

Selection process #: RG-T4091-P00X

## **TERMS OF REFERENCE**

### Energy Technical Assessments

*COUNTRY: Regional*

*Project Number: P00X*

*Technical Cooperation Number: RG-T4091*

*TECHNICAL COOPERATION NAME: Supporting Energy Dialogues in the Caribbean*

#### **1. Background and Justification**

- 1.1. Caribbean countries face several common energy sector challenges. These countries rely heavily on imported liquid fossil fuels for power generation, thus impacting their macroeconomic balances and increasing exposure to oil price volatility. Their geographic location and market size contribute to higher costs of alternative energy solutions such as wind, solar and geothermal on a country-by-country basis. In addition, the Caribbean is highly exposed and vulnerable to natural hazards, such as extreme weather events that are expected to increase in frequency and intensity due to climate change, which causes severe damage to infrastructure affecting energy services with substantial financial impacts on the economies.
- 1.2. Most Caribbean countries lack adequate integrated planning capacities, evidence-based policy, regulations, and effective governance frameworks, limiting the enabling environments for renewable energy investments. These factors also constrain private sector investments and impact the expansion and diversification of the energy matrix.
- 1.3. In addition, innovation enables the participation of consumers from all demand sectors in the energy systems, leading to the democratization of the grid and its resources and the breakdown of boundaries between energy sub-sectors. Digitalization in the energy sector is increasing fast and has the potential to increase the flexibility of electricity grids, enable integration across entire systems, reduce operation and maintenance costs, improve power plant and network efficiency, reduce unplanned outages and downtime, extend the operational lifetime of assets, contribute to reducing Greenhouse Gas Emissions (GHGs), and increase the resilience of power systems to climate change and other natural hazards.
- 1.4. Caribbean countries have great potential for renewable energy generation. Additionally, the region has a history of biomass production and use, and many of the countries use hydroelectric plants for power system stability. There are even nations that have surpluses of renewable electricity. Almost all countries, transportation is based on fossil fuels. Therefore, the feasibility assessment will be key to determine to the integration of renewable technologies to decarbonize

and meet the energy objectives of economies and will have a considerable impact on the identification of new project opportunities, mainly for power system stabilization, land transport, shipping and aviation, and also for export.

## **2. Objectives**

- 2.1. The general objective is to provide a technical assessment of further integration of renewable technologies to assist the Caribbean to decarbonize its energy systems and use (electricity, transportation, including land and maritime, and key industrial uses).

## **3. Scope of Services**

- 3.1. The scope of services is as follows: i) to provide a road map for the country to achieve greater energy self-sufficiency/independence by pursuing policies, regulations and plans that are sustainable, provide for energy security and efficiency, and are environmentally friendly for sustainable economic growth and development.

## **4. Key Activities**

- 4.1. Review and consider available reports and outputs of contractual agreements on the country's energy sector policy, legal and regulatory framework and advise on the challenges, opportunities, risks and value propositions to support the country's medium-long term Macro Economic Programme for sustainable growth.
- 4.2. Review existing data across the country's energy sector. This will include economic, financial and technical data on (a) import and domestic energy supplies of all sources; (b) energy consumption by sector and type; and (c) environmental, efficiency and sociopolitical matters. Any data omissions and/or inconsistencies to be rectified and a set of base historical and projected data required as input for the integrated energy plan and model development.
- 4.3. Review, evaluate and extract the lessons learned by similarly situated countries which have used energy planning and optimization models.
- 4.4. Identify the leading integrated energy models that are available in the international marketplace for national energy planning. Based on the country's needs, identify the advantages and disadvantages of the various models.
- 4.5. With the emergence of electric vehicles technology and energy storage options, energy efficiency the nexus between electricity and primary fuels necessitates an integrated energy planning approach so that entire energy needs of the country can be adequately and sustainably be realized. The consultant with the necessary qualification and experience in this discipline shall provide the optimal, cost effective and sustainable short medium- and long-term energy plans

for the country.

- 4.6. Facilitation of workshops with energy sector stakeholders provide an overview of the report and solicit feedback.
- 4.7. Preparation of requisite training material and related training of select technical staff that will demonstrate best practices planning methodologies/approaches and how to update the energy sector plans.

## 5. Expected Outcome and Deliverables

- 5.1. **Deliverable 1:** Prepare an Inception Report no later than two (2) weeks after start of the consultancy.
- 5.2. **Deliverable 2:** Develop an Interim Report on Activities 4.1 to 4.4
- 5.3. **Deliverable 3:** Draft Comprehensive Energy Technical Assessment Report
- 5.4. **Deliverable 4:** Final Report and presentation to Key Stakeholders based on comments from draft report. In addition to capacity Building to key stakeholders during and/or end of project.

## 6. Project Schedule and Milestones

- 6.1. The duration of the Consultancy will be 12 months

Deliverables	Estimated Duration
Inception Report no later than two (2) weeks after start of the consultancy.	Within 20 days of contract signing
Interim Report on Tasks 4.1 – 4.4.	Within 3 months of contract signing
Draft Comprehensive Energy Technical Assessment Report	Within 7 months of contract signing
Final Report and presentation to Key Stakeholders based on comments from draft report. In addition to capacity Building to key stakeholders during and/or end of project.	Within 11 months of contract signing

## 7. Reporting Requirements

- 7.1. All reports must be completed in English. Reports should contain a contents page and an executive summary.

## 8. Acceptance Criteria

8.1. Deliverables will be accepted based on agreements on scope of services herein and approach reached with consultants at inception. Additionally, deliverables will be reviewed and approved by Mr. Roberto Aiello, Principal Regional Energy Specialist.

## 9. Other Requirements

9.1. It is expected that the work will be carried out by at least four experts: one senior project lead, one senior distribution design and construction specialist, one financial and economic expert, and one social impact specialist.

## 10. Supervision and Reporting

10.1. The Energy Portfolio is supervised by Mr. Roberto Aiello, Principal Regional Energy Specialist (INE/ENE) based in CJA. The Consultancy will be supervised and report to Mr. Roberto Aiello.

## 11. Schedule of Payments

11.1. Payments will be made in United States Dollar (USD) and will be paid based on the submission of the following:

Deliverables	%
Inception Report no later than two (2) weeks after start of the consultancy.	10%
Interim Report on Tasks 4.1 – 4.4.	40%
Draft Comprehensive Energy Technical Assessment Report	25%
Final Report and presentation to Key Stakeholders based on comments from draft report. In addition to capacity Building to key stakeholders during and/or end of project.	25%

## **HRD Terms of Reference**

### **Consultant: Energy Advisor**

#### **Background**

Caribbean countries face several common energy sector challenges. These countries rely heavily on imported liquid fossil fuels for power generation, thus impacting their macroeconomic balances and increasing exposure to oil price volatility. Their geographic location and market size contribute to higher costs of alternative energy solutions such as wind, solar and geothermal on a country-by-country basis. In addition, the Caribbean is highly exposed and vulnerable to natural hazards, such as extreme weather events that are expected to increase in frequency and intensity due to climate change, which causes severe damage to infrastructure affecting energy services with substantial financial impacts on the economies.

Most Caribbean countries lack adequate integrated planning capacities, evidence-based policy, regulations, and effective governance frameworks, limiting the enabling environments for renewable energy investments. These factors also constrain private sector investments and impact the expansion and diversification of the energy matrix.

In addition, innovation enables the participation of consumers from all demand sectors in the energy systems, leading to the democratization of the grid and its resources and the breakdown of boundaries between energy sub-sectors. Digitalization in the energy sector is increasing fast and has the potential to increase the flexibility of electricity grids, enable integration across entire systems, reduce operation and maintenance costs, improve power plant and network efficiency, reduce unplanned outages and downtime, extend the operational lifetime of assets, contribute to reducing Greenhouse Gas Emissions (GHGs), and increase the resilience of power systems to climate change and other natural hazards.

The Energy Advisor consultant will assist with policy and regulatory support that can facilitate the Caribbean government's dialogue.

#### **The team's mission**

The market penetration of energy efficiency, renewable energy and electric mobility is a top priority for IDB member countries as a means of decreasing their dependency on fossil fuels and the associated volatile international prices, increasing diversification of energy sources and/or as a climate change mitigation measure. Additionally, it is important to support clients on institutional capacity, regulatory and legal framework in relation to energy sector and utility reform. The sharp increase in demand for IDB resources provides the Bank with an important challenge regarding the timely and effective execution of its operations in order to ensure the achievement of its development impact in the different countries of the Caribbean Region.

Accordingly, the Bank is emphasizing the execution and disbursements of all operations, creating important targets to be met by each Division and making supervision of all operations will be critical in the following years. Therefore, in order to ensure that operations are executed as proposed and that timely disbursements are made, a thorough follow-up should be implemented. At the same time, the increase in technical cooperation supporting the energy field operations will require further support and management.

**What you will do:**

Specifically, the Consultant will:

- Provide the Government with expert advice, comments, and recommendations as per the review of technical studies and capacity building activities, including:
  - Assessment of the energy institutional, regulatory, and governance framework;
  - Development of an Integrated Resources and Resilience Plan (IRRP) for the national electric sector;
  - Regulatory measures to accelerate the increase of renewable electricity
  - Oversee the revision of the Electricity Act, National Energy Policy, and other key legislations;
  - Electricity Tariff review;
  - Power Purchase Agreements (PPAs) for microgrids or other RE projects.
- Compile and review relevant energy/electricity sector policies, laws, regulations, and other relevant documents to assess the sector challenges and identify their causes.
- Based on the identified challenges, gap analysis, and international best practices, propose policy, regulatory and institutional recommendations according to the priorities of the government.
- Actively participate in meetings as required.
- Prepare inputs for the Government/Ministry's participation in national and international meetings/events and participate in such forums/events as required.
- Elaborate technical notes and briefings specialized on energy matters.

**Deliverables:**

Deliverable	Estimated Duration
1. Workplan	20 days after contract signing
2. Status Reports (3)	every 2 months after contract signing
3. Final Report	8 months after contract signing

**Payments:**

- 15 % - submission and approval of the Workplan
- 20 % - submission and approval of each status report (3) on the activities completed in accordance with the scope of work;
- 25 % - submission and approval of the Final Report on the findings and assistance provided and propose recommendations.

**What you'll need:**

- **Citizenship:** You are a citizen of one of our 48-member countries.
- **Consanguinity:** You have no family members (up to fourth degree of consanguinity and second degree of affinity, including spouse) working at the IDB Group.
- **Education:** Master's degree in economics, engineering and more than 10 years of relevant professional experience or the equivalent combination of education and experience.
- **Experience:** A minimum of fifteen (15) years of demonstrable international professional experience in the energy sector, including expertise with renewable energies, energy efficiency and conservation, energy policy, regulatory frameworks and institutional strengthening.
- **Languages:** English (fluency) required.

**Core and technical competencies:** Thorough knowledge of infrastructure project cycles. Command of project databases, and of MS Word, Excel, and Power Point. IDB's internal procedures and operational systems knowledge is desirable.

**Opportunity Summary:**

- **Type of contract and modality:** Products and External Services Consultant (PEC)
- **Length of contract:** 8 months
- **Starting date:** November 2022
- **Location:** Remote
- **Responsible person:** The Energy Division Team
- **Requirements:** You must be a citizen of one of the IDB's 48 member countries and have no family members currently working at the IDB Group.

**Our culture:** Our people are committed and passionate about improving lives in Latin-America and the Caribbean, and they get to do what they love in a diverse, collaborative, and stimulating work environment. **We are the first Latin American and Caribbean development institution to be awarded the EDGE certification, recognizing our strong commitment to gender equality.** As an employee you can be part of internal resource groups that connect our diverse community around common interests.

**We encourage women, afro-descendants, people of indigenous origins, and persons with disabilities to apply.**

**About us:** At the IDB, we're committed to improving lives. Since 1959, we've been a leading source of long-term financing for economic, social, and institutional development in Latin America and the Caribbean. We do more than lending though. We partner with our 48-member countries to provide Latin America and the Caribbean with cutting-edge research about relevant development issues, policy advice to inform their decisions, and technical assistance to improve on the planning and execution of projects. For this, we need people who not only have the right skills, but also are passionate about improving lives.

**Our team in Human Resources carefully reviews all applications.**

## **HRD Terms of Reference**

### **Consultant: Communication Consultant**

#### **Background**

Caribbean countries face several common energy sector challenges. These countries rely heavily on imported liquid fossil fuels for power generation, thus impacting their macroeconomic balances and increasing exposure to oil price volatility. Their geographic location and market size contribute to higher costs of alternative energy solutions such as wind, solar and geothermal on a country-by-country basis. In addition, the Caribbean is highly exposed and vulnerable to natural hazards, such as extreme weather events that are expected to increase in frequency and intensity due to climate change, which causes severe damage to infrastructure affecting energy services with substantial financial impacts on the economies.

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The Energy Policy and Regulatory Advisor (EPRA) consultant will assist with policy and regulatory support that can facilitate the Caribbean government's dialogue.

#### **The team's mission**

The market penetration of energy efficiency, renewable energy and electric mobility is a top priority for IDB member countries as a means of decreasing their dependency on fossil fuels and the associated volatile international prices, increasing diversification of energy sources and/or as a climate change mitigation measure. Additionally, it is important to support clients on institutional capacity, regulatory and legal framework in relation to energy sector and utility reform. The sharp increase in demand for IDB resources provides the Bank with an important challenge regarding the timely and effective execution of its operations in order to ensure the achievement of its development impact in the different countries of the Caribbean Region.

Accordingly, the Bank is emphasizing the execution and disbursements of all operations, creating important targets to be met by each Division and making supervision of all operations will be critical in the following years. Therefore, in order to ensure that operations are executed as proposed and that timely disbursements are made, a thorough follow up should be implemented. At the same time, the increase in technical cooperation supporting the energy field operations will require further support and management.

**What you will do:**

Specifically, the Consultant will:

- Shoot on-camera/on-mic interviews with policymakers, funding agencies and government representatives, beneficiaries and representatives of target audiences for use in video / audio products;
- Produce a quarterly newsletter to keep stakeholders informed about the country's energy portfolio implementation progress and highlight important milestones.
- Liaise with internal communications staff/departments to inform, or obtain approval pre-release of external communications products
- Coordinate with media personnel and stakeholder agencies to optimize reach and impact of media campaigns;
- Coordinate social media coverage among stakeholders.
- Design and implement communications campaigns leveraging all relevant media channels to bring visibility on the IDB project and its benefits to target audiences;
- Produce blogs and editorials for internal and external platforms to disseminate key messages and bring visibility to IDB project and its impact;
- Prepare and distribute press releases at predetermined milestones to generate press coverage and bring attention to the energy project events before, during and after;
- Plan agendas, recruit speakers, invite delegates and provide logistical support before, during and after IDB project events;
- Provide text and graphic design options for key stakeholders' approval;
- Produce pamphlets, brochures and banners with consistent with the branding and messaging to be distributed as necessary at relevant events and to commemorate milestones;
- Procure plaques and related commemorative signage with relevant branding to place on public buildings benefitting from sponsor actions.
- Share knowledge and lessons learned via internal and external communications products;

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- **Languages:** English (fluency) required.

**Core and technical competencies:** Thorough knowledge of infrastructure project cycles. Command of project databases, and of MS Word, Excel, and Power Point. IDB's internal procedures and operational systems knowledge is desirable.

**Opportunity Summary:**

- **Type of contract and modality:** Products and External Services Consultant (PEC)
- **Length of contract:** 6 months
- **Starting date:** June 2024
- **Location:** Remote
- **Responsible person:** The Energy Division Team
- **Requirements:** You must be a citizen of one of the IDB's 48 member countries and have no family members currently working at the IDB Group.

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