Public Utilities Regulatory Commission (PURC)

Pre-Procurement Early Market Engagement –

Request for Expression of Interest and Request for Information

for an

Independent Power Producer

for the

Grenada Renewable Energy Project

15.1MW Solar PV Only [Option 1] or

15.1MW Solar PV plus 10.6MW/21.2MWh Battery Energy Storage System [Option 2] for the Island of Grenada

Issue Date: August 30, 2024

Submission Deadline: September 20, 2024

Introduction:

As the Government of Grenada (GoG) strives to achieve national renewable energy targets, the Public Utilities Regulatory Commission (PURC), in its capacity as the procuring entity has engaged Rocky Mountain Institute (RMI) to assist with developing, procuring, and implementing large ground-mount solar PV with battery storage installations at the Maurice Bishop International Airport (MBIA), Point Salines, Grenada.

This announcement constitutes an Early Market Engagement (EME) notice soliciting Expressions of Interest and Requests for Information for an Independent Power Producer (IPP) of the Grenada Renewable Energy Project, consisting of a 15.1MW Solar PV AC minimum plant [Option 1] or 15.1MW of Solar PV AC minimum with 10.6MW/21.2MWh Battery Energy Storage System (BESS) minimum [Option 2] to be located at the Maurice Bishop International Airport (MBIA), Grenada. Also included in Option 2 is a power management system capable of solar, diesel generator, battery storage integration and control. Both options shall include the plant's operation and maintenance (O&M) for 25 years. The solar PV or the solar + battery storage plants will integrate into the Grenada Electricity Services Limited (Grenlec) grid. In both cases the plant will also form part of a microgrid at the MBIA capable of decoupling from the grid to provide localized electricity during outage situations.

Grenlec is responsible for installing a new substation at the MBIA to accommodate the interconnection of the renewable energy plants to the grid and further grid upgrades.

This EME document provides an overview of the Grenada Renewable Energy Project requirements. It allows interested parties to share information that will influence the scope of work and specifications of the intended Request for Proposal (RFP) and register their interest in receiving the Request for Qualification (RFQ) solicitation documents.

This is not a Request for Proposals (RFP) or a solicitation for formal proposals. The information developed through this EME will be used to evaluate the market interest, gauge market prices, help decide the project scope, and help develop the final RFP, including solar PV and battery storage specifications to connect to the Grenlec electricity grid. The project scope includes the selection of an Independent Power Producer (IPP) for the design, implementation, and operation of the MBIA Renewable Energy Project. The Public Utilities Regulatory Commission (PURC) will lead the IPP procurement process, and the awarded bidder will sign a Power Purchase Agreement (PPA) with Grenlec. This EME does not

constitute a commitment, implied or otherwise that the PURC will act in this matter. The PURC will not be responsible for any costs incurred in furnishing responses.

The PURC is interested in understanding market participants' (solar & battery storage IPP developers) current availabilities, flexibilities, and preferences in providing IPP services for the proposed Grenada Renewable Energy Project at the MBIA. The PURC's objectives for this EME are to:

1. Communicate the needed outcomes and get feedback on requirements from the solar PV and battery storage IPP market to assist in developing the final project specifications.
2. Provide the solar PV and battery storage IPP market the opportunity to contribute to developing a market-focused requirements package.
3. Provide the solar PV and battery storage IPPs the opportunity to help price set the Government of Grenada's expectations of potential PPA rates for the Grenada Renewable Energy Project.
4. Provide the solar PV and battery storage IPP market with the opportunity to share critical project-related information, such as the estimated project duration and estimated plant space requirements, especially for the battery storage, for the proposed Grenada Renewable Energy Project.
5. Allow potential bidders to register their interest in receiving the Request for Qualifications documents.

The PURC will share the information secured with RMI for the future development of the Grenada Renewable Energy Project procurement (RFQ and RFP) documents.

Background:

Grenada is an island nation near the south of the Caribbean, with a population of around 115,000 distributed throughout its three main islands. Grenada is the largest, with an area of 120 square miles, while Petite Martinique and Carriacou are smaller islands located north of Grenada in the Grenadines with a total area of 13 square miles. Although the country has achieved a renewable energy penetration of approximately 6%, Grenada's energy sector remains primarily based on fossil fuels. The National Energy Policy, a draft update recently released in March 2023 for public comment, outlines several goals aimed at decarbonization and shifting the economy away from its reliance on petroleum to one based on renewable energy. Like many other Caribbean countries, Grenada is a signatory to the Paris Agreement and has established a Nationally Determined Contribution of 40% reduction in emissions below

2010 levels. In addition, the country aims to achieve 100% renewable energy in the electricity and transport sectors by 2030.

The PURC was established to regulate public utilities in Grenada, but to date, only the electricity sector has been legislated to fall under its mandate. One of the PURC's main responsibilities is to ensure that the price of electricity is fair and reasonable. The PURC's objectives also includes building a strong and sustainable regulatory regime that supports the economic development of Grenada, Carriacou, and Petite Martinique and protects consumers' interests. Through legislation, the Government of Grenada (GoG) has mandated the PURC to lead the country's renewable energy transition. The PURC is currently facilitating the procurement of small-scale (national only) solar PV IPP projects as one element of the Grenada renewable energy transition. The Grenada Renewable Energy Project, which will be opened to local, regional, and international developers, is another element of Grenada's renewable energy transition.

The country's sole electric utility, Grenlec, generates, transmits, and distributes electricity on the islands of Grenada, Carriacou, and Petite Martinique to over 55,000 customers. It has already taken measures to incorporate renewables into its mix. These include installing small-scale solar PV systems at various locations throughout Grenada with a total capacity of 1.1 MW. Grenlec will contribute to the Grenada Renewable Energy Project by providing a new substation and upgrading the grid to accommodate the interconnection of the renewable energy plants at the MBIA. The renewables present in Grenada are not limited to utility-owned systems, however. Grenlec's Customer Renewable Energy Interconnection Programme, launched in 2007, was one of the first programs in the English-speaking Caribbean to allow customers to install renewable energy systems and interconnect with the main grid. Today, customer-owned renewables provide 3.5 MW of capacity, representing around 10% of Grenada's peak load of 37.67 MW. Grenlec's power generation is primarily diesel-based, with a 50MW capacity from 15 diesel units on the island of Grenada.

The three sites earmarked for solar installations for an aggregated capacity of 15.1MW at the MBIA are as follows:

i. North of Hardy Bay at MBIA 12.66 Acres (4.6MW)
ii. West end of MBIA runway 6.75 Acres (3.4MW)
iii. Outside south fence at MBIA 15.76 Acres (7.1MW)

Detailed analysis suggests that a 10.6MW/21.2MWh BESS would be appropriate to provide the required value streams. The proposed location for siting the BESS is at a new 33/11kV substation to be constructed at the site north Hardy Bay at MBIA. Figure 1 below shows the locations of the sites at the MBIA.

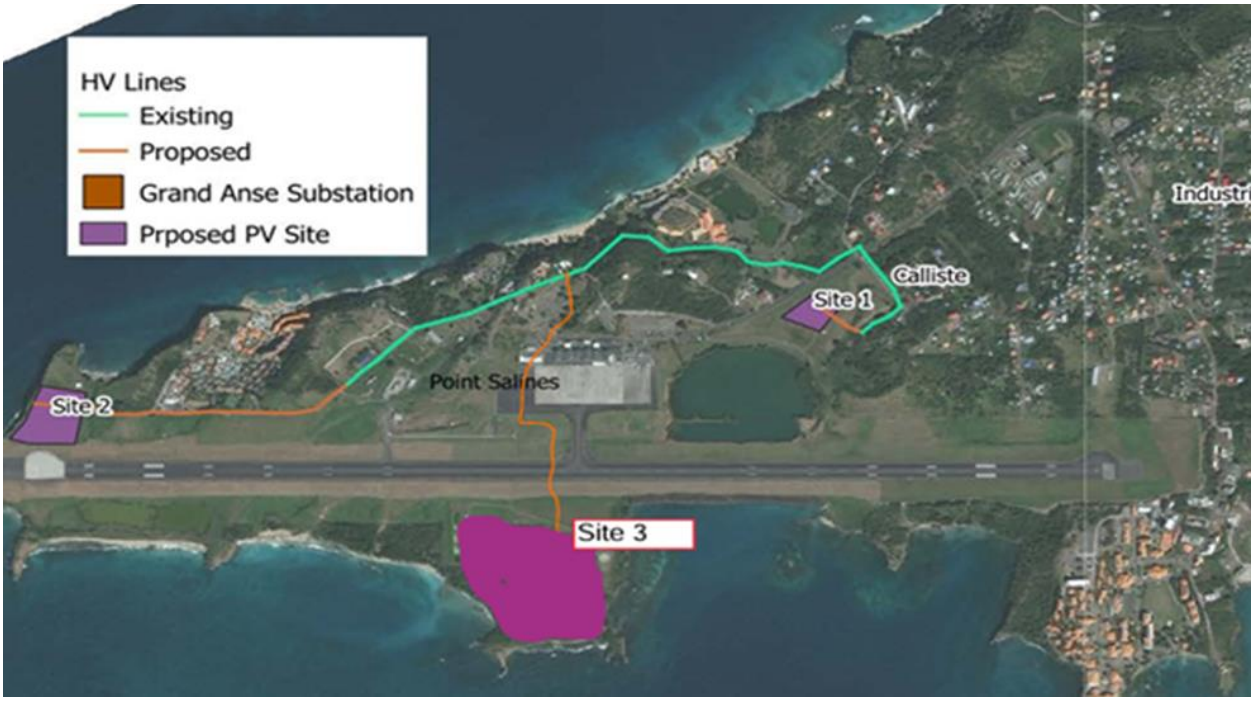

Figure 1 – Locations of three proposed sites at the MBIA

Grenlec, the PURC, and RMI are currently undertaking the proposed Grenada Renewable Energy Project feasibility studies/project de-risking exercises and assessments, including a geotechnical investigation, hydrology study, aviation risk assessment, boundary and topographic surveys, battery optimization study, grid integration study, and environmental and social impact assessment. The final deliverables from the de-risking exercises will be shared with all shortlisted bidders as part of contracting an IPP via subsequent RFQ & RFP solicitation processes.

Grenada Renewable Energy Project Objectives

The Government of Grenada, via the PURC, is exploring opportunities to reduce diesel fuel consumption and, therefore, the unit cost of electricity in Grenada.

One economic opportunity identified is the engagement of IPPs for the continued investment in indigenous energy sources, namely solar and battery storage, to provide higher levels of renewable energy penetration. The following objectives have been identified for the Grenada Renewable Energy Project:

i. Significantly increase the contribution of renewable energy in the Grenada energy mix

ii. Reduce the cost of electricity generation through investment in large utility-scale solar PV and battery storage assets that would reduce Grenlec's usage of fossil fuels

iii. Support the achievement of Grenada's NDCs and RE targets

iv. Create a resilient microgrid at the Maurice Bishop International Airport to provide reliable power during long-duration grid outages

The IPP Scope of Works:

The IPP's scope of work on the proposed Grenada Renewable Energy Project consists of project development, including solar PV and battery storage plant design, energy yields, permits/licenses, contractual arrangements, and financing. Project implementation includes procurement of equipment and materials, construction/installation, interconnection to the Grenlec grid, and commissioning. This would be followed by operation and maintenance of the solar PV and battery storage plant and sale of electricity to Grenlec. The IPP will carry out the defined scope of work according to the performance and technical specifications within the RFP document.

The licensing and contractual structure for the Grenada Renewable Energy Project consists of one license and two agreements:

1. An IPP License from the PURC
2. A Power Purchase Agreement and an Interconnection Agreement with the utility, Grenlec.

Qualifications and Assumptions:

A. For this EME, the **"Grenada Renewable Energy Project"** means the development, design, engineering, fabrication, packaging, testing, delivery, installation, commissioning, operation and maintenance of the renewable energy facilities.

B. For purposes of this EME, **"solar energy"** means electrical power generated by solar photovoltaic modules (PV), and **"battery energy storage system"** means devices that enable energy from renewables (solar) to be stored and then released when it is needed most.

C. All expressions of interest and requests for information should assume that the information supplied will aid the PURC in designing a procurement solution to implement the Grenada Renewable Energy Project.

D. All expressions of interest should assume the issue of an IPP license to generate, distribute, and sell electricity from the MBIA renewable energy facilities for 25 years. The signing of a PPA and an interconnection agreement with Grenlec relating to the Grenada Renewable Energy Project for 25 years.

E. Interested parties should respond to this EME by Friday, September 20, 2024.

Specific Information of Interest:

1. Offered solar technology and solar technology with battery solution microgrid options
2. PPA Rate Range for SOLAR ONLY (Option 1) for the Grenada Renewable Energy Project.
3. PPA Rate Range for SOLAR with BATTERY STORAGE (Option 2) for the Grenada Renewable Energy Project. This should include specific cost categories that differ from SOLAR ONLY for battery storage such as firm dispatch and / or capacity charges.
4. General project timeline for SOLAR ONLY (Option 1) for the Grenada Renewable Energy Project.
5. General project timeline for SOLAR with BATTERY STORAGE (Option 2) for the Grenada Renewable Energy Project.
6. Level of respondents' experience in solar PV (only) and/or solar PV with battery storage IPPs.
7. Respondent's affirmation of interest in bidding for:
    a SOLAR ONLY (Option 1) for the Grenada Renewable Energy Project IPP.
    b SOLAR with BATTERY STORAGE (Option 2) for the Grenada Renewable Energy.
8. Experience working within the Caribbean on similar energy projects.

Content of Submissions:

All information shared with the PURC about this EME must be in electronic documents sent to the email addresses below.

After reviewing responses, the PURC may request additional information or schedule individual meetings with any respondent to gain insight into the information provided.

Submissions should include more than general marketing content; in particular:

i. A cover letter
ii. Completed Expression of Interest (EOI) form
iii. Acknowledgment of each item listed above in **Qualifications and Assumptions**
iii. **Latest Corporate Statement of Qualifications (SoQ)**
iv. Respondent's relevant history and capabilities (if not covered in the SoQ)
v. Overview of respondent's products or services (if not covered in the SoQ)

Submitting requested information and the EOI does not guarantee that an interested party will be selected for the pending Request for Qualifications (RFQ). The RFQ will be made by open competitive tender that will determine which shortlisted companies will receive the RFP.

Questions and Points of Contact:

Questions are to be communicated via email addresses given below and addressed to:

Mr. Andrew Millet
Chief Executive Officer
Public Utilities Regulatory Commission (PURC)
Tel: 1-473-437-1602
Email: ipp.info@purc.gd

and

Mr. Fidel Neverson
Technical Manager – Islands Energy Program
Rocky Mountain Institute (RMI)
Tel: +1-784-494-6232
Email: fneverson.contractor@rmi.org

and

Mr. Owen Lewis
Operational Manager – Islands Energy Program
Rocky Mountain Institute (RMI)
Tel: 1-664-392-4696
Email: olewis.contractor@rmi.org

Submission Date and Address:

Electronic responses to this notice must be emailed to the above contacts no later than Friday, September 20, 2024.

All responses or questions should be emailed to ipp.info@purc.gd, fneverson.contractor@rmi.org and olewis.contractor@rmi.org with the subject: "**Grenada Renewable Energy Project IPP EME Q&A.**"

Confidentiality

The PURC recognizes that certain information contained in the submitted EME responses may be considered confidential and, as permitted by applicable law, will treat any information clearly labelled as such as confidential. If the PURC is formally requested and required by any regulatory or judicial authority or is otherwise required by law to disclose information about an EME response, the PURC will disclose such information following applicable laws and regulations.

Expression of Interest Registration Form

I. Expression of Interest Registration Form

If you would like to be considered for inclusion in the Request for Qualification process for the Grenada Renewable Energy Project please provide your details below:

Ref.	Subject	Proposal
1	The full legal name of your business entity	
2	Principle place of business (full address)	
3	Full name of contact person(s)	
4	Phone number(s) of contact person(s)	
5	Official email address of contact person(s)	
6	Full name of authorized company signatory	
7	PPA Rate Range for SOLAR ONLY (Option 1) for the Grenada Renewable Energy Project	
8	PPA Rate Range for SOLAR with BATTERY STORAGE (Option 2) for the Grenada Renewable Energy Project with specific cost category(s) for BATTERY STORAGE such as firm dispatch and/or capacity charges	
9	General project duration for SOLAR ONLY (Option 1) for the Grenada Renewable Energy Project	

10	General project duration for SOLAR with BATTERY STORAGE (Option 2) for the Grenada Renewable Energy Project	
11	Estimated space requirements for the proposed 10.6MW/21.2MWh battery storage plant	
12	Have you worked as a solar PV and/or Solar PV with BESS IPP in the Caribbean before? If YES, how many PPAs?	
13	Have you worked as a solar PV and/or Solar PV with BESS EPC contractor in the Caribbean before? If YES, how many EPC contracts?	
14	What is the highest capacity (MWp) solar project delivered as an IPP in any location?	
15	What is the highest capacity (MWp) solar project delivered as an EPC contractor in any location?	
16	What is the highest capacity (MWh) BESS project delivered as an IPP in any location?	
17	What is the highest capacity (MWh) BESS project delivered as an EPC contractor in any location?	

18	What is the highest capacity (MWp) solar PV + (MWh) BESS project delivered as an IPP in any location?	
19	What is the highest capacity (MWp) solar PV + (MWh) BESS project delivered as an EPC contractor in any location?	
20	List any experience with CARILEC / Caribbean electric utilities, including any work in generation, transmission or distribution, inclusive of substation design and construction projects.	
21	Is there any other information you would like to provide? Please only provide information that is critical for our understanding of your business and our assessment of whether you should participate in the Request for Proposal process.	
22	Are there specific project requirements or financial requirements or commercial transaction information your company would like provided by the PURC in a future tender?	
23	YES, register my company to receive the intended RFQ. (Please indicate by signing here)	