Road, Kingston 10	876 926 2073
<b>Non-OECS Representative - Suriname</b>	Mr. Lucien Refos	Senior Advisor	Ministry of Natural Resources of Suriname	Mr. Dr. J. C. de Mirandastraat #11-15	597 477 487
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<b>University Representative</b>	Prof. Al Binger		UWI - Mona	Jamaica	
<b>NGO Representative</b>	Dr. Indra Haraksingh	President	Caribbean Solar Energy Society	Department of Physics, St. Augustine Campus, UWI	868 663 3200
<b>Private Sector Representative</b>	Mr. Roy Kolader	Managing Director	Delta Caribbean N.V	Mahaaiweg 6, Curacao, Netherland Antilles	599 9736 4033
<b>CEIS Representative</b>	Ms. Mona Whyte	Team Leader	CEIS	Hope Gardens, Kingston, Jamaica	876 927 1779
<b>PMU Project Manager</b>	Dr. Roland Clarke	Project Manager	CREDP	CARICOM Secretariat, Georgetown, Guyana	592 222 0001-75 592 222 0079
<b>GTZ Representative</b>	Mr. Thomas Scheutzlich	CREDP/GTZ Principal Advisor	CREDP/GTZ	c/o CEHI, The Morne, P.O.Box 1111, Castries, St. Lucia	758 458 1425

## List of Project Steering Committee Members & Contact Information

### List of Country RE/Focal Points

COUNTRY	Name	Designation	Organisation	Address	Tel.
The Bahamas	Mr. Gilles Deal	Chief Price Inspector	Ministry of Energy and Environment	PO Box N 4849, Nassau	242
Barbados	Mr. William Hinds	Senior Technical Officer	Ministry of Energy and Environment	2nd Floor, NPC Building, Wildey, St. Michael	246 427
Belize	Mr. Cresencio Sosa	Chief Executive Officer	Ministry of Home Affairs and Public Utilities	New Administrative Building, Belmopan	501
Cuba	Dr. Alfredo Curbelo	Director of Innovation and Energy	Centre for the Management of Prioritized Programs and Projects (GEPROP)	Ministry of Science, Technology and Environment, Capitolio Nacional, La Habana 10200	537
Commonwealth of Dominica	Dr. Colmore Christian	Permanent Secretary	Ministry of Housing, Lands, Telecommunication, Energy and Ports	Government Headquarters, Kennedy Avenue, Roseau	767

Grenada	Mr. John Auguste	Senior Energy Officer	Ministry of Agriculture, Lands, Forestry, Fisheries, Public Utilities, Energy and MNIB	Ministerial Complex, Botanical Gardens, Tanteen, St. George's	473
Guyana	Ms. Maxine Alexander-Nestor	Electricity Advisor to Prime Minister	Office of the Prime Minister	Wight's Lane, Kingston, Georgetown	592
	Mr. Joseph O' Lall	Energy Coordinator	Guyana Energy Agency	295 Quamina Street, South Cummingsburg, Georgetown	592
Jamaica	Mr. Conroy Watson	Senior Director, Energy Monitoring Unit	Ministry of Commerce, Science and Technology	PCJ Building, 36 Trafalgar Road, Kingston 10	876
St. Kitts and Nevis	Mr. Oaklyn Peets	Permanent Secretary	Ministry of Public Works, Utilities, Transport and Posts	Water Services Building, P.O. Box 80, Needsmust, Basseterre	869
St. Lucia	Ms. Marcia Philbert-Jules	Permanent Secretary	Ministry of Physical Development, Environment and Housing	Graham Louisy Administration Building, PO Box 709, The Waterfront, Castries	758
	Mr. George James	Deputy Permanent Secretary	Ministry of Physical Development, Environment and Housing	Graham Louisy Administration Building, PO Box 709, The Waterfront, Castries	758
St. Vincent and Grenadines	Mr. Lynford James (correspond with PS until new focal point identified)	Permanent Secretary	Ministry of Telecommunications, Science and Technology and Industry	Egmont Street, Kingstown	784
Suriname	Mr. Lucien Refos	Senior Advisor	Ministry of Natural Resources of Suriname	Mr. Dr. J. C. de Mirandastraat #11-15	597
Trinidad and Tobago	Arjoon Banswah	Senior Planning Officer	Ministry of Energy and Energy Industries	Level 9, Riverside Plaza, Cor Besson and Picadilly Sts. Port-of-Spain	868

## **Annex 2**

### **List of Persons Interviewed (in person and telephone calls)**

#### **Bahamas**

Mr. Gilles Deal

CREDP's National Focal Point

Chief Price Inspector, Ministry of Energy and Environment, The Bahamas

#### **Barbados**

Mr. William Hinds

CREDP's National Focal Point

Senior Technical Officer, Ministry of Energy and Environment, Barbados

#### **Belize**

Mr. Carlos Fuller,

Chairman of CREDP's Project Steering Committee

Chief Meteorological Officer, National Meteorological Service, Belize

#### **Cuba**

Dr. Alfredo Curbelo

CREDP's National Focal Point

Director of Innovation and Energy, Ministry of Science, Technology and Environment, Cuba

#### **Grenada**

Mr. John Auguste

CREDP's National Focal Point

Senior Energy Officer, Ministry of Agriculture, Lands, Forestry, Fisheries, Public Utilities, Energy and MNIB, Grenada

#### **Jamaica**

Mr. Conroy Watson

CREDP's National Focal Point

Senior Director, Energy Monitoring Unit

Ministry of Commerce, Science and Technology, Jamaica

Professor Al Binger

Member of CREDP's Project Steering Committee

#### **St. Kitts & Nevis**

Mr. Ernie Stapleton

CREDP's National Focal Point

Ministry of Energy, Nevis

**St. Lucia**

Crispin d'Auvergne  
CREDP's National Focal Point  
Chief Sustainable development & environment Officer

Ms. Neranda Maurice  
Sustainable Development Officer

Ministry of Economic Affairs, Economic planning, Investment and National  
Development, St. Lucia

**Trinidad & Tobago**

Professor Indra Haraksingh  
Member of CREDP's Project Steering Committee  
University of the West Indies, Trinidad

**CARICOM Secretariat**

Ambassador Irwin LaRocque  
Assistant Secretary General for Regional Trade and Economic Integration

Dr. Garfield Barnwell  
Director for Sustainable Development

**Caribbean Development Bank**

Ms. Allison Davis  
Manager, Infrastructure Portfolio Division

**CEIS**

Ms. Mona Whyte, Team Leader, and Mr. Curtis Deenah  
Caribbean Energy Information Service

**CARILEC**

Mr. Nigel Hosien  
Member of CREDP's Project Steering Committee  
Executive Director of CARILEC

**CREDP's Guyana Component**

Dr. Roland Clarke, Project Manager  
Mr. Leighton Waterman, Project Associate  
Ms. Nichelle Foo, Project Assistant

**CREDP's St. Lucia Component**

Mr. Thomas Scheutzlich  
Principal Advisor  
CREDP-GTZ

**OAS**

Mr. Mark Lambrides  
Member of CREDP's Project Steering Committee  
Program Officer  
ESDU, OECS Secretariat

**UNDP**

Mr. Aboubacry Tall, Resident Representative  
Ms. Patsy Ross  
Ms. Nadine Livan  
Ms. Juanita Mangal

**(In progress: I have tried but, as of February 16, 2008, had not yet succeeded in speaking with CREDP's National Focal Points in Dominica, Guyana, Suriname, and St. Vincent and the Grenadines)**

## Annex 3

# New Zealand Outlines Steps To Offset Greenhouse Gas Production

DOW JONES NEWSWIRES      *February 12, 2008 2:11 a.m.*

WELLINGTON (AP)--New Zealand's government outlined a series of steps Tuesday toward its goal of becoming the world's first nation to fully compensate for its production of gases that contribute to global warming.

Prime Minister Helen Clark last year set New Zealand the ambitious goal of becoming the world's first greenhouse gas-neutral country, meaning that carbon dioxide and other gases that contribute to global warming are offset through a variety of means, such as the planting of trees or funding of energy-efficient technology.

Clark told Parliament on Tuesday that the nation needs "to be part of the solution to the world's biggest problems - and certainly not a reluctant last mover."

Stepping up to the challenge of creating a sustainable future "is the right thing to do and the smart thing to do," she told lawmakers as she outlined priorities for 2008.

These included passing laws to implement a greenhouse gas emissions trading scheme and ensure clean-burning biofuels make up a minimum of 34% of the fuel sold in the country by 2012, replacing gasoline and diesel.

"In our own economic interests we have to move or face significant barriers in key (foreign) markets where consumers increasingly make ethical choices" about the goods and services they buy, she said in a statement.

This was a reference to a "food miles" campaign in Europe in which consumers are choosing food from local producers to reduce the amount of greenhouse gases produced by transportation. The campaign is likely to impact New Zealand goods produced 19,000 kilometers away from Europe's wealthy markets.

New Zealand has set a target of a carbon-neutral transport sector by 2040 and a carbon-neutral electricity generating sector by 2025.

Already, nearly 70% of the nation's electrical supply comes from renewable resources, such as hydroelectric, geothermal and wind generation.

Clark has likened the threat of climate change to that of a nuclear holocaust during the Cold War, and has said New Zealand must lead the way in combating it.

Clark proposed a green path to the future based on sustainable growth, carbon neutrality, sharply lower greenhouse gas output and helping ordinary households fight climate change, cut waste and improve energy efficiency.

She told lawmakers Tuesday that new plans for sustainable land and fresh water management would be rolled out to help land-based industries - half the nation's economy - "improve (their) environmental performance...and assist them to adapt to a changing climate."

Clark also pledged New Zealand would play "a full part in international negotiations for a comprehensive post-2012 agreement on climate change" to replace the Kyoto Protocol, due to end that year.

New Zealand is now recognized "as a leading nation in stepping up to the sustainability challenge," she told the lawmakers.

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