

## Project Document

### 1. Short description of the project “Caribbean Renewable Energy”

The heavy dependence of Caribbean countries on fossil fuels and the thereto related high electricity production costs not only have a detrimental effect on the environment, but also on economic development. In spite of the big available potential for applying cost-favourable and environmentally friendly energy solutions, such as Renewable Energy (RE) or measures to increase Energy Efficiency (EE), this is hardly used. At the heart of the problem lies the lack of qualified technical and managerial personnel within both private and governmental institutions to provide framework conditions for an energy policy that favours RE, improves EE, and allows for the planning of concrete projects.

The overall aim of the project reads as: “Improved political, regulatory and institutional framework conditions, and the development of specialist technological and economic competencies are favourable to investment in RE/EE within the Caribbean area”.

The project methodology centres on initialising and accompanying processes of change within political and institutional procedure, and in providing technical and economic expertise so as to encourage the climate of investment in RE/EE in the Caribbean. The project’s scope of performance covers the provision of specialist consultancy to the national governments and political organisations within the region on questions of energy strategy and the required framework conditions for RE/EE; giving support to the electric utilities and other investors with regard to the planning and implementation of concrete RE and EE projects; and finally, through an institutional strengthening of the Caribbean Community Secretariat (CARICOM/CCS) and the Caribbean Association of Electric Utilities (CARILEC).

The project’s supportive components are the utilization of a team of international and regional long-term and short-term specialist staff and in the provision of a small amount of materials, respectively, expenses for transport and publications.

The project is particularly supportive of the aims of the German Development Cooperation to encourage economic development and preserve the natural environment. Energy is a central theme of German Development Cooperation and also one of the themes of the “Big 5”. The countries of the Caribbean are striving for greater recourse to RE and measures for higher EE, especially with regard to lowering energy costs (Relevancy).

The project itself is part of the “*Caribbean Renewable Energy Development Programme*” (CREDP), which came into being in 2002 with the support of the UNDP. The objective of the CREDP is to reduce the obstacles in the path to using renewable energy in the Caribbean and also to support concrete investment projects. The CREDP/GTZ project was included in the programme in 2003 for the purpose of covering additional countries and it works in close cooperation with the CREDP/UNDP, whose term expires during 2008. During the second phase the CREDP/GTZ will take over a part of the activities carried out by the CREDP/UNDP, and will be regionally extended to include further countries in the sub-region.

The total term set for the project is of 9 years and 2 months duration (from 02/2003 to 03/2012) at an estimated cost of EUR 6 700 000. The term for the tendered second phase of the work is four years (from 04/2008 to 03/2012). The total cost for the second phase amounts to EUR 4 500 000.

## 2. Obligatory elements

### 2.1 Overall aim, indicators

#### Overall aim

Improved political, regulatory and institutional framework conditions, and the development of specialist technological and economic competencies are favourable to investment in RE/EE within the Caribbean area.

#### Indicators

- 1) The number of legislative power supply regulations for RE and incentives for EE are at present being increased from 1 to 5 (at regional and/or national levels).
- 2) The number of investments being channelled into RE projects and EE measures is to date increasing from 5 to 10.
- 3) The demand for advisory services from the CCS Energy Department is rising from currently 0 to 6 up to 03/2012.
- 4) There is significant use being made of the databank installed by the CARILEC to support its member companies.

A gender-based quantifying of Indicator 4) is to follow within 3 months after the start of phase two, at the latest.

### 2.2 Phase aims and indicators

The overall aims and the phase aims are identical.

### 2.3 Target Group(s) and mediators

**Target Groups** are private households (in all, around 15 million people) and commercial and industrial electricity consumers, as well as the hotel sector in some selected CARICOM member states.

**Mediators** are officers and technical-specialist staff members of governmental and regional organisations (CCS, CARILEC, *Organisation of Eastern Caribbean States/OECS*, *Caribbean Energy Information System/CEIS*), the electric utilities, national and regional financial institutions, project developers and investors, and also universities.

### 2.4 Value of the current phase in EUR

EUR 4 500 000

### 2.5 Political Counterpart

The Caribbean Community Secretariat (CARICOM), Guyana.

With the placement of the tender, the political Counterpart retains the right as principal to directly call for performance of the obligations to which the GTZ is bound. The GTZ and the political counterpart are to regulate the details of the works agreed to in an implementation agreement. The BMZ may exercise its own rights under the tender, in particular, those in accordance with the General Contract, without the need for consent from the political counterpart.

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## 2.6 Cooperation agreed

The project is a part of the “*Caribbean Renewable Energy Development Programme*” (CREDP) that was initiated in 2002 with the support of the UNDP. The objective of the CREDP is to reduce the hindrances to the use of renewable energy in the Caribbean and to support concrete investment projects. The GTZ project (CREDP/GTZ) was included in 2003 to cover additional countries, and it works in close cooperation with the CREDP/UNDP.

## 2.7 GTZ Attestation

The concepts propounded by the participating countries and in the core-strategy papers, and the obligatory sector concepts and sector cross-boundary concepts contained in the pertinent BMZ guidelines have been adhered to throughout the planning and performance of the project.

## 3. Essential Information

### 3.1 Departure point/context

In spite of the considerable technical and economic potential for RE in the region, up to now only just 2% of the energy requirement is covered by this energy source.

The **core problem** lies in the lack of qualified technical and managerial personnel within both private and governmental institutions to provide framework conditions for an energy policy that favours RE, improves EE, and allows for the planning of concrete projects. There is also a lack of knowledge on the inherent potential of RE and the possibilities available for saving energy by applying EE measures. Moreover, there is a lack of commitment among many governments to break out of the monopolies which dominate the Caribbean energy market.

The **major cause** of the problem has its origin in the predominantly crude oil based energy supply of the Caribbean countries which also has a strong foothold due to the convenience of the oil resources in countries such as Venezuela, Mexico, and Trinidad and Tobago. Taking other sources of energy into consideration was for a long time neither politically nor economically necessary, so the requirements and understanding necessary for their use today are absent.

Because most of the countries in question are net-importers of petrol products, these economic structures inevitably lead to a higher dependency on the international mineral-oil market. The currently high price of oil at the world market as well as the existing monopolies in the electricity sector lead to higher costs for electricity, and so, in turn, to a loss of spending power and thus to the pitfall of poverty. In addition, the emission of greenhouse gases heavily increases burden on the environment (**negative effects**).

The project services so far has been used by the mediators to initiate political, regulatory and institutional reform processes and to make decisions on investment. The effects of the project to date have included the ammendment of the *Electricity Supply Acts* in Dominica, which has opened up the Dominican electricity sector as well as prepared the way for concrete investments (preparation of tender documents), with two hydro-electric power plant projects in St. Vincent and the Grenadines (SVG), and three windparks (St.Lucia, SVG, Barbados). These and similar measures are to be continued within the second phase, also in those countries that are new to the CREDP/GTZ project.

Whereas the focus during the first phase has been primarily set on providing exemplary examples, in the foreground of the second phase will be the institutional strengthening of the CSS and CARILEC. These are to function as the main regional consultant agencies, also beyond the term of the project, and they are to secure the sustainability of the programme.

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### **3.2 The relevant connection to the partner's development strategy**

Under the International Action Plan that was concluded at the International Conference on Renewable Energy in Bonn in June 2004, the 15 CARICOM member-states included the *CARICOM Regional Energy Initiative* (CREI). The overriding aim of the CREI is the provision of a secure, affordable and sustainable energy supply system. The CREDP is a part of this initiative which is supported by a number of donors. In addition, in January 2007, the draft of a CARICOM Energy Policy was submitted by the CSS, which at present is under discussion among the CARICOM members.

### **3.3 The relevant connection to the MDG, the Programme of Action 2015 and to international agreements / programmatic pronouncements**

The project contributes to the implementation of Action 1 under the Programme of Action 2015 (Economic Dynamic) in that it supports the securing of an efficient and sustainable energy supply.

Also Action 6 (Securing access to life-essential resources, commitment to a stable environment) is supported in that through the use of RE and EE, greenhouse gas emissions are avoided and the natural local environment preserved.

In this way the project contribution supports Article IV of the UN Millennium Declaration (Protecting our common environment), and also MDG No. 7 (Ecological sustainability).

Through its cooperative working relationship with the UNDP and other international donor organisations, the project is also in alignment with donor-harmonisation in the sense given under the Paris Declaration (Indicator 10: Encourage shared analysis).

Moreover, the project supports the implementation of Agenda 21: Chapter 8 (Integrating environment and development in decision making), Chapter 9 (Protection of the atmosphere), Chapter 34 (Transfer of environmentally sound technology, cooperation and capacity-building), and Chapter 39 (International legal instruments and mechanisms). Further, the project is in accord with the Framework Convention on Climate Change.

### **3.4 Relevance for regional concepts, core strategies and/or cross-cutting topics**

Energy is one of the core topics of the German Development Cooperation. The use of RE contribute to environment protection which is a further focus of the German Development Cooperation.

The project is in alignment with the concept laid down in the Development Cooperation with Indigenous Peoples in Latin America and the Caribbean and with the core precepts therein outlined (the fight against poverty, protecting the environment and its natural resources, modernisation of the state and community).

### **3.5 The relevant connection to earlier bilateral Technical Cooperation (TC) programmes**

The project "Renewable Energy in the Dominican Republic" (PROFER; PN 2001.2462.8) came to its close in 2007. Throughout the project there had always been an intensive exchange between the CREDP/GTZ and PROFER on the knowledge gained. PROFER led to the issue of a new legislative ruling on RE/EE in the Dominican Republic. Based on this, the Dominican Republic is now to be tied in to the second phase of the CREDP/GTZ and further developed.

### 3.6 Cooperation with other development projects

The project participates in the joint group activities of the UNE LAK (Environmental and Sustainable Development in Latin America and the Caribbean).

In addition, the cooperation with the IDB within the framework of the “Renewable Energy and Energy Efficiency in Latin America/Caribbean Project” (PN2004.2148.7) is being intensively pursued. The CREDP/GTZ works together with financial institutions such as the KfW and the IDB, who themselves take part in further-training workshops and are linked-in to the financial investment phase of the work. The open possibilities for cooperating with the IDB’s “Sustainable Energy and Climate Change Initiative” (SECCI) in the areas of RE/EE, agrofuel and CDM have together with the IDB also been identified. Cooperation with the IDB can as equally as well be based on the strategic partnerships that operate between the regional mediating organisations (CCS, CARILEC, and OECS) and the IDB. Among other, CREDP/GTZ activities are clearly characterised by the way they are soundly anchored with their partners, and also by their continuity, whereas the IDB has so far shown that its own activities are of a singular nature.

With CEPAL (Comisión Económica para América Latina y el Caribe), cooperation has so far only been on a here and there basis, in Jamaica. The cooperation is to be more emphatically developed.

### 3.7 Methodological approach, chain of reaction, supporting components

The project methodology is based on initiating and accompanying political and institutional change, and to provide technical and economic consultancy that will favour the climate of investment in RE/EE in the Caribbean. Consultancy is given in accordance with the due consideration that is to be paid to the current thematic debate on gender and energy, among other, on the basis of the pamphlet issued by the UNDP, “GENDER ENERGY FOR SUSTAINABLE DEVELOPMENT”. In that these activities are concentrated on national governments and on regional and national organisations and businesses, they take place, for the greater part, at the meso-level. As a natural consequence, the cooperation with the named institutions and organisations, and partly with individual persons, takes place at the micro-level. In contrast, the effective outcome of the work of the project manifests most strongly at the macro-level, in that a change in the whole community is brought about.

The project advises national governments and regional political organisations (CCS, OECS) on questions of energy strategy and framework conditions for RE/EE. In addition it supports investors with the planning and realization of concrete RE and EE projects, through to securing the financing phase, e.g. by drafting Letters of Interest and drawing up tenders. Finally, the project gives support to strengthening the institutional structure of the CSS and helps to guide it on the path to becoming more of a consultative agency in its own right. In this way the CSS Energy Unit is to become primarily established as the ultimate agency to contact for all questions related to energy policy, and it is to be able to offer support to the governments of the CARICOM member states in forming their own national energy policy. Beyond the further training programmes it already offers, CARILAC is in future to give support to its member companies in the preparation of concrete RE and EE projects. This is to be accomplished by the creation of a comprehensive databank in which the knowledge gained through projects, the standardised project documentation (e.g. Terms of Reference and specimen contracts), and contacts (consulting companies, financiers, etc.) is all made available (performance). Hereby, the project will concentrate on support and development for network-linked wind-energy and small hydroelectric power plants, the popularisation of solar-thermal water heating systems, and

improving EE on the consumer side (especially in the hotel sector, e.g. by *Energy Audits*). The use of bio-energy will be introduced and supported in the second phase, as the need arises. The performance of the work involves analysing and commenting on strategic documents; carrying out joint studies on energy policy and technical and economical feasibility; drafting and discussing legal documents; carrying out potential analyses; direct consultant talks; organising workshops and the accompanying training and further training programmes – and tying in the universities. The mediators make use of this performance to carry out processes of reform on energy policy, regulations and institutional procedures, and to enable them to make decisions on investment, as well as to help them to develop their own capacity (use and performance). In this way, the framework conditions in favour of RE/EE are improved and the realisation of projects enhanced (direct effect). In consequence, the cost of providing energy for producers and consumers then falls, and the conditions for securing a safe supply of energy and a healthy environment rise (indirect effect). The highly aggregated effect results from the ensuing economic progress and its subsequent effect of reducing poverty, as well as resulting in a safer environment, at the same time lowering the burden on climatic change. The supporting components are the utilization of a team of international and regional long-term and short-term specialist staff and the provision of a very small quantity of materials, respectively, expenses that cover transport and publications.

The project is looking to find development partnerships within the business sector. One hindrance thereto, with such a limited market volume, is the often high logistical cost. In the second phase of the project the information policy with regard to Public Private Partnership measures is to be extended and will come under the **PPP-1** code.

In the sense of a Programme Based Approach (PBA), the project is contributing to CARICOM's *Regional Energy Initiative* (REI). As well as CREDP/UNDP and GTZ, the *European Delegation* in Guyana and the Secretariat of the *Caribbean Forum of African, Caribbean and Pacific States* (CARIFORUM) are also taking part in the initiative. The project comes under the code **PGF 1**.

### 3.8 The regional limits of the project

CREDP/GTZ is active in six CARICOM member-states (Dominica, Grenada, Jamaica, St. Lucia, St. Vincent & The Grenadines, St. Kitts and Nevis). At the close of CREDP/UNDP in 2008, the CREDP/GTZ will also be active in other selected CARICOM member-states, although individually targeted UNDP undertakings will still be made to give a guarantee that the UNDP has provided the best continuity possible. To be included now that the GTZ PROFER project has ended is the Dominican Republic, where RE/EE is foreseen for the hotel sector, and where small hydroelectric plant projects have a high potential. Consideration is being given to Cuba, who is not a member of CARICOM, in that it will start to attend conferences and training events. The wish to become more involved in the programme is largely dependent on the country's own political evolution, and cannot as yet be concretized.

### 3.9 Terms of duration

Overall term: from 02/2003 to 03/2012 (9 years, 2 months)

Support phases:

1. Support phase from 02/2003 to 03/2008 (5 years, 2 months)
2. Support phase from 04/2008 to 03/2012 (4 years)

### 3.10 Administrative organisations

Organs of administration are the CCS (energy policy level), and CARILEC (concrete projects level). Both organisations are the consultative and negotiating agencies that act between the member states and/or private enterprise. The CSS has been assigned to develop regionally coordinated policy strategies and advance economic integration. Strengthening the institution of both organisations on a sustainable basis is the central activity of the second phase.

### 3.11 Partner performance

Major performance on the side of the partner is to provide the necessary personnel, all the essential information and documents, and the office infrastructure. The partner's staff is to be given fully paid leave of absence to take part in any training and further training measures; travelling expenses for its own employees are also to be met by the partner. In addition, the coordination of the project with other acting parties and giving support with the arrangements and execution of scheduled events is also within the partner's scope of performance. A final major requirement thereto is that the CSS is to establish an *Energy Unit* and to recruit the required qualified personnel. Due to the CSS current personnel situation, the partner's performance cannot as yet be valued.

### 3.12 Co-financing agreed to

None

### 3.13 Anticipated effects

#### Anticipated socio-economic effects

Improving the sustainability of energy supply is essential for long-term economic development and ultimately has a positive effect on employment. This in turn directly contributes to the fight against poverty. In spite of the indirect poverty-effect that is to be anticipated, in the project here, poverty comes under the **EPA** category. This is because the project is intrinsically distant from the target group, and the latter does not consist in the main of poor people and the poor are themselves not participants in the actual planning and execution of the work.

Participatory development/good government leadership is a sub-aim of the project. Among other, the emphasis here is on the need for clarifying the roles of institutional responsibility, on inculcating the competence of government employees, and financial budgeting. In this way the project strives to improve governmental procedures and is therefore allocated code **PD/GG 1**.

#### Anticipated socio-cultural effects

The development programme has a positive effect towards the aim of balancing equality among the sexes.

In its advisory capacity the project is to ensure that the gender aspect is taken into full account, whether in matters of energy strategy, framework conditions or concrete projects. Already foreseeable is that the project will lead in the long-term to a drop in energy costs for the consumer, which will mean an increase in the spending power of households. As the majority of households in the Caribbean are run by women, the additional means are then available for improving the economical well-being of the family and also for lessening the burden of household chores. The direct benefit, especially for women, is then an improved quality in the standard of living. The training and further training modules within the project immediately reinforce the vocational skills and qualifications of both sexes on the staff of the administrative

organisations. Resultingly, the project is allocated code **G-1**.

### **Anticipated conflict reducing and/or peace promoting effects**

The project is not located in a conflict fraught or post-conflict fraught region. (Code **K--**).

### **Anticipated ecological effects**

The effects of the project on the environment are to be assessed positively. The use of RE and a more efficient handling of energy are a positive contribution to the environment and climate protection. In the process of identifying concrete investment projects, performing an environmental impact assessment is an explicit component procedure in the investigation. It can however be taken that these projects have only a minimal effect on the environment without the need for any special measures. The project here is allocated the environmental code **UR-1**.

### *Anticipated effects on the structure of the supporting organisations*

The project is aimed at strengthening the institution of the CSS and CARILEC on a sustainable basis. The anticipated effects of the project on the administrative organisations include an expansion in the scope of performances offered, an intensifying of efforts to improve performance results, and changes in cooperation relationships/networks, and organisational changes.

## **3.14 Important risks**

### **Overall risk in achieving the total aim**

very high: §      high: §      medium: **x**      low: §

### **Description and evaluation of each risk**

One risk would be in a possible lack of will on the side of the partner to meet its obligations, respectively, there could be a possible lack of mandate among the member countries. Should, for example, the introduction of the Energy Unit by the CSS not come into effect as planned, then sustainability at regional level would come into doubt and reorientation focused at the national and OECS levels would be the result. For the desired outcome of the project this could be a problem, but not necessarily one that leads to failure because an effect would be achievable at these levels.

A risk also exists on account of the Petrocaribe Agreements made between Venezuela and numerous of the Caribbean states in which a lower price for oil is regulated, and which could weaken the political pressure conceived to advance RE/EE. A current present risk is related to the widespread production load in the manufacture of wind turbines. Nevertheless, there is a mid to long-term interest in new markets.

### **Influence on risk**

high: §      medium: **X**      low: §

### **Risk reducing measures**

The project can contribute to the political dialogue to enhance the awareness of political decision-makers and by forwarding persuasive viewpoints. In cooperation with the innovative EVU, it can also create illuminating examples that have a successful influence.