11th EDF NIP for Barbados – Summary

The relations between Barbados (BAR) and the European Union (EU) are underpinned by the Joint Caribbean-EU Partnership Strategy, the Cotonou Agreement and the CARIFORUM-EU Economic Partnership Agreement (EPA). Climate vulnerability exacerbates the already high and inter-linked social, economic and environmental vulnerabilities of the country. EDF 11 (EUR 3.5 million) support to renewable energy and energy efficiency complements, and is based on, the analysis and projections of the BAR National Strategic Plan (NSP) 2006-2025 "Global Excellence, Barbadian Traditions" and the Barbados Green Economy Scoping Study of 2012.

Energy costs are a concern at the macroeconomic level, and at the individual level of consumers in BAR. Nearly all of the electricity generated in the country is produced with fossil fuels. Oil imports for the period 2007-2012 averaged about 7.3 % of GDP (comparable to education expenditure). Average electricity tariffs are high by international standards, although they are among the lowest in the Caribbean. Electricity costs have a devastating effect on direct production costs, and hence on the competitiveness of Barbadian businesses. Government subsidies to cushion global spikes in fuel prices also add to the indebtedness of the country.

The institutional framework of the energy sector is quite robust. A revised Energy Policy, setting ambitious Renewable Energy (RE) and Energy Efficiency (EE) targets, is expected to be adopted in early 2014. The Government enacted a new Electric Light and Power Bill, which strengthens the institutional framework and also role of private sector, in early 2014. Renewable energy (RE) is deemed to be economically and commercially viable in BAR. The main barriers to the uptake of RE and EE have been; i) access to capital; ii) equipment supply; iii) lack of awareness on recent technological developments; iv) need to develop a more conducive enabling environment. The EU is already engaged in the sector through a substantial project with the Government and the Inter-American Development Bank (IDB); the Public Sector Smart Energy programme. Sector dialogue is maturing, witnessed by increasing engagements with the Barbados Chamber of Commerce and Industry and the Barbados Renewable Energy Association.

Introduction of RE and EE are closely inter-linked with efforts to transform the economy of the country to a green economy. RE and EE similarly are high on EU agenda, as noted in the "Agenda for Change", and the commitment to make 20% of the EU overall budget for 2014-2020 “climate relevant”. Possibilities to leverage additional funds to the sector exist, primarily via the Caribbean Investment Facility, and will be assessed further. Linkages with the energy component of the EDF 11 regional programme also need to be explored.

Financial overview:

Sector of cooperation	***Amount (EUR)***	***% of Total***
Renewable Energy / Energy Efficiency	**3,000,000**	**86**
Measures in favour of civil society (NSA Panel)	**150,000**	**4**
Support measures	**350,000**	**10**
- Support measures National Authorizing Officer (NAO)	150,000	4
- Support measures Technical Cooperation Facility (TCF)	200,000	6
Total	**3,500,000**	**100**

The overall objective is to support the energy sector goals of the Government. The specific objective is to support the recently commenced Government pilot programme for renewable energy and energy efficiency measures in primary and secondary schools; thereby raising awareness, reducing energy costs, and securing a reliable energy supply for schools designated as hurricane / natural disaster shelters. Complementary to this will be a capacity building programme for educators on RE / EE.

Monitoring of the intervention, and demonstration of impact, will be informed by a robust sector Monitoring and Evaluation (M&E) framework. A risk mitigation framework has also been defined.

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LIST OF ACRONYMS

BAR- Barbados
BCCI-Barbados Chamber of Commerce and Industry
BL&P- Barbados Light & Power Company Limited
BREA- Barbados Renewable Energy Associations
CARIFORUM Caribbean Forum – Forum of the Caribbean Group of African, Caribbean and Pacific (ACP) States
CDB – Caribbean Development Bank
CIESIN- Centre for the Development of Enterprise
CIF-Caribbean Investment Facility
CER-Certified Emission Reductions
CDM-Clean Development Mechanism
CRIP – Caribbean Regional Indicative Programme
ECCB – Eastern Caribbean Central Bank
EE-Energy Efficiency
EPA – Economic Partnership Agreement
EU – European Union
FTC – Free Trading Commission
GDP – Gross Domestic Product
GEF- Global Environmental Facility
GESS-Green Economy Scoping Study
GETSC-Green Economy Technical Steering Committee
GiZ-Gesellschaft fuer internationale Zusammenarbeit.
HRD-Human Resource Development
IDB – Inter-American Development Bank
IMF –International Monetary Fund
NAMA-Nationally Appropriate Mitigation Action
NAO – National Authorising Office(r)
NGO-Non Governmental Organisation
NIP – National Indicative Programme
NSA-Non-State Actors
NSP – National Strategic Plan
OECS – Organisation of Eastern Caribbean States
PV- Solar Photovoltaic
RE-Renewable energy
RER-Renewable Energy Rider
SIDS – Small Island Developing State
TA – Technical Assistance
TCF – Technical Cooperation Facility
UN – United Nations
UNDP – United Nations Development Programme
UNEP- United Nations Environnent Programme
UNFCCC-United Nations Framework Convention on Climate Change
UWI-CH-University West Indies-Cave Hill Campus
US(A) – United States (of America)
WB – World Bank

1. The overall lines for the EU response

1.1. Strategic objectives of the EU's relationship with the partner country

The relations between Barbados (BAR) and the European Union (EU) are underpinned by the Joint Caribbean-EU Partnership Strategy, the Cotonou Agreement and the CARIFORUM-EU Economic Partnership Agreement (EPA). BAR and the EU share a long history, culture and a broad base of common values. Both share a commitment to global peace, progress and prosperity as well as to democracy, human rights, and the rule of law. The EU continues to be an active partner in supporting regional integration and cooperation, based on its own experience. The CARIFORUM-EU EPA builds a trade partnership for increased competitiveness, economic growth and development, supporting regional integration in the Caribbean and participation in the world trading system. The EU is firmly committed to implement its obligations stemming from the EPA and to assist BAR to implement it.

Climate Change and its consequences are key obstacles to sustainable development and the achievement of the Millennium Development Goals. BAR is a Small Island Developing State (SIDS) and is particularly vulnerable. This climate vulnerability exacerbates the already high and inter-linked social, economic and environmental vulnerabilities of the country. Hence, resilience building is an overarching goal of the NIP, guided by relevant EU[I], BAR and CARIFORUM policies. BAR and EU Member States, as signatories to the Kyoto Protocol, have worked together to advance climate change negotiations, and developed policies to reduce the impact of climate change and environmental degradation. They share an interest in achieving a comprehensive, fair and legally-binding outcome under the United Nations Framework Convention on Climate Change (UNFCCC).

The economy of BAR relies heavily on tourism and investment for development and hence is inherently susceptible to external factors. Working together to fight criminal networks is a priority of EU-BAR relations. Strengthening cooperation and capacity building as well as addressing the root causes behind criminal activity and its social impact are key aspects in this regard. BAR and the EU face a number of common global challenges and concerns and are committed to act in a coordinated manner to find joint responses at the international level. Together, BAR, with CARIFORUM partner countries and the EU Member States represent forty-three (43) countries. The goal of cooperation is therefore also to have a more decisive impact on topics of mutual importance.

The EU – BAR development cooperation portfolio has grown significantly in recent years, primarily due to the allocation of significant funds from the Accompanying Measures for Sugar Protocol Countries (AMSP). The current portfolio is app. EUR 40 million, with a further app. EUR 40 million in the pipeline. About EUR 75 million will be invested in building capacity through the Human Resource Development Programme and EUR 5 in support of a national renewable energy initiative. The EU ranks as no. 1 in terms of the volume of aid provided to the country out of seven (7) donors. The EU provides 71% (2010) of Official Development Assistance to BAR.

The Government of Barbados presented the Green Economy Scoping Study (GESS) in June 2012. The GESS recognises the structural vulnerabilities of the country, offers a model for further realising sustainable development aspirations and identifies the required institutional platform. The EU acknowledges this exceptional foresight and is committed to support the transformation of BAR to a green economy.

EU support and cooperation is provided in support of the efforts of BAR to recover from the effects of recent global economic and financial crises, restore macro-economic stability, and achieve the Millennium Development Goals. Linkages between the national and CARIFORUM regional programmes will be sought, as will the opportunity to leverage further funds for development interventions; one opportunity for this being the Caribbean Investment Facility (CIF). The EU support complements, and is based on, the analysis and projections of the BAR National Strategic Plan (NSP) 2006-2025 "Global Excellence, Barbadian Traditions".

[I] COM(2012)586 final and SWD(2013)227 final

1.2. Choice of sectors

In his inaugural speech in February 2008, the Prime Minister of Barbados stated that "the single biggest challenge of our generation is the drain on foreign exchange created by the high cost of oil". Consequently, the Government of Barbados has identified three main objectives related to energy: i) reduce energy costs; ii) achieve greater energy security and iii) improve environmental sustainability. Key pillars to assist in achieving these objectives are the promotion of the use of renewable energy technologies, and the efficient use of energy.

Energy costs are a concern for all at the macroeconomic level, and at the individual level of consumers in Barbados. Nearly all of the electricity generated in the country is produced with fossil fuels. Oil imports for the period 2007-2012 averaged about 7.3 % of GDP, a level comparable to Government expenditure on education. Average electricity tariffs reached USD 0.32 per kWh in 2012. These average tariffs are high by international standards, although they are among the lowest in the Caribbean. As a comparison, rates in the USA (Florida) are in the region of USD 0.05 – 0.08 / kWh. Costs are largely due to the small system size (peak demand of about 160 MW) and the need to import fuel. In 2010 average bills increased by app. 5% (given a constant fuel price). This was the first change in base electricity tariffs since 1983. The period 1983-2010 had seen the Retail Price Index in Barbados increase by over 100 %, however, electricity price increases had depended solely on the Fuel Clause Adjustment (FCA).

Electricity costs have a devastating effect on direct production costs, and hence on the competitiveness of Barbadian businesses. Additionally, government subsidies to cushion global spikes in fuel prices [linked to the FCA] add to the indebtedness of the country. In 2008 this subsidy cost the Government app. BBD 36 million in less than one year. As a result of this expenditure, the 'average' Barbadian was spared the requirement to spend up to 25% of the household income on electricity bills.

Barbados currently has a relatively secure electricity generation capacity. However, Barbados' electricity generation mix consists primarily of imported fuel oil and diesel. Insufficient diversification of energy resources is likely to jeopardise energy security, in particular due to the volatility of fossil fuel prices. Environmental sustainability largely concerns the more direct pollution effects on Barbados' natural environment; a vital economic resource for the country's tourism industry.

The institutional framework of the energy sector is quite robust. Energy policy is the responsibility of the Energy Division within the Prime Minister's Office. The country's regulator is the Fair Trading Commission (FTC) which was established in January 2001. Barbados Light & Power Company Limited (BL&P) is the country's sole commercial electricity provider. BL&P is owned (79.7%) by the Canadian based Emera Inc. BL&P plans to invest in 83.5 MW of new capacity to meet demand growth and replace its existing plant in the next ten (10) years. The need to invest in new capacity may create an opportunity to invest in renewables without stranding existing conventional capacity.

Renewable energy (RE) is deemed to be economically and commercially viable in Barbados, but is not widely used. As a result, Barbados has no installed utility scale renewable generation capacity. Solar water heaters comprise the most significant use of renewable energy in the country. According to Government estimates, solar water heaters have reached a penetration of 33.5 % in households. Barbados is one of the best performing countries in the world in this regard. Additionally, during the annual sugar harvest, the two (2) sugar factories co-generate 4 MW from biomass. Similarly, all the economically viable energy efficiency (EE) technologies are also commercially viable. Yet, certain barriers have prevented RE and EE investments. The main barriers to the uptake of RE and EE have been; i) access to capital; ii) equipment supply; iii) lack of information / awareness on recent technological viabilities; iv) need to develop a more conducive enabling environment.

In 2010 a pilot "Renewable Energy Rider (RER)" was introduced in order to promote domestic use of wind and solar energy and allow for a feed-in tariff to the grid. Furthermore, the Government has embarked on an intensive renewable energy and energy conservation programme with extensive support from international donors. In November 2013, the Government signed the BBD 50 million

Public Sector Smart Energy programme with the Inter-American Development Bank (IDB) and the European Union (EU). A revised Energy Policy, setting ambitious RE and EE targets, is expected to be adopted in early 2014. The Government has also developed a new Electric Light and Power Bill due to be enacted by Parliament in early 2014. In recent years the Barbados Chamber of Commerce and Industry (BCCI) and the Barbados Renewable Energy Associations (BREA) have commenced policy dialogue engagements in the sector.

Introduction of RE and EE are closely inter-linked with the Government's efforts to transform the economy of the country to a green economy. Energy was, in particular as relates to transport and tourism sectors, extensively discussed in the context of the Barbados Green Economy Scoping Study (GESS). The process to execute the GESS was internationally recognised for the participatory and visionary approach. As a testament to the Government's global leadership on green economy transformation efforts, as well as RE and EE ambitions, the United Nations Ministerial Conference on "Achieving Sustainable Energy for All in SIDS – Challenges, Opportunities, Commitments" was held in Barbados in May 2012. This culminated in the Barbados Declaration on Achieving Sustainable Energy for All in Small Island Developing States (SIDS), which informed deliberations at the Rio+20 Summit. In addition, the Government is currently developing a Nationally Appropriate Mitigation Action (NAMA) which is in aligned to its energy policy.

In conclusion, the energy sector in Barbados is relatively well regulated, analysed and reported on. Sector related dialogue takes place in the framework of the Barbados Social Partnership, the energy sector dialogue and the GETSC. Constraints of energy costs for economic development are well identified and appreciated by the Government. RE is a priority sector for the Government and hence it is deemed a very appropriate sector for EU-Barbados development cooperation for EDF 11. Concentrating investments in sustainable energy is given high priority in the EU "Agenda for Change". Additionally, RE also addresses climate change and low-carbon development. The choice of sector and intervention were further informed by assessing lessons learned from previous interventions to the sector in the country and region. Hence, the EU - Barbados programme will contribute to achieving the EU proposal to make 20% of the EU overall budget for 2014-2020 “climate relevant”. Possibilities to leverage additional funds to the sector exist, primarily from the Caribbean Investment Facility, and will be assessed further. Linkages with the energy component of the EDF 11 regional programme also need to be explored. Increasing innovative financial instruments, including other facilities for blending grants and loans is a key feature of the EU "Agenda for Change" as well. EU support will take into account the equal and non-discriminatory access to energy services as integral to the enjoyment of socio-economic rights. Gender equality, participation of the most marginalized in equitable service delivery will be thus paid special attention to.
Lessons learnt will be taken into account during the implementation phase and in particular lessons learned will be taken into account during the identification and formulation phases so as to inform the choices for implementation.

2. Financial overview (Indicative amounts)

Sector of cooperation	***Amount (EUR)***	***% of Total***
Renewable Energy / Energy Efficiency	**3,000,000**	**86**
Measures in favour of civil society (NSA Panel)	**150,000**	**4**
Support measures	**350,000**	**10**
- Support measures NAO	150,000	4
- Support measures TCF	200,000	6
Total	**3,500,000**	**100**

The EU response and National Indicative Programme may be complemented by operations financed by the European Investment Bank (EIB) from the Cotonou Investment Facility and/or its Own Resources

3. EU support per sector

3.1. Renewable Energy / Energy Efficiency (indicative amount EUR 3,000,000)

3.1.1. The following overall and specific objectives will be pursued:

The overall objective is to support the energy sector goals of the Government, as defined in the draft 2013 Government of Barbados Energy Policy. The main elements of this policy are: i) increase the share of economically viable renewable energy in Barbados' energy mix; ii) achieve savings in the country's consumption of electricity compared to a 'business as usual' scenario; iii) achievement of savings in transportation and other non-electric energy uses; iv) increase the sustainability and efficiency of fossil fuel exploration, production, transportation, storage, and use across all sectors; v) increase the awareness and skills of the people of Barbados for sustainable energy.

The specific objective is to support the recently commenced Government pilot programme for renewable energy and energy efficiency measures in primary and secondary schools; thereby raising awareness, reducing energy costs, and securing a reliable energy supply for schools designated as hurricane / natural disaster shelters. Complementary to this will be a capacity building programme for educators on RE / EE.

3.1.2. For each of the specific objectives the main expected **results** are:

i. Renewable energy (RE) systems (e.g. solar photovoltaic (PV) and small medium wind power systems) installed at primary and secondary schools.

ii. Energy efficiency (EE) systems installed at primary and secondary schools.

iii. Educational material for RE and EE developed (on the basis of existing regional and global experiences), to complement the national curriculum and a 'teach the teacher' programme commenced.

A link with the Public Sector Smart Energy Conservation Programme will be sought, in particular with regard to utilising electrical vehicles / buses purchased under this programme as school buses when possible, to reinforce the educational aspect of the EDF 11 programme.

3.1.3. The main indicators for measuring the aforementioned results are contained in the sector intervention framework in Attachment 3.

3.1.4. Donor coordination and policy dialogue:

The Government of Barbados is currently receiving support from the Inter-American Development Bank, the European Union (EU), the Global Environmental Facility (GEF), the United Nations Development Program (UNDP), as well as the Governments of South Korea and China. Interventions in the energy sector are coordinated by the Energy Division. Details of international support are shown in Attachment 2. the Government also works with Gesellschaft fuer internationale Zusammenarbeit (GiZ- Former GTZ) and SIDS Dock in the context of the regional programmes of these institutions.

The Government will also explore the extent to which the components of RE and EE interventions may benefit from the Clean Development Mechanism (CDM) in order to generate an additional income stream from carbon revenues and trading of CDM certified emission reductions (CERs). Being part of the CDM framework should also support the establishment of capacity to access funds linked to NAMAs and proposed new climate / carbon mechanisms and funds. Energy issues are discussed in the context of the Social Partnership Dialogue – given the cross-cutting impact of energy on Barbadian society. Energy was, in particular in the context of transport and tourism, extensively discussed in a participatory manner in the context of the Barbados Green Economy Scoping Study (GESS). A standing Green Economy Technical Steering Committee (GETSC) guides the implementation of the GESS.

3.1.5. The Government's financial and policy commitments;

A draft National Sustainable Energy Policy has been prepared. The specific objectives of this policy are as follows:

- Renewable Energy: increase the share of economically viable renewable energy in Barbados' energy mix, with an indicative target of about 29 per cent of all electricity consumption to be generated from renewable sources by 2029.
- Electric Energy Efficiency: achieve savings in the country's consumption of electricity, with an indicative overall target of 22 per cent savings by 2029 compared to a 'business as usual' scenario.
- Efficiency in the use of Non-Electric Energy: achieve an indicative target of 29 per cent savings in transportation and other non-electric energy uses by 2029.
- Sustainable Supply and Demand of Fossil Fuels: increase the sustainability and efficiency of fossil fuel exploration, production, transportation, storage, and use across all sectors.
- Energy Education and Awareness: increase the awareness and skills of the people of Barbados for sustainable energy matters, and to ensure that they have the knowledge and ability to implement economically viable sustainable energy measures.

It is recognised that a sound regulatory framework is necessary to establish a viable renewable and energy efficiency sector. To achieve this objective, an Electric Light and Power Bill was passed by Parliament in December 2013 and is expected to be proclaimed by April 2014. This legislation will make provisions for; inter alia, the establishment of a licensing regime for entities wishing to sell electricity to the grid from renewable energy sources including Independent Power Producers. This legislation will require the public utility to make interconnection services available to other licensees and persons other than licensees who own or operate renewable energy generation systems. Additionally, it will empower the Minister to prescribe levels of electricity generated from renewable energy that the public utility must allow to be supplied to the public grid. A revised Income Tax Amendment Bill was recently adopted, providing tax incentives for households, businesses and entrepreneurs. A few of these incentives are tax reductions for installing RE systems, corporate tax waivers, 0% VAT payments and reduced import duties on RE technologies. Government policies are thus also geared towards creating an enabling environment for the private sector in the area of renewable energy and energy efficiency.

Current Government initiatives to promote a more sustainable energy sector include the following: the Public Sector Smart Energy Conservation Programme (BBD 50 million – co-funded with the IDB and the EU), commencing January 2014, which will finance renewable energy and energy efficiency technology in government buildings; introduce efficient public street lighting; support pilot projects for innovative renewable energy technologies such as electric vehicles and explore ocean energy technologies and fund capacity building, institutional strengthening and public awareness in Barbados. An Energy Smart Fund (BBD 20 million – funded by the IDB) has been established for the commercial sector and households. This is a package of financial instruments and technical assistance to address the main market failures that prevent the country from adopting renewable energy and energy efficiency. Other Government measures include the erection of solar photovoltaic systems at schools and the Caribbean Hotel Energy Efficiency Action Programme. With funds from the Global Environmental Facility (GEF), compact fluorescent lamps and distributed power monitors will be procured as well as the erection of photovoltaic systems on the roofs of homes and at three government-owned facilities. Furthermore, the Government has submitted a request to the GEF for the erection of solar photovoltaic systems at disaster shelters, community centres and polyclinics. It is also proposed to invite the private sector to enter into a Public/Private Partnership arrangement with respect to having that sector provide the requisite capital to procure, erect, operate and maintain solar electricity systems on the roofs of Government-owned buildings and provide the electricity to the Government and the excess to the Barbados Light and Power Co. Ltd utilizing the method of a Solar Power Purchase Agreement.

In June 2012 the Government of Barbados, the University of the West Indies-Cave Hill Campus (UWI-CH), and the United Nations Environment Programme (UNEP) published the Barbados Green Economy Scoping Study (GESS). The study was the product of an intense and consultative twelve month formulation period. As a part of this process were learning, innovation and business solutions fora under the leadership of the Cabinet-appointed Green Economy Technical Steering Committee. The GESS analysed five (5) key sectors for the Barbados economy based on a model participatory method for sector analysis and planning. The sectors analysed were: agriculture; fisheries; building/housing; transport and tourism. In each of these sectors and for the economy as a whole energy repeatedly emerged as a key factor, either as a constraint or an opportunity.

3.1.6. Environmental aspects

For the purpose of this programme, there will be no need for an Environmental Assessment. The installation of solar photovoltaic systems on the roofs of buildings in Barbados does not require such assessments to be undertaken. The Chief Town Planner has however indicated that any ground-mounted systems will require the submission of the relevant applications to the Town and Country Planning Department. This project does not foresee any such systems. In general, all components of the project will be executed in compliance with the environmental policies, laws and regulations of Barbados. Should any environmental impacts arise during implementation of the interventions, an appropriate type of environmental assessment (SIA or EIA) will be carried out in accordance with the relevant guidelines. The net positive impact of energy reform interventions on the environment is documented in several analyses.

3.1.7. The overall risk assessment of the sector intervention:

The Government has identified the following risks for developing the renewable energy sector; 1) Stakeholder participation; 2) Renewable energy uptake to the grid; 3) Institutional and capacity constraints; 4) Lack of financing; 5) Variability of renewable energy generation; 6) Project scheduling; 7) Project Scope; 8) Management arrangements; 9) Experience with projects of similar size and scope; 10) Project Budgeting. Attachment 5 indicates details and mitigating measures.

These risks (including risks from natural disasters) will be integrated in a risk informed investment approach.

4. Measures in favour of civil society

In line with the Cotonou Agreement and its Annex IV an indicative amount of EUR 150,000 is set aside in support of civil society organisations, specifically the Non-State Actors (NSA) Advisory Panel. This allocation may also be used to finance actions linked to cross cutting issues.

Under the 10th EDF the NSA Panel awarded grants to non-governmental organisations to assist in matters related to Human Resource Development (HRD) and Human Rights. Funding was also provided for training in Non-Governmental Organisation (NGO) management. This component will continue in 2014. Support was also provided to host a major Conference in Barbados relating to the Regional Indicative Programme, as well as participation in various others workshops and conferences to further support the involvement of NSA in the planning and implementation of EDF funded activities.

The expected results from this allocation under EDF 11 are: i) enhanced consultative and participatory processes and involvement of civil society in sector dialogue; ii) stronger involvement of NSA's in the planning and implementation of energy sector actions.

5. B-allocation

A B-allocation is included for unforeseen needs (specifically relevant for fragility situations). This allocation is EUR 0 until a need arises. In case of necessity, a Financing Decision to meet an unforeseen or urgent need can be taken.

6. Support measures

6.1. Measures to support or accompany the programming, preparation or implementation of actions

An indicative amount of maximum EUR 200,000 is foreseen for the Technical Cooperation Facility (TCF), which aims at supporting or accompanying the programming, preparation or implementation of actions. The TCF is not a sector, and is to be used for supporting activities of limited amounts. It may not be used neither for financing small projects in the focal sector, nor for actions related to cross cutting issues. Nevertheless it may be used to finance activities in support of civil society and non-state actors.

6.2. Support to the National Authorizing Officer

An indicative amount of maximum EUR 150,000 is foreseen for support to the National Authorising Officer. This component seeks to maintain and improve the institutional capacity necessary for the efficient planning and implementation of development projects and programmes financed by the EU. A key component will be to ensure adequate visibility of EU interventions in Barbados. Further, the NAO will be integral to the process of assisting the Country to access resources under the Caribbean Regional Indicative Programme (CRIP), the Caribbean Investment Facility (CIF) as well as other EU thematic funds including for research.

Attachments

1. Country at a glance
2. Donor matrix showing the indicative allocations per sector
3. Sector intervention framework and performance indicators
4. Indicative timetable for commitment of funds
5. The Government Renewable Energy Sector Risk Framework

Attachment 1: Barbados at a glance

Barbados	Unit	**2010 (or earlier)**	**2011**	**2012**	**2013**	Source
POLITICAL						
Status / political rights / civil liberties	Score (F = Free; PF = Partly Free; N = Not Free) / 1 = the most free and 7 the least free rating.	F/1/1	F/1/1	F/1/1	F/1/1	Freedom House
SOCIAL / VULNERABILITY						
Population	Number	280,396	281,804	283,221	-	World Bank
Human Development Index	Index / rank	0.823	0.824	0.825/38	-	UN
Life expectancy at birth, total	Years	75	75	-	-	World Bank
School enrolment primary	%	120	126	-	-	World Bank
Homicides	Number per 100,000 population (change from year before)	35 (+12)	-	-	-	UN
Poverty (headcount index)	%	19,3	-	-	-	CDB
Unemployment	%	10,7	11,2	11,6	11,5*	CDB/IMF
GINI	0 – 1 coefficient	0.47	-	-	-	CDB
EVI (Environmental Vulnerability)	Index	403=Extremely Vulnerable	-	-	-	UNEP
Fuel imports	(% of merchandise imports)	-	27	31	-	World Bank
Pop. Living in areas of elevation < 5 meters	%	15,70 (2000)	-	-	-	Centre for International Earth Science Information Network (CIESIN)

Disaster risk reduction progress	Score (1 to 5): 1= worst	-	4	-	-	World Bank
ECONOMICAL						
GDP Real Growth	%	0.3	0.8	0.0	(0.8) estimated	Economic Affairs
Public deficit	% GDP	-8.8	-4.4	-8.0	-	Economic Affairs
Debt	% GDP	116.8	117.3	117.8*	-	Economic Affairs
Net Public Sector Debt	% GDP	46.4	52.1	57.7	62.2 (Sept 2013)	Economic Affairs
Current Account Balance	% GDP	-8.2	-8.6	-5.6	-6*	Economy Watch
Inflation	%	5,8	9,4	4.5	3.0	Economic Affairs
Global Competitiveness	Rank/score/change	43/ 4,45 / +1 (2010-2011)	42/ 4,44/ +1 (2011-2012)	44/4,42/ -2 (2012-2013)	47/4,42/-3 (2013-2014)	World Economic Forum
Rating Agencies	Rate	-	-	S&P : BB+ MIS : Baa3 FR : -	-	S&P; MIS; FR
FDI, net inflows	BoP, current USD (millions)	668,827,625	333,622,493	-	-	World Bank
Net ODA and official aid received	Current USD (millions)	16,200,000	-	-	-	World Bank
EU Import from / EU Export to	Value: EUR million	30.5/131.8	60.9/143.1	29.2/122.5	-	EU
GOVERNANCE						
Control of Corruption	% / score	89/1.43	-	-	-	Transparency International

* Estimation; ** Forecast

Attachment 2: Donor Matrix

No	Project / Programme	Budget (USD)
1	**IADB Sustainable Energy and Climate Change Initiative (SECCI) Grant** Sustainable Energy Framework Project Technical Assistance to develop Sustainable Energy Policies	1,000,000
2	**Global Environmental Facility Grant** Sustainable Energy Framework Pilot Projects for the installation of 28 Solar PV systems, one wind turbine and the distribution of 15,000 Compact Fluorescent Lamps and 2000 power monitors in 3000 households.	1,000,000
3	**IDB loan** Energy Smart Fund for concessional loans to the private sector, grants to finance agencies for interest rate subsidies and free replacements of inefficient lights and the provision of rebates for the replacement of inefficient air-conditioning units.	10,000,000
4	**Loan from the IDB and Grant from the European Union** Public Sector Smart Energy Program for the erection of solar PVs and energy efficient retrofit in 12 Government-owned buildings, the procurement of electric vehicles and the erection of a charging station, the replacement of streetlights with energy efficient lights, institutional, capacity building and public awareness as well as studies in ocean energy.	24,664,000
5	**Global Environmental Facility/UNDP Grant** The erection of solar PV on community centres and polyclinics as well support to the renewable energy licensing process.	2,000,000
6	**People's Republic of China** Energy Efficiency lighting in Government-owned buildings through the replacement of fluorescent bulbs with LED lights.	3,000,000
7	**Government of Barbados** Lighting efficiency inventory in 75 government buildings and replacement existing lights with energy efficient lights.	400,000
8	**European Union National Indicative Programme (EDF 11)**	4,675,555
9	**Republic of Korea** Renewable Energy Fuels for Government Vehicles Project to pilot the use of bio-diesel and ethanol in Government vehicles.	200,000
10	**Barbados Private Sector/Public Sector Government Solar Electricity Roofs Program** Invitation to the private sector to install up to 10 MW of solar PV on 45 Government-owned buildings and sell the electricity to the grid or to the Government. The companies engaged in this process will use their own funds to erect, operate and maintain the systems under the requisite power purchase agreement.	50,000,000
11	**Government of Barbados** Pilot Solar PV 2.5 kWp Project The erection of 2.5 KWp solar PV systems on the roofs of 19 Government-owned buildings including nine buildings of the National Conservation Commission which is responsible for parks and beaches and ten primary and secondary schools.	500,000
10	**TOTAL**	**97,439,555**

Attachment 3. **Sector Intervention Framework and performance indicators**[2]

Sector: Renewable Energy / Energy Efficiency

The specific objective is to support the recently commenced GoBAR pilot programme for renewable energy and energy efficiency measures in primary and secondary schools; thereby raising awareness, reducing energy costs, and securing a reliable energy supply for schools designated as hurricane / natural disaster shelters. Complementary to this will be a capacity building for educators on RE / EE (total EUR 3.0 mn).

Expected Results	Indicators	Means of Verification
a) Renewable energy (RE) systems (e.g. solar photovoltaic (PV) and small medium wind power systems) installed at primary and secondary schools.	a) Number of MWh generated from renewable sources with the EU support; b) % of electricity production from renewable sources in the energy country mix; c) Number of students bodies and parents exposed to RE technologies	- Certificates of acceptance for the solar PV systems provided by the Government Electrical Engineering Department. - Electricity bills of schools
b) Energy efficiency (EE) systems installed at primary and secondary schools.	a) Electricity consumption of selected schools. b) Completion of works issued and / or delivery of supplies for the energy retrofits carried out by the contractors.	- Certificates of completion of works issued and / or delivery of supplies for the energy retrofits carried out by the contractors. - Electricity bills of schools
c) Educational material for RE and EE developed (on the basis of existing regional and global experiences), to complement the national curriculum and a 'teach the teacher' programme commenced;	a) Existence of GoBAR endorsed RE / EE educational material; b) Number of trainers trained; c) Numbers of students reached.	- Educational material and certificates of training
The results, indicators and means of verification specified in the present annex may need to evolve to take into account changes intervening during the programming period.		

[2] Baselines will be included in the Action documents at the latest

Attachment 4. ____ Indicative timetable for commitments

	Indicative allocation (million EUR)	2014	2015	2016	2017	2018	2019	2020
SECTOR – Renewable Energy / Energy Efficiency	3.00		3.0					
Other measures (support to civil society)	0.15		0.15					
B- allocation	N/A							
Support measures	**0.35**		**0.35**					
• Measures to support or accompany the programming, preparation or implementation of actions	0.20		0.20					
• Support to the National Authorising Officer	0.15		0.15					
Total Commitments	**3.5**		**3.5**					

Attachment 5: GoBAR Renewable Energy Sector Risk Framework

Risk Factors	Risks	Mitigating Measures to be Employed
1) Stakeholder participation	Private sector will not take up renewable energy/energy efficiency investment	• Fiscal incentives (Income Tax Amendment Bill)
2) Renewable energy uptake to the grid	Barbados Light and Power Co. Ltd does not allow enough renewable energy on the grid	• New Electric Light and Power Bill
3) Institutional and capacity constraints	Institutional capacity not adequate	• Capacity building and recruitment of appropriate management capacity • Income tax incentives for training for individuals
Lack of financing	Small and Medium Enterprises cannot afford renewable and energy efficiency	Energy Smart Fund Central Bank loan guarantees
6) Variability of renewable energy generation	Grid cannot support levels of variable renewable energy	• Smart Grid study proposed • BL&P grid stability planned
7) Project scheduling	Scheduling and resource allocation insufficient	• Break into smaller phases • Phased implementation with specific and manageable targets identified • Add time to the schedule to allow for slippage
8) Project Scope	Project not defined or is large/complex	• Break into smaller phases • Add phase for analysis • Provide more detailed specifications/scope • Add time to the project schedule.
9) Management arrangements	Complex decision making systems	• Specify decision-makers' role in a project Charter • Plan for involving decision-makers and managing relationships with them/ • Establish good communication systems
10) Experience with project of similar size and scope	Limited (No similar project completed)	• Undertake capacity building • Consider hiring consultant(s) with additional experience for initial period to work alongside local counterpart for knowledge transfer

Risk Factors	Risks	Mitigating Measures to be Employed
11) Project Budgeting	No budget or realistic estimation of costs	• Undertake detailed planning of inputs with realistic costing and resource allocation
12) Operation and Maintenance (O&M) of the renewable energy systems installed and energy efficiency measures	Insufficient budgeting and funding for adequate and required O&M, resulting in systems not fulfilling intended designs.	• clearly define the responsibilities at the institutional level including the possible need of specific O&M financial contributions from the Beneficiary
13) Natural disasters	A natural disaster strikes the country	• Integration of DRR measures which are key elements for sustainable investments where possible