



GEF-6 REQUEST FOR MEDIUM-SIZED PROJECT APPROVAL

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT IDENTIFICATION

Project Title:	The Ten Island Challenge: Derisking the Transition of the Caribbean from Fossil Fuels to Renewables		
Country(ies):	Regional*	GEF Project ID: ¹	8006 Repl. 9112
GEF Agency(ies):	UNDP	GEF Agency Project ID:	5526
Other Executing Partner(s):	Carbon War Room, Rocky Mountain Institute	Submission Date:	24 November 2014
		1 st Resubmission Date:	30 January 2015
		2 nd Resubmission Date:	26 March 2015
		3 rd Resubmission Date:	13 April 2015
GEF Focal Area(s):	Climate Change	Project Duration (Months)	36
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>		
Name of Parent Program:	[if applicable]	Agency Fee (\$)	168,766

A. FOCAL AREA STRATEGY FRAMEWORK AND PROGRAM²:

Focal Area Objectives/programs	Focal Area Outcomes	Trust Fund	(in \$)	
			GEF Project Financing	Co-financing
CCM-1 Program 1 <i>Promote timely development, demonstration and financing of low-carbon technologies and mitigation options</i>	Outcome A. Accelerated adoption of innovative technologies and management practices for GHG emission reduction and carbon sequestration	GEFTF	1,776,484	304,550,000
CCM-1 Program 2 <i>Develop and demonstrate innovative policy packages and market initiatives to foster new range of mitigation actions</i>	Outcome B. Policy, planning and regulatory frameworks foster accelerated low GHG development and emissions mitigation			
	Outcome C. Financial mechanisms to support GHG reductions are demonstrated and operationalized			
Total project costs			1,776,484	304,550,000

B. PROJECT FRAMEWORK

Project Objective: To accelerate the transition of Caribbean island economies from heavy dependence on fossil fuels to a diverse platform of renewables and energy efficiency and establish a blueprint for other SIDS						
Project Components/Programs	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Confirmed Co-financing
1. Policy Derisking Measures <u>Expected Outcome:</u> Island-wide	TA	1.1. Clean energy action plans to meet Ten Island Challenge targets in the Caribbean developed	<ul style="list-style-type: none"> ▪ Goals and vision statements for each island participant with commitments and resources to meet them ▪ Renewable energy and energy efficiency strategies and assessments on selected islands with specific targets 	GEFTF	60,000	1,375,000

* Preliminary discussions with countries have started with Bahamas, Belize, Colombia (San Andres and Providencia islands), Grenada, Saint Lucia, Saint Kitts and Nevis, and Saint Vincent and the Grenadines, all which are Ten Island Challenge (TIC) eligible to GEF funding. Other islands to be considered in the program include the British Virgin Islands, Aruba, Anguilla and Turks and Caicos, which are not eligible for GEF funding, but would participate through non-GEF co-financing

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

³ Financing type can be either investment or technical assistance.

derisked enabling environment for low GHG development through the demonstration of innovative policy tools	TA	<i>1.2. Policy derisking analysis and guidance for Ten Island Challenge countries in the Caribbean provided</i>	<ul style="list-style-type: none"> ▪ Use of derisking tools to low carbon energy technologies in the Caribbean context ▪ Model up to twenty possible Resource Conservation Measures (RCMs) for health centers ▪ Regional guide development (including support for grid integration and energy efficiency in hospitals) ▪ Transformation of the market and regulatory framework to demonstrate effective grid integration or renewable energy resources across the Caribbean 	GEFTF	120,000	400,000
2. Institutional and Technical Capacity <u>Expected Outcome:</u> Strengthened island capacity for integrated low GHG technical and operational planning and coordination among countries and donor partners	TA	<i>2.1. Caribbean platforms for clean energy technology research, development, transfer and adoption enabled</i>	<ul style="list-style-type: none"> ▪ Community of Practice and Energy Transition Strategy Platform for government officials, utility and other networking and coordination bodies (e.g. CARILEC, CARICOM, CDB, 5Cs) ▪ Caribbean energy transition virtual platform hosted by Caribbean Development Bank to support a pipeline of bankable renewable projects ▪ Young Leaders Network identifying and nurturing the youth to transition and lead the clean energy sustainable development agenda in the Caribbean 	GEFTF	170,000	250,000
	TA	<i>2.2. Skills and expertise in island-wide clean energy investment derisking and market transformation built</i>	<ul style="list-style-type: none"> ▪ Regional workshops and capacity building for knowledge-sharing and lessons learnt ▪ Follow-up tools, guidance and materials to measure and ensure the impact of capacity interventions 	GEFTF	100,000	125,000
3. Investment Projects and Financial Mechanisms <u>Expected Outcome:</u> Catalyzed island funding for low GHG technology deployment	TA	<i>3.1. Caribbean energy resource capacity established</i>	<ul style="list-style-type: none"> ▪ Ten Island Challenge-wide renewable energy assessments, feasibilities and analyses ▪ Resource technical, economic and financial potential 	GEFTF	364,985	2,000,000
	Inv	<i>3.2. Clean energy island-wide investments leveraged</i>	<ul style="list-style-type: none"> ▪ Derisked equity/lending structures and other financing mechanisms to deliver on Caribbean clean energy targets ▪ Feasible investment project pipeline (400 MW) across Ten Island Challenge (TIC) participant countries applying the Transition Playbook ▪ Plans for clean energy operation and maintenance in place 	GEFTF	800,000	300,000,000
Subtotal					1,614,985	304,150,000
Project Management Cost (PMC) ⁴				GEFTF	161,499	400,000
Total GEF Project Financing					1,776,484	304,550,000

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ()

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

Please include confirmed co-financing letters for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Private Sector	Development Finance (e.g. OPIC)/Commercial Banks	Equity	300,000,000
CSO	Carbon War Room (Dutch Postal Code Lottery)	Grants	3,000,000
GEF Agency	United Nations Development Programme	In-kind	200,000
CSO	Rocky Mountain Institute	In-kind	1,350,000
Total Co-financing			304,550,000

C. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES), FOCAL AREA AND PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee ^{a)} (b)	Total (c)=a+b
UNDP	GEF TF	Regional	Climate Change	(select as applicable)	1,776,484	168,766	1,945,250
Total Grant Resources					1,776,484	168,766	1,945,250

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

D. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁵

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	13.36 million metric tons

E. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

(If [non-grant instruments](#) are used, provide an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF Trust Fund) in Annex B.

F. PROJECT PREPARATION GRANT (PPG)⁶

Is Project Preparation Grant requested? Yes No If no, skip item G.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS*

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁷ (b)	Total c = a + b
UNDP	GEF TF	Regional	Climate Change	(select as applicable)	50,000	4,750	54,750
Total PPG Amount					50,000	4,750	54,750

⁵ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

⁶ PPG of up to \$50,000 is reimbursable to the country upon approval of the MSP.

⁷ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

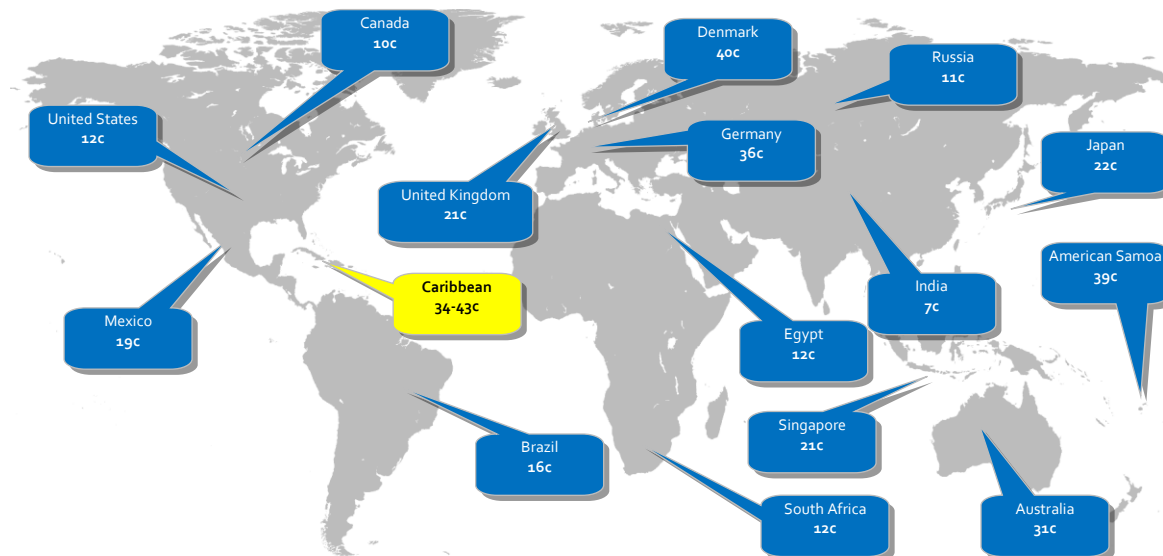
PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: a) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; b) the baseline scenario or any associated baseline projects, c) the proposed alternative scenario, with a brief description of expected outcomes and components of the project, d) [incremental/ additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF/SCCF and [co-financing](#); e) [global environmental benefits](#) (GEFTF), and [adaptation benefits](#) (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

a) *Global environmental problems, root causes and barriers*

Most Caribbean islands import oil for the bulk of their electricity needs, exposing these countries to the volatility of international markets and all of the associated economic consequences. Local generation plants are often old and a major source of greenhouse gas emissions, while the islands' greatest indigenous energy resources – the sun and the wind – remain untapped. Building a sustainable energy infrastructure, however, is not easy. Even in the most developed countries, large-scale investment in renewable energy requires a supportive policy and economic climate. But if the right framework can be put in place, renewable power can be cost-competitive with traditional electricity generation. This is particularly true in the Caribbean, where electricity can cost as much as 50 cents/kWh, higher than anywhere in the United States.

The island of Saint Lucia offers both a typical and illustrative example. Saint Lucia imports almost 100% of its oil needed to run its' sole power plant on the island. According to the Caribbean Electricity Service Corporation, electricity prices average at least 34 cents/kWh, a level almost unheard of anywhere in the United States. Consumers pay these prices on an island where the average household income is \$13,000.⁸ The dependence on imported fossil fuels is a familiar story throughout the region and the lack of diversified resources leaves the Caribbean islands greatly constrained in its economic opportunities – see map⁹ with global comparisons (below):



⁸ [http://www.indexmundi.com/saint_lucia/gdp_per_capita_\(ppp\).html](http://www.indexmundi.com/saint_lucia/gdp_per_capita_(ppp).html)

⁹ Sources: IEA, EIA, IADB and national data

With its tremendous wind, solar and (in some cases) hydro and geothermal resources, the Caribbean region has the opportunity to take a low emission climate resilient development path. Substantial barriers remain, however, the type of barriers that hinder renewable energy projects in many places around the world, though with the level of complexity typically faced by small island development states, as follows:

Barrier type	Barrier Descriptions
<u>Regulatory Policy / Legal:</u> <i>Limited capacity to enforce island-wide clean energy policies and regulations</i>	<ul style="list-style-type: none"> • Limited mainstreaming of clean energy targets into island-wide sustainable development goals (e.g. national development plans) and impacts (e.g. jobs, health, gender equality) • Absence of clarity on licensing processes and billing arrangements for off-grid/on-grid/self generation • Absence of penalties for not meeting renewable energy targets in national energy policies • Limited enforcement of energy performance standards for RETs and EE equipment • No restrictions on the quality and other features of RETs/EETs (e.g. life-cycle costs) • Lack of uniform island-wide net-metering and grid interconnection standards • No building codes for solar and energy storage technology installations
<u>Institutional / Technical:</u> <i>Lack of coordination and expertise in adoption of island-wide clean energy technologies</i>	<ul style="list-style-type: none"> • Limited technical expertise in public sector institutions (particularly in the Caribbean health sector) tasked to oversee electricity equipment purchases and performance (e.g. quality standards, cost-benefit analysis) • Energy officials – both in government and in utilities – have no forum or peer-to-peer infrastructure in which to share experience related to implementing sustainable energy policies and projects • Public generation and grid system losses (both technical and non-technical) exceeding the total renewable energy produced, contributing to high electricity prices • Lack of critical mass of certified RE/EE students, installers and entrepreneurs to address the demand for energy savings and performance contracts (i.e. ESCOs) required
<u>Market / Financial:</u> <i>High credit, market and other operational risk perception affects island-wide clean energy financing</i>	<ul style="list-style-type: none"> • Lack of fiscal, economic or other financial incentives to promote low carbon development investments, and dedicated grants and loans for relevant research, development and adoption of clean energy technologies appropriate for the Caribbean context • Despite high electricity costs (nearly US\$0.34-43/kWh) across the Caribbean, the upfront cost of RETs & EE deters investment in cleaner energy/electricity efficient equipment (particularly in health centers), and infrastructure (i.e. grid instability to feed in RE) • Higher-quality EE & RE products are too expensive, so most hospitals buy conventional incandescent lamps, inefficient air conditioning, and cheaper/lower quality solar PV panels • Each island's economy is relatively small, and if one island can implement a successful program (e.g.: Aruba), there are few avenues for spreading that experience

Overall, some of these constraints are technical (wind farms have to be careful when being developed in places where hurricane force winds are common and can damage blades). Some are policy or regulatory (land acquisition policies can make it challenging to obtain the space needed for solar and wind projects). In some cases, utilities are locked into long-term contracts that provide few incentives to develop more economical energy sources. Perhaps most important, however, is the fact that these islands are small economies, and it can be difficult to attract investor interest and the capital needed to construct these facilities. If these barriers included low or subsidized energy prices, there might be very little that could be done. But because energy costs are so high in the Caribbean, renewable energy and energy efficiency investments can start out by being more competitive.

b) Baseline scenario or any associated baseline projects

The objective of the Ten Island Challenge (TIC) is to accelerate the transition of Caribbean island economies from heavy dependence on fossil fuels to a diverse platform of renewables and energy efficiency, thereby

establishing a blueprint for other isolated economies. Solar and wind generation profiles are strong throughout the region. For instance, solar irradiance is steady throughout the year due to the limited variation in daylight across seasons. Meanwhile, wind speeds are strong and reliable, providing highly attractive capacity factors for wind farms. Furthermore, some Caribbean countries also have untapped bioenergy, hydrology and geothermal potential. This combination of local resources creates both a strong incentive for Caribbean governments to transition to renewables and a large potential market for investment.

CWR has been involved in the island economies for several years. When the Smart Island Economies operation launched in Rio+20, the CWR made a commitment to work with ten islands by 2014, and the first phase of this Ten Island Challenge (TIC) has focused on the Caribbean. In February of 2014, CWR organized the Creating Climate Wealth (CCW) summit in the British Virgin Islands. This event brought together governments from across the region with top tier renewable energy providers, finance institutions and other experts in the renewable space. The event also set out practical steps for local officials to address energy issues right now, and it's these commitments the CWR wants to build upon in the next phase of work. Using the TIC Transition Playbook each participating country is being engaged through (Phase 1) their government representatives (e.g. Office of Prime Minister, Energy, Finance and Environment ministries) to assess the specific circumstances of their commitment (e.g. targets behind each vision and goals set); and (Phases 2-5), through their private sector and communities (e.g. developers, installers, beneficiaries) applying both policy and financial derisking mechanisms to realize the investment opportunities to address the specific needs of each signatory island. Several clean energy initiatives are underway in the Caribbean, with sample commitments made by individual countries, including:

- i. Aruba
 - a. Evaluation of lessons learned and development of a roadmap for renewable energy solutions for the island, *Smart Growth Pathways*.
- ii. St Lucia
 - a. Initiate and manage RFP process for solar and waste-to-energy projects
 - b. Develop corporate engagement protocol and stakeholder map as a first step to build local support for project investments
- iii. Colombia (specifically targeting the islands of San Andres and Providencia)
 - a. Create energy efficiency retrofits for hospitals on each island
 - b. Review the island renewable supply plan
 - c. Review San Andres Waste to Energy plant and identify barriers to start-up

The project is expected to contribute to a reduction of Caribbean island dependence on fossil fuel-generated electricity through the deployment of wind, solar and energy storage technologies and efficiency improvements in island-wide economies, with a particular focus on the health sector, replicable to other sectors and industries. The proposed approach (below) intends to address the technical, policy and financing weaknesses underscored above.

c) Alternative scenario, description of expected outcomes and components of the project

While most islands are not large enough to create a significant impact on global carbon emission reductions, they are the ideal combination of geographical scale and renewable potential to demonstrate system-wide, sustainable solutions across an entire economy, and collectively show that this transition is both replicable and scalable. A commitment to demonstrate success with partners in the Caribbean - applying best practices and lessons learned, underpins the focus of this execution strategy, with the intention of providing replicable models for other islands and isolated economies.

By accelerating the transition of islands to renewable energy sources, local governments can accomplish the following: lower electricity costs in the household and industry sectors; increased private investment on-island with the introduction of more and higher skilled jobs; lower GHGs and less local pollution; improved energy efficiency across different sectors and less money spent on fuel. For this initiative, CWR will track the following

key performance indicators as a way of measuring success. The overall goal will be to have the islands participating in the program achieve renewable energy penetration that amounts to 30% of their total installed capacity, as follows:

1. Policy Derisking Measures: Island-wide derisked enabling environment for low GHG development through the demonstration of innovative policy tools

1.1. Clean energy action plans to meet Ten Island Challenge targets in the Caribbean developed:

- Goals and vision statements for each island participant with commitments and resources to meet them
- Renewable energy and energy efficiency strategies and assessments on selected islands with specific targets

1.2. Policy derisking analysis and guidance for Ten Island Challenge countries in the Caribbean provided:

- Use of derisking tools to low carbon energy technologies in the Caribbean context
- Model up to twenty possible Resource Conservation Measures (RCMs) for health centers
- Regional guide development (including support for grid integration and energy efficiency in hospitals)
- Transformation of the market and regulatory framework to demonstrate effective grid integration or renewable energy resources across the Caribbean

An important challenge for any utility dealing with large-scale renewable energy investments is integrating intermittent resources into the grid. Conventional power plants cannot be brought on and off-line quickly enough in response to changes in wind and solar power production with the changing weather. There are a number of technologies and practices that help mitigate this risk, as well as energy storage options. With smarter grid devices and software – combined with changes in government policy and utility practice – the grid infrastructure can do a better job absorbing intermittent energy supplies with minimal curtailment or risk to power lines, transformers, etc. CWR will put together a resource guide with case studies (including the use of innovative technology and the design instructive policy and regulatory changes) that demonstrate effective grid integration of renewable resources. This analysis will be tailored to the Caribbean context and will offer practical advice and guidance to utilities, regulators, private developers and others seeking to ensure that as many MW of renewable energy can be delivered through the grid as possible.

Based on the available data points and interviews with hospital/health facility officials, CWR will establish a benchmark energy use index for a typical hospital as a foundation for the comparison of building-wide, energy savings potential. Our team will model up to twenty possible Resource Conservation Measures (RCMs) for their savings potential and cost savings and develop a tool to allow properties to input simple property-specific information such as number of beds, age of property and utility rates to construct energy savings scenarios and likely returns on investment. We will also develop an Energy Retrofit Guide that addresses a whole building approach and process. The guide will be disseminated across the region, and GEF funding would support dissemination costs.

2. Institutional and Technical Capacity: Strengthened island capacity for integrated low GHG technical and institutional stakeholder planning and coordination

2.1. Caribbean platforms for clean energy technology research, development, transfer and adoption enabled:

- Community of Practice and Energy Transition Strategy Platform for government officials, utility and other networking and coordination bodies (e.g. CARILEC, CARICOM, CDB, 5Cs)
- The virtual Caribbean energy transition platform will host a number of project related templates including standard Purchasing Power Agreement templates, Standard Engineering, Procurement and Construction contract templates, checklists for bankability, etc. This virtual platform will be hosted by the Caribbean Development Bank to support a pipeline of bankable projects that are eligible for financing

- Young Leaders Network identifying and nurturing the youth to transition and lead the clean energy sustainable development agenda in the Caribbean

2.2. *Skills and expertise in island-wide clean energy investment derisking and market transformation built:*

- Regional workshops and capacity building for knowledge-sharing and lessons learnt
- Follow-up tools, guidance and materials to measure and ensure the impact of capacity interventions

To facilitate the sharing of knowledge, tools and technology across the participating countries – and build the capacity of utility and government officials with grid integration – a sustainable community of practice (CoP) and on-line forum will be created. This CoP will be a peer network and target utility engineers, government energy practitioners and development partners active in the renewable space. With a range of on-line resources, discussion forums and in-person meetings, the CoP will promote and facilitate a culture of information sharing. The result of this cross-fertilization of ideas and experience will be to build the capacity and inform decision making across the network about how best to solve the barriers that inhibit the growth of renewable energy generation. Training workshops that include utility and government leaders from all participants in the Ten Island Challenge (TIC), with all associated materials and follow-up to measure impact of these events.

The purpose of the Young Leaders Network is to identify and nurture young government officials who are keen to lead the energy agenda in the region and ensure that energy transition is sustainable. The network will help:

- Strengthen the learning platform for the Caribbean Energy Transition
- Highlight the leadership on the energy agenda that Caribbean islands are keen to demonstrate
- Highlight the position of islands leading the demonstration of solutions to climate change
- Establish an engagement programme specifically designed for the region, led by young individuals from the region
- Build on the innovation from this generation of leaders to develop a framework for the future of sustainable energy and economic growth

The virtual Caribbean energy transition platform will host a number of project related templates including standard Purchasing Power Agreement templates, Standard Engineering, Procurement and Construction contract templates, checklists for bankability, etc. This virtual platform will be accessible to all Caribbean Development Bank members and will facilitate knowledge around the steps, studies and information required to support a bankable renewable project.

3. Investment Projects and Financial Mechanisms: Catalyzed island funding for low GHG technology deployment

3.1. Caribbean energy resource capacity established:

- Ten Island Challenge-wide renewable energy assessments, feasibilities and analyses
- Resource technical, economic and financial potential

3.2. Clean energy island-wide investments leveraged:

- Derisked equity/lending structures and other financing mechanisms to deliver on Caribbean clean energy targets
- Feasible investment project pipeline (400 MW) across Ten Island Challenge participant countries applying the Transition Playbook
- Plans for clean energy operation and maintenance in place

Goals and vision statements for each island participant that outlines the overall goal for the island (X% of renewable energy by Year Y) with a commitment of staff and other resources needed to meet that commitment

(Phase 1 and 2 of Transition Playbook). This project will be evaluated in large part by the number of MW of renewable energy generation (as well as MW saved through efficiency) developed under the project. This work will involve island-wide, renewable energy assessments, including renewable resource potential, technical/economic assessments of individual projects, feeder specific grid integration studies and potential equity/lending structures to present to investors and lending institutions. Operation and maintenance plans are included as well (Phase 3-6 of the Transition Playbook). Phase 3 (Project preparation) involves the identification and prioritization of bankable projects, further to the confirmation of country level commitments (Phase 2). As such, the main criteria for pipeline selection will be geographical distribution across participant TIC islands. The pipeline results from: (a) the set-up of project development guidelines, (b) RE project development best-practices, (c) project risk mitigation; leading to, (d) the preparation of request for proposals (RFP), (e) the selection and negotiation with selected vendor(s), and finally (f) the commercial agreement and financing for the project to start. The following preliminary capacity and project pipeline targets have been set during the project period:

Activity (70% of which is wind and PV)	Total MW Installed
Wind, PV, energy storage projects in 2015	40 (28)
Wind, PV, energy storage projects in 2016	100 (70)
Wind, PV, energy storage projects in 2017	280 (196)
TOTAL	400 (294 PV/wind)¹⁰

d) *Incremental cost reasoning and expected contributions from the baseline, the GEFTF, and co-financing*

The project will work to leverage the capacities of local and particularly regional organizations such as the 5Cs, drawing on its scientific and technical mandate, CARICOM, drawing on its mandate for coordination and the CDB, drawing on its financial assistance available throughout the region (particularly in OECS countries). Of particular note is CARILEC, whose member utilities will benefit from the training and information sharing related to creating a new utility model, one based on renewable energy resource development:

Project Outcome	Business-As-Usual	GEF Alternative
1. <i>Island-wide derisked enabling environment for low GHG development through the demonstration of innovative policy tools</i>	Whatever renewable energy policies, programs or practices are developed and applied remain isolated with no forum for discussion about how these efforts to minimize the curtailment of RE sources can be replicated in other islands.	Policy derisking measures promote the introduction, enforcement and dissemination of licensing, net billing, audit inspection, certification and minimum energy performance standards of RE and EE equipment, systems and products in the health and other economic sectors key to Caribbean sustainable development efforts (i.e. employment creation, resilient health coverage, youth and women empowerment). Innovative best practices that anticipate changes in PV/wind supply, and reduce voltage fluctuations, are shared amongst utilities across the region.
\$2,380,484	<i>\$1,775,000</i>	<i>\$180,000</i>
2. <i>Strengthened island capacity for integrated low GHG technical and institutional stakeholder planning and coordination</i>	Utility officials and government leaders lack the capacity to craft the policies and create the overall environment that will encourage project development (e.g. experience with issuing RFPs, assessing renewable energy resources, amending land acquisition policies, and adopting other regulations that help reduce	The Young Leaders network that creates the infrastructure to bring isolated islands together. Through in-person meetings, web-based resources and regional conferences and workshops, whatever happens in one island will be quickly known everywhere in the region (from projects implemented and policies adopted, to private companies investing and banks' lending). Regional and in-country workshops to build this capacity, so local officials are more familiar and comfortable with all of the aspects of implementing renewable energy and energy efficiency projects/programs. With greater familiarity of the benefits of non-fossil fuel projects – as well as how these projects can be developed – utility and government leaders will be more willing and interested in moving forward to reduce reliance on fossil fuels.

¹⁰ This figure includes 106 MW target for energy storage (mainly electricity battery-based type, with potential thermal water heating applications) estimated to trigger of \$79.5m of investment (i.e. \$0.8-0.9m per MW installed).

	risks for project developers)	
\$645,000	<i>\$375,000</i>	<i>\$270,000</i>
<i>3. Catalyzed island funding for low GHG technology deployment</i>	Utility grids are accustomed to conventional, base-load energy resources. Renewable energy projects may not be pursued because it is difficult to integrate intermittent resources into the grid, particularly from small, distributed generated resources. Hospitals continue to use cost-inefficient energy technology.	Financial derisking approaches catalyze and leverage wind, solar and energy storage projects (400 MW installed capacity) in the countries participating in the Ten Island Challenge, with the potential of \$300 million in investment over a four-year period. Storage options, which are experiencing significant price reductions, will also be explored – all of which will provide utility engineers with practical and creative ways to enhance grid integration. Accelerated project adoption with a guide that reduces perceived risks and directs retrofit efforts towards proven, low-risk projects and practices. Leverage existing resources in the region to create a guide specific to Caribbean building types, materials, climate and economic considerations.
\$303,726,484	<i>\$302,400,000 (incl. PMC)</i>	<i>\$1,326,484 (incl. PMC)</i>
\$306,326,484	\$304,550,000 (incl. PMC)	\$1,776,484 (incl. PMC)

The project will bring a number of funding resources, both in-kind and actual cash contributions. Of particular note is the Dutch Postal Code Lottery. This funder has been crucial in providing the staff time required to set up the program, as well as pay for the numerous consultants required, such as DNV GL. This funding will also help to develop RFP's for utilities and other technical work, as well as workshop and travel costs and other incurred expenses.

Further to the application of the UNDP-GEF clean energy derisking and market transformation approach in the context of the Caribbean, a pipeline of leveraged financing (current US\$300 million estimate) and island-wide investments (over 880 MW expected in the region) is expected as a result of this project.

e) Global environmental benefits

The corresponding global environmental benefits associated to the above outcomes are estimated below, with the final figures (including the basis to determine indirect benefits and their attribution to this project) to be confirmed during the preparation phase (at the CEO endorsement stage):

Activity	Total MW Installed (70% of which is wind and PV)	Average Capacity Factor (%)	Average Emissions Factor (tCO2/MWH)	TCO2 reduced
Wind, PV, energy storage projects in 2015	40 (28)	22	0.84	45,328
Wind, PV, energy storage projects in 2016	100 (70)	22	0.84	113,319
Wind, PV, energy storage projects in 2017)	280 (196)	22	0.84	317,294
TOTAL	400 (294 PV/wind)			475,941

Direct emissions: annual average 476,000 tCO2 reduced at project-end (associated to 294 MW wind/PV installed capacity) result in 4,760,000 tCO2 total reduced following the \$2 million GEF intervention (assuming a conservative 10-year useful investment lifetime): US\$0.42/tCO2

Indirect emissions: *Bottom-Up* 14,280,000 tCO₂ (assuming a market-transformation replication factor of 3); *Top-Down* 8,596,000 tCO₂ (associated to 600 MW wind/PV market potential at project-end with a 60% causality factor associated to the GEF intervention)

Emissions reduced: 4,760,000 tCO₂ (direct) + 8,596,000 tCO₂ (indirect) = 13,356,000 tCO₂ (total)

NOTE – These figures do not include savings from energy efficiency programs and exclude any additional MWH that can be supplied to the grid through energy storage investments.

f) Innovativeness, sustainability and potential for scaling up

CWR has a full-time, on-the-ground presence in the region and has demonstrated the ability to marshal local government commitments. This local buy-in will be crucial if the overall effort is to succeed. CWR's US-based staff have more than 15 years of experience related to energy issues in island economies.

Innovativeness – In terms of innovation, this project will demonstrate how renewable energy projects, supported through regional networking and capacity building exercises, can demonstrably change the energy resource mix of an entire country. Through a combination of technical, legal and business advisory services, the CWR will bring bankable projects to the market, in turn, creating a competitive renewable market. This will be supported from a bottom up approach through the Community of Practice. This will create a catalytic combination of activities, which will collectively support business and government. This is also in line with UNDP-GEF derisking approach, because the Ten Island Challenge will show how capacity building, policy interventions and project development activities can address a country's macroeconomic risk. This project will trigger an estimated \$300 million in investment in renewable energy infrastructure across the islands, making these islands truly innovative models for sustainable development. Finally, the project will demonstrate innovativeness by providing a clear template – the Transition Execution Playbook – which any island can adapt to move towards a more sustainable path. The Playbook Design allows for standardization of innovative approaches across islands with the flexibility of applying of its phases to island-specific circumstances. For instance, visions set (Phase 1) and O&M needs (Phase 5) will vary from country to country, but will receive standard CWR/DOE/RMI technical support to assess opportunities pathways (Phase 2), prepare projects (Phase 3) and quality control/lessons learnt (Phase 4/6).

Sustainability – The project interventions will continue after the three-year GEF-funded period, because the existing networks – the Young Leaders group and the Community of Practice, for example – will continue to exist, as will the experience and capacity developed under the project. This experience will make it easier to expand renewable energy penetration on the islands beyond the 30% target, as well as start projects on other islands. In addition, the knowledge created by the resources developed under the program, including the hospital guide, will continue to be relevant long after the GEF project is completed.

Scale-up potential – The goal of this project is to create a template for all isolated island economies throughout the world, as well as make the Transition Execution Playbook available and applicable anywhere. In addition, if private investors and lending institutions can be convinced that the Caribbean market is a real opportunity, it will be much easier for other countries not in the Ten Island Challenge to develop sustainable energy projects and raise the necessary capital to finance them. If this program can succeed, local officials will be more likely to believe that such an initiative will work on their island, whether in the Caribbean or elsewhere. The Carbon War Room, through its Smart Island Economies program, will have the infrastructure in place to be able to expand the lessons learned from this experience well beyond the initial Ten Island Challenge participants.

This project will leverage the work of several local partners, including regional institutions such as the Caribbean Community Climate Change Centre (designated by CARICOM to provide technical assistance and scientific guidance on climate change implementation in the region) and the Caribbean Development Bank (that is the main financial vehicle for financial support to non-IDB members such as OECS countries, amongst other islands), CARILEC, IRENA and the newly-established renewable energy and energy efficiency hub. CWR's effort will not be duplicative however, and will complement the strengths of these local groups. While many of these groups

and associations have excellent local connections, CWR’s comparative advantage will be to bring in technical expertise from its partners, such as RMI and US DOE, as well as the private sector. CWR and its partners can provide all of the technical and business advisory services required for this project – from assessing renewable energy potential to identifying actual projects to restructuring viable financing arrangements. This capacity is currently lacking in most island countries.

2. *Child Project?* If this is a child project under a program, describe how the components contribute to the overall program impact.

3 Stakeholders. Will project design include the participation of relevant stakeholders from [civil society](#) and [indigenous people](#)? (yes /no) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation:

Stakeholder communities will be involved at every step of the process, including project planning and design, project implementation and project monitoring and evaluation. As an initial step, CWR will conduct a thorough community stakeholder mapping and engagement exercise.

The objective will be to identify, map and engage relevant audiences and champions (local and international) in this effort. We believe that local support of stakeholders will be critical to accelerating all of the steps needed to bring the vision to reality. Conversely, a poor stakeholder outreach strategy that leaves key players out of the process can lead to opposition, delay and ultimate failure of the entire effort.

Constructive stakeholder engagement will therefore be critical, and at every step of the process, local community groups, environmental organizations, business and trade associations and others will be invited to comment on the overall vision of the program, as well as specific opportunities identified throughout the phases. Some of the key stakeholder groups will include the following:

	On-Island	Off-Island
Primary	Government decision makers Utility Executives Influencers and local champions	Financiers and investors Multinational renewable energy and energy efficiency companies
Secondary	Citizens Incumbent utility employees Local businesses, including developers Hotels and other local tourism businesses Universities Church groups Grassroots groups Local media	Commercial vendors and consultants Regional media Multilaterals Tourism industry corporate HQ (Cruise companies, large hotel chains etc.) Energy NGOs, non-profits
Tertiary	Energy sector labor force	Foreign governments and other donors Replicators Caribbean diaspora Small island nations’ governments Tourists

The long-term success of the Ten Island Challenge as part of the Caribbean Energy Transition will hinge on whether the people of the island partners feel like the efforts undertaken not only respond to their needs and

concerns, but capitalize on their active involvement. It is critical, therefore, to ensure at each step that key stakeholders and the public-at-large have been engaged in planning and execution. Prior to finalizing and implementing a communications approach on each island, CWR, RMI, and DOE will meet with government, utilities, NGOs and citizens to identify key stakeholders, influencers and local champions, who have a vested interest in and/or an out-sized influence on the outcome. These discussions will focus on areas that are anticipated to have the largest impact on success, namely, financial, political, environmental, and social justice concerns.

Specific members of the audiences described above will be actively gleaned from interviews, as well as from “passive” sources lack traditional and new media, speeches, annual reports, and other publications. A set of basic interview questions will be developed to elicit open-ended responses to capture stakeholder knowledge, interests, and positions, along with contact info on an as-needed basis. By identifying preferences and priorities, this stakeholder engagement will inform the local communications strategy, anticipate other operational issues, and, ultimately shape the path and outcome in that particular location. While public input will be solicited on a continuous basis, discrete stakeholder analysis and engagement will take place in Phases 1 – 3 with priorities and scope adjusted to suit the relevant phase.

During the development and implementation of this initiative, UNDP will consult with key stakeholders and convene a series of in-depth discussions in each country to enable government representatives, civil society, academia as well as the donor community to provide their views on the overall scope of the project. These views will be used by the project implementation team to fine tune and devise annual operational work plans that are fully aligned with other ongoing and planned initiatives. Consultations and agreements with key stakeholders including Government as well as utilities, the private sector, and national beneficiaries and communities will be sought after throughout the process.

4. *Gender Consideration.* Are [gender considerations](#) taken into account? (yes /no). If yes, briefly describe how gender considerations will be mainstreamed into project preparation and implementation, taken into account the differences, needs, roles and priorities of men and women.

The Ten Island Challenge initiative, as a core principal will ensure that gender considerations are fully integrated into the transition of the Caribbean to low carbon growth. Specifically, the GEF-funded project pipeline will be assessed to identify the extent to which gender concerns have been taken on board in key sectors (e.g. health, tourism, others). The project will provide opportunities for skills development of both men and women in the training to be provided on wind, solar and energy storage technologies.

At island-wide community levels, UNDP will ensure that all planned interventions conduct a gender needs assessment to ensure that they are gender informed, and provide opportunities for reinforcing positive gender norms. This is in line with UNDP’s 2014-2017 Strategic Plan and the GEF Policy on Gender Mainstreaming.

The project will operationalize its social safeguards by integrating gender concerns in monitoring activities to ensure it does not cause perverse gender impact nor exacerbate gender inequality (e.g. employment opportunity, access to energy, child and maternal health, women empowerment and entrepreneurship).

5. *Benefits.* Describe the socioeconomic benefits to be delivered by the project at the national and local levels. Do any of these benefits support the achievement of global environment benefits (GEF Trust Fund) and/or adaptation to climate change?

In addition to the gender benefits described above, the project is also in line with the GEF 2020 Strategy on sustainable development, as tabled below. The project will integrate the acceleration of clean energy investment with the promotion of both job creation and local entrepreneurship across the Caribbean. With the targeting of health centers in the region, benefits are also expected in terms of improved coverage of social needs, with particular importance for strengthening the resilience of small islands to climate change in the event of disasters.

Metric of Success	Goal
The number of countries adopting and implementing the Ten Island Challenge Execution Strategy.	10 Countries signed on by mid-2015
Reduction in volume of fossil fuels imported in participating Caribbean countries	20% reduction in total fossil fuel imported in participating Caribbean countries by 2018
The number of countries utilizing the different components of the Ten Island Challenge Transition Platform.	10 countries using actively using the Ten Island Challenge Transition Platform by 2016
Amount of capital injected into the region for clean energy projects.	Over \$300 million during the first 4 years
Renewable electricity, energy efficiency, or highly efficient generating capacity added in Caribbean partner countries.	294 MW of wind and solar installed between 2015-2017
Employment created, salaries generated and other benefits that go directly into supporting the local economy.	2,500-3,500 jobs/beneficiaries estimated (no. of people, % in O&M/direct jobs, % indirect jobs)
Coverage of cost-efficient and sustainable energy, disaggregated by energy source and beneficiary, sex, and excluded groups	20-50% share of renewable sources into Caribbean electricity mix by 2030
Number of active partnerships that target women's access to environmental goods and services	Youth Leaders Network and Community of Practice

6. *Risks*. Indicate risks, including climate change, potential social and environmental future risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks:

Risks	Likely	Remedial actions
1. Change in political party and commitment to the renewable agenda changes	Low	<p>Due to the high cost of electricity experienced in Caribbean countries and excellent renewable resource, there is strong political will from all political stakeholders in participating Caribbean countries.</p> <p>However, in order to mitigate a change in political priority, the project will have a direct impact on the policy and regulatory framework to ensure the appropriate policies are in place to accelerate commercial and utility scale renewable deployment, which will in turn mitigate the risk to medium term and long-term renewable deployment.</p>
2. Lack of coordination amongst various stakeholders and partners with various sustainable energy roles and responsibilities in participating countries	Medium	<p>The project will ensure the coordination and integration of support to sustainable energy objectives, in line with each respective countries low carbon development strategies – including National Adaptation Plans of Action (NAPA) where relevant, Strategic Programs for Climate Resilience in participating Pilot Program for Climate Resilience countries, first and second communications to the UNFCCC.</p> <p>In addition, the CWR will work directly with relevant bi-lateral and multi-lateral organizations active in the sustainable energy space to ensure programmatic coordination. National level coordination will be ensured through the adoption of the playbook by other donor partners, which was agreed to in the Sustainable Energy Donor Working Group comprised of all donor partners and regional institutions involved in sustainable energy in the Caribbean.</p>
3. Limited public sector uptake after EE lighting / appliance solar PV grant-funded pilot demonstrations take place	Low	<p>The costs and risks associated with the proposed EE lighting/appliance and solar PV infrastructure will be shared between the project, the Government and the private developers who are expected to engage with, and invest in, this project. The project's market transformation approach will primarily focus on addressing the policy de-risking concerns the government may have before committing to investment programs. But</p>

		the expected energy savings considering government hefty electricity bills provide a strong indication that further public investment will be catalyzed after the pilots.
4. Non approval of expected fiscal, economic and financial incentives to address the first-cost concerns behind EE lighting / appliance and solar PV procurement	Medium	Access to cleaner energy sources has been placed high enough in the respective governments' agenda, given the high tariffs experienced in participating countries, which are later on passed to municipalities and island communities. Therefore, budgetary allocations will be closely monitored to ensure provision is made to support planned energy-efficient lighting/appliance and solar PV investments, with the direct engagement of the Ministry of Finance.
5. Low capacity and awareness to support project identification, development and start-up implementation (e.g. proposal development, tendering, oversight)	Low	Actions will be proposed to ensure above-mentioned government entities and the private sector fully participate in the capacity development interventions, with the required technical and policy oversight of the project and UNDP. Project identification will be supported by Homer Energy hybrid modeling software – the industry standard, and project development and procurement will be directly supported by DNV GL – in close collaboration with the utility. All procurements will be open and competitive with and CWR and DNV GL will participate in the evaluation of technical proposals to ensure transparency in the process. In addition, local private sector will be directly engaged in project implementation; and, the project communication strategy will target all other stakeholders, so they visualize the benefits of the EE lighting/appliances and solar PV installations.
6. Climate variability in the Caribbean exacerbating extreme weather events, such as hurricanes, severe storms and other patterns leading to infrastructure disruption	High	The climate resilience of the proposed wind, solar and energy storage interventions will be addressed by ensuring that the design and installation of the systems places emphasis on their ability to withstand extreme conditions. Project implementation will also target public buildings and infrastructure expected to be used as shelter during extreme weather events (e.g. hurricanes, cyclones, storms), as electricity cost savings from any disaster risk response will free up public expenditure space to address other basic needs (e.g. water, food, health).

7. *Cost Effectiveness*. Explain how [cost-effectiveness](#) is reflected in the project design:

Expected outcomes and outputs under each project component consider cost-effective activities to achieve them. Starting with the policy derisking measures, the suggested design considers the need to promote Caribbean-wide approaches to create the enabling environment, instead of promoting national enforcement interventions across islands isolated from one another. The proposed involvement of CARILEC at the current formulation stage reflects on the economies of scale of engaging a key regional counterpart instead of individual country utilities. The CDB and 5Cs are also critical stakeholders during the implementation given the need to channel significant financial resources to the Caribbean (of particular relevance for OECS islands that do not have direct funding access to the IDB or other international financial institutions) and ensure consistency of renewable energy targets with regional technical and scientific guidance from the designated CARICOM institution.

Further, the strengthening of institutional and technical capacities proposed by the project learns from previous GEF-funded interventions at the country level, which sometimes lack in coordination at the regional level, in order to accelerate the transition to renewables in the Caribbean. The cost-effectiveness of the knowledge management, technology transfer and skills training promoted under the Community of Practice and the Young Leaders Network reflects on the need to undertake these and other related peer-to-peer activities through existing regional platforms, not creating new (e.g. CARICOM Energy Week, CIPORE, CREF or CEIS, amongst others).

Finally, the investment portfolio to be catalyzed through GEF involvement learns from experiences of using subsidies and demonstration pilots in the region with isolated results. The Ten Island Challenge approach is an integral part of the project design, relying significantly on Caribbean private sector engagement and international

financial leverage. A direct result of the participation of OPIC and other IFIs is the opportunity of using GEF funding to apply derisking approaches in the Caribbean context, with economies of scope in promoting SIDS-appropriate renewable energy technology, and economies of scale in accelerating the transition across islands.

Thus, the project's derisking approach at the current design stage estimates abated costs in the range of US\$0.42/tCO₂ as a result of the GEF-funded intervention (targeting 294MW of installed clean energy capacity through the Ten Island Challenge), with a prospect of US\$0.14/tCO₂ as the Caribbean renewable markets continue their path away from fossil fuels (estimating additional installed wind/PV capacity of 600 MW).

8. *Coordination.* Outline the coordination with other relevant GEF-financed projects and other initiatives [not mentioned in 1]:

Coordination with other relevant GEF-financing initiatives will occur on a country by country basis and will be ensured through close coordination with relevant GEF staff and UNDP, which is responsible for the implementation of several national GEF allocations in the region.

For instance, UNDP is supporting the implementation of the St. Vincent and the Grenadines' "Promoting Access to Clean Energy Services" proposal funded by the GEF (\$1.8m) is catalyzing additional funding for renewable energy developments, including hydropower, potentially geothermal and particularly solar technologies (e.g. the country's new airport is expected to include solar photovoltaic installations).

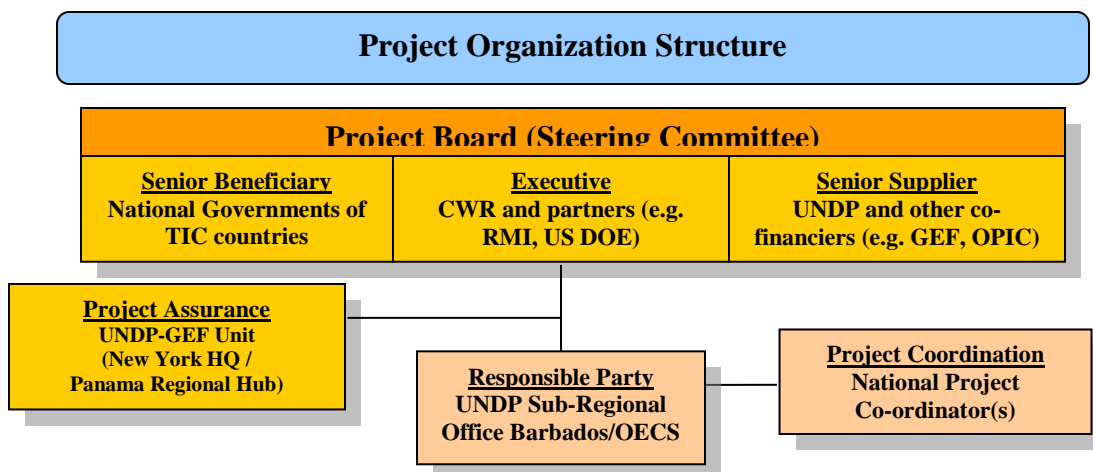
UNDP and BMUB (Germany) are currently assisting Grenada, on a programme on integrated climate change adaptation strategies (\$3.8m). In addition, the Grenada government is working with UNDP's Sub regional office (SRO) in Barbados for NAMA support to "convert government buildings to solar", which will also be considered for GEF-6 funding along with similar demands for NAMA from the region.

UNDP's upstream climate change mitigation upstream work would already include key regional partners on board. In addition, the SRO will be supporting the Eastern Caribbean region on Energy Efficient Lighting technologies under the SIDS DOCK Support Program (\$1m), with baseline activities expected in Barbados, in line with the GEF-funded Barbados Solar PV initiative for public buildings (\$1.8m), as well as the rest of the OECS (particularly in Dominica and St. Vincent & the Grenadines, with St. Lucia and Grenada scoping their possible involvement).

Elsewhere in the Caribbean, UNDP is also supporting energy access in various sectors and locations of relevance to other donors (e.g. Jamaica in the health sector, Guyana in the remote hinterlands), and low emission capacity building. UNDP's in-country presence in the region (with 9 country offices supporting implementation on the ground for 16 GEF program countries in the Caribbean) and coordination mandate within the UN system and across donor platforms, will help ensure integration and avoid duplication with activities supported by other agencies with GEF grants (e.g. WB, IDB, UNEP) and other sources of funds (e.g. Japan-Caribbean Climate Change Partnership, SIDS DOCK, USDOE, ECPA, OAS, 5Cs).

9. *Institutional Arrangement.* Describe the institutional arrangement for project implementation:

The project will be executed by the Carbon War Room, in partnership with Rocky Mountain Institute and the U.S. Department of Energy, with implementing agency support from UNDP to the beneficiary countries, as follows:



The Project Board/Steering Committee (PSC) will be composed of representatives from UNDP and other co-financiers (Senior Supplier), the national governments of donor/support recipient islands (Senior Beneficiary) and the Carbon War Room and partners, e.g. Rocky Mountain Institute, U.S. Department of Energy (Executive) with oversight of Project Coordination.

UNDP through its Sub-Regional Office in Bridgetown for Barbados and the OECS (Responsible Party) will provide management support and guidance to national project coordinator(s), who are responsible for day-to-day implementation.

The UNDP-GEF unit will provide implementing agency financial, technical and quality support (Project Assurance) to ensure successful project execution.

10. Knowledge Management. Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The Ten Island Challenge approach is not a traditional donor led project, but a country-driven process enabling recipient countries to realize their own clean economy vision.

The approach includes a “Transition Playbook”, a detailed step-by-step process to transition islands out of fossil fuels; a “Transition Platform”, providing self-service hands-on information, capacity building and training with web presence (one-stop shop portal with resources), a peer network of local counterparts, a finance facility, and communications support; and, a UNDP-GEF “Derisking” financial tool to be applied throughout the transition.

As part of regular monitoring and outreach activities outlined in this proposal (e.g. community of practice, Youth Leaders and other peer networks) the project will host a regional workshop in one of the islands to showcase the application of these approaches, and disseminate its results, best practices and lessons learned.

11. *Consistency with National Priorities.* Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes /no). If yes, which ones and how: NAPAs, NAPs, NBSAPs, ASGM NAPs, MIAs, NCs, TNAs, NCSA, NIPs, PRSPs, NPFE, BURs, etc.

The 2010 UNFCCC Cancun Agreements (COP-16) on climate change provided that “developing country Parties will take nationally appropriate mitigation actions (NAMAs) in the context of sustainable development, supported and enabled by technology, financing and capacity-building, aimed at achieving a deviation in emissions relative to ‘business as usual’ emissions in 2020.

At the UNFCCC Session in Durban (COP-17) parties adopted a decision on National Adaptation Plans (NAP). The new and emerging instruments called National Adaptation Plans (NAP) are taking hold in the Caribbean, with UNDP-GEF support. In terms of national institutions’ capacity on adaptation planning, most Caribbean countries have developed plans for adaptation during the course of National Communications and Technology Needs Assessments. This project will seek integration between energy and climate change interventions (across the low emission and resilience spectrum).

In addition, the 2012 “Barbados Declaration” included 22 voluntary commitments from Small Island Developing States (SIDS) contributing to the Sustainable Energy for All (SE4ALL) initiative, reiterated at the UNCSO Rio+20 Conference. The Ten Island Challenge initiative will support these goals. Meanwhile, Caribbean countries are focusing their post-2015 long-term sustainable development strategies on the principles of climate risk management and resilience building - understood as market transformations based on “adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts”.

The priority to invest in measures that result in the necessary market transformations for addressing long-term climate change needs is reflected in the “Barbados Programme of Action (BPoA)”, reaffirmed in the “Mauritius Strategy for the further Implementation of the BPoA (MSI)”, and reaffirmed in the 3rd International SIDS Conference S.A.M.O.A. Pathway.

The project is consistent with key mitigation priorities (e.g. fossil-fuel dependence reduction in energy generation and distribution, mainly in the electricity and transport sectors) as indicated in national communications throughout the Caribbean; as well as, equipment applications (e.g. including wind turbines, solar PV panels and battery-based electricity storage) identified in technology needs assessments for SIDS. The project will seek to align its interventions with concrete technology action plans and mitigation options, selected by the GEF program countries with which preliminary discussions have started (Bahamas, Belize, Colombian islands, Grenada, Saint Lucia, Saint Kitts and Nevis, and Saint Vincent and the Grenadines) once their participation is confirmed.

12. *M & E Plan.* Describe the budgeted monitoring and evaluation plan.

The project coordination team and UNDP SRO in Bridgetown, supported by the UNDP-GEF unit and the CWR will be responsible for monitoring an evaluation in accordance with UNDP/GEF procedures (see table below).

As part of the M&E plan a project Inception Workshop will be held within the first 4 months of the project start-up with the stakeholders part of the project organization structure described above, the UNDP SRO and where appropriate/feasible the UNDP-GEF team, as well as other stakeholders will be invited.

As the project gets implemented quarterly progress reports (QPRs), annual project review/project implementation reports (APR/PIR) and periodic monitoring through site visits to assess first hand project progress that may be joined by members of the PSC.

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time Frame
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Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time Frame
Inception Workshop and Report	<ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP SRO, UNDP GEF 	Indicative cost: 5,000	Within first four months of project start up
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> ▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members. 	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> ▪ Oversight by UNDP with support from the Project Manager ▪ Project team 	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP SRO ▪ UNDP RTA ▪ UNDP GEF 	None	Annually by July
Project Board meetings	Project Manager	To be determined as part of the Annual Work Plan's preparation. Indicative cost: 6,000 (1,500 x 4 years)	Following IW and annually thereafter.
Mid-term Review	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP SRO ▪ UNDP GEF ▪ External Consultants (i.e. evaluation team) 	Indicative cost: 20,000	At the mid-point of project implementation.
Periodic status/ progress reports	1. Project manager and team	None	Quarterly
Final Evaluation	<ol style="list-style-type: none"> 1. Project manager and team, 2. UNDP SRO 3. UNDP GEF 4. External Consultants (i.e. evaluation team) 	Indicative cost : 30,000	At least three months before the end of project implementation
Project Terminal Report	<ul style="list-style-type: none"> • Project manager and team • UNDP SRO • local consultant 	0	At least three months before the end of the project
Audit	<ol style="list-style-type: none"> 1. UNDP SRO 2. Project manager and team 	Indicative cost: 4,000 (1,000 x 4 years)	Yearly
Visits to field sites	<ul style="list-style-type: none"> • UNDP SRO • UNDP GEF (as appropriate) • Government representatives 	For GEF supported projects, paid from IA fees and operational budget	Yearly
Dissemination of lessons learnt	<ul style="list-style-type: none"> • Project Manager and team • Local consultant 	Indicative cost: 5,000	At least three months before the end of the project
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		Total: 70,000 approx. (GEF funded, not including co-financing resources)	

The Project Results Framework provides performance and impact indicators for project implementation along with their corresponding means of verification. The GEF CC Tracking Tool will also be used to monitor progress in reducing GHG emissions. The M&E plan includes: inception workshop and report, project implementation reviews, quarterly and annual review reports, independent mid-term evaluation, and independent final evaluation.

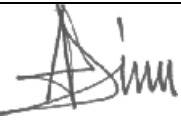
PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. Record of Endorsement¹¹ of GEF Operational Focal Point (S) on Behalf of the Government(S): (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)

Note: Preliminary discussions with countries have started with Bahamas, Belize, Colombia (San Andres and Providencia islands), Grenada, Saint Lucia, Saint Kitts and Nevis, and Saint Vincent and the Grenadines, all which are Ten Island Challenge eligible to GEF funding. Other islands to be considered in the program include the British Virgin Islands, Aruba, Anguilla and Turks and Caicos, which are not eligible for GEF funding, but would participate through non-GEF co-financing.

B. GEF Agency(ies) Certification

This request has been prepared in accordance with GEF policies ¹² and procedures and meets the GEF criteria for project identification and preparation under GEF-6.					
Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Adriana Dinu UNDP-GEF Executive Coordinator		04/13/2015	Raul Alfaro-Pelico, UNDP-GEF Technical Advisor, Latin America and the Caribbean	+(507) 302 4500	raul.alfaro@undp.org

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (*Applicable only to newly accredited GEF Project Agencies*)

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to this project template.

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

¹¹ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

¹² GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

PROJECT RESULTS FRAMEWORK

Primary applicable 2014-2017 UNDP Strategic Plan Key Result Area (Outcome 1: Growth and Development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded): Output 1.5. Inclusive and sustainable solutions adopted to achieve increased energy efficiency and universal modern energy access (especially off-grid sources of renewable energy): 1. Annual emissions of carbon dioxide, 2. Coverage of cost-efficient and sustainable energy, disaggregated by energy source and beneficiary
Applicable GEF Strategic Objective and Program: GEF-6 CCM-1 Strategic Programs 1 and 2
Applicable GEF Expected Outcomes: Outcomes A, B and C for accelerated adoption of innovative technologies, policy frameworks and financial mechanisms for GHG emission reductions
Applicable GEF Outcome Indicators: Market penetration of on-grid RE (% from renewables); GHG emissions from electricity generation (tons CO _{2eq} /kWh); and \$/ tons CO _{2eq} ; no. jobs/beneficiaries

	Indicator	Baseline	Targets End of Project	Source of verification	Assumptions
Project Objective: ¹³ To accelerate the transition of Caribbean island economies from heavy dependence on fossil fuels to a diverse platform of RE/EE	<ul style="list-style-type: none"> ▪ Number of countries signed on the Ten Island Challenge ▪ CO₂ emission reductions by project-end (EOP) ▪ % share of RE in the power generation mix of TIC countries 	<ul style="list-style-type: none"> ▪ 0 ▪ 0 ▪ 1-7%¹⁴ 	<ul style="list-style-type: none"> ▪ 10 ▪ 476 ktCO₂ ▪ 20-50%¹⁵ 	<ul style="list-style-type: none"> ▪ Project final report as well as annual surveys of energy consumption & reductions for each RE project 	<ul style="list-style-type: none"> ▪ Economic growth across islands will continue ▪ Island-wide government support for renewables development and utilization will not change
Outcome 1: ¹⁶ <u>Policy Derisking Measures</u> – Island-wide derisked enabling environment for low GHG development through innovative policy tools	<ul style="list-style-type: none"> • Number of RE/EE strategies and assessments with specific targets • Number of islands applying the derisking method, resource conservation measures and Ten Island Challenge tools 	<ul style="list-style-type: none"> • 0 • 0 	<ul style="list-style-type: none"> • 10 • 10 	<ul style="list-style-type: none"> • Studies/assessments of Derisking RE/EE investment options • Annual project reviews of key performance indicators 	<ul style="list-style-type: none"> • Island-wide support for policy reform to promote RE continues • Technical capacity to apply tools does not delay adoption of RE policy measures
Outcome 2: <u>Institutional and Technical Capacity</u> – Strengthened island capacity for integrated low GHG technical and operational planning and coordination	<ul style="list-style-type: none"> • Number of stakeholder partnerships active in 10-Island Challenge KM platforms • Number of local counterparts capacitated to partake in RE/EE developments 	<ul style="list-style-type: none"> • 0 • 10-50¹⁷ 	<ul style="list-style-type: none"> • 2 • 500-1,000 	<ul style="list-style-type: none"> • Workshop and seminar proceedings • Training evaluations by participants 	<ul style="list-style-type: none"> • Local and regional stakeholders continue to be engaged during the various phases of the Ten Island Challenge
Outcome 3: <u>Investment Projects and Financial Mechanisms</u> Catalyzed island funding for low GHG technology deployment	<ul style="list-style-type: none"> • Installed RE capacity through Ten Island Challenge • Number of jobs/beneficiaries from Ten Island Challenge • Capital injected following support by Ten Island Challenge 	<ul style="list-style-type: none"> • 0 • 0 • \$3m 	<ul style="list-style-type: none"> • 294MW • 2,500-3,500 • >US\$300m 	<ul style="list-style-type: none"> • Feasibility studies of RE technologies • Bankable project reports • PPAs and approval permits • Work inspection reports 	<ul style="list-style-type: none"> • Sufficient annual replenishment of RE development funds • Capacity of government does not substantially delay approval of RE policies and RE projects

¹³ Objective (Atlas output) monitored quarterly ERBM and annually in APR/PIR

¹⁴ Source: IRENA. Figures range across islands from 1% in Bahamas, to 7% in Grenada

¹⁵ Source: Carbon War Room

¹⁶ All outcomes monitored annually in the APR/PIR.

¹⁷ These personnel are from the Energy Unit