



# ISLANDS ENERGY PROGRAM STATEMENT OF QUALIFICATIONS



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## Background

**ISLAND NATIONS** are at the front lines of climate change. Residents already experience rising sea levels, climbing temperatures, and frequent natural disasters. This severely impacts residents' livelihoods. Building resilience and adapting to these impending threats are daunting tasks.

Abundant local resources, like the wind, sun, and geothermal, are the solution; these can provide low-cost, clean, resilient, and reliable energy. High electricity costs and a reliance on imported diesel create a clear business case for clean energy. A well-planned integration of clean energy into existing systems benefits utilities, governments, and customers, resulting in a more resilient community.

By **ACCELERATING THE TRANSITION** of islands toward an energy system that includes clean energy and energy efficiency, island governments, utilities, and stakeholders can accomplish the following:

- Stabilize the cost of electricity for households and businesses
- Reduce dependence on imported fossil fuels and reduce greenhouse gas emissions
- Create on-island investment opportunities and investment returns
- Increase resiliency of the distribution grid and defer maintenance on transmission and distribution systems
- Diversify the local job market with higher-skilled, better-paying jobs

In the process, the Islands Energy Program will create a blueprint for continental-scale energy transition that can be replicated in other isolated economies and developing countries.

**CONTACT US:** [islands@rmi.org](mailto:islands@rmi.org)

## Program Partners

### **CARIBBEAN ELECTRIC UTILITY SERVICES ASSOCIATION**

Caribbean Electric Utility Services Association (CARILEC) will enhance the effectiveness of its members by providing industry-related services; creating regular networking, training, and knowledge sharing opportunities; supporting mutual assistance programs; and accelerating the Caribbean Region's energy sector transition through innovation and advocacy.

### **CLINTON CLIMATE INITIATIVE**

The Clinton Climate Initiative collaborates with world-class partners to increase the resiliency of communities facing climate change and create replicable and sustainable models for others to follow. Its unique and innovative models encourage cross-sectorial collaborations. At the core of its engagement philosophy is systems thinking; identifying and activating leverage points that can create significant positive impact in climate change mitigation and energy transition for communities around the world. Through the Initiative's programs and with its distinctive resources it aims to create measurable, meaningful, and lasting contributions.

### **INTERNATIONAL RENEWABLE ENERGY AGENCY**

International Renewable Energy Agency (IRENA)—The International Renewable Energy Agency is an intergovernmental organization that supports countries in their transition to a sustainable energy future and serves as the principal platform for international cooperation, a center of excellence, and a repository of policy, technology, resource, and financial knowledge on renewable energy. IRENA promotes the widespread adoption and sustainable use of all forms of renewable energy, including bioenergy, geothermal, hydropower, ocean, solar, and wind energy in the pursuit of sustainable development, energy access, energy security, and low-carbon economic growth and prosperity.

### **ROCKY MOUNTAIN INSTITUTE**

Rocky Mountain Institute (RMI) is an independent nonprofit founded in 1982—transforms global energy use to create a clean, prosperous, and secure low-carbon future. It engages businesses, communities, institutions, and entrepreneurs to accelerate the adoption of market-based solutions that cost-effectively shift from fossil fuels to efficiency and renewables. RMI has offices in Basalt and Boulder, Colorado; New York City; the San Francisco Bay Area; Washington D.C.; and Beijing.

# OUR APPROACH

The team supports islands to develop inclusive, resilient energy strategies and scale renewable and electric-mobility projects, and supports impactful knowledge exchange among islands to achieve their clean energy goals. It does this by delivering technical expertise; engaging with governments, utilities, regulators, and island stakeholders; and providing communications support.

With an independent, objective, and fact-based approach, RMI's Islands Energy Program brings experience gained from engagements with governments and utilities to solve the toughest energy challenges. We offer a diverse skill set in integrated resource planning, project identification and development, construction implementation support, and a range of business advisory services. In addition, the program leverages an array of consulting services from leading engineering and consulting firms in the power generation and transportation sectors.

## OUR PROGRAM ACTIVITIES INCLUDE

- Attracting investment and creating jobs through responsibly transitioning to clean energy
- Providing proven, trusted, and open-minded partners that execute national energy goals and strategies
- Ensuring a stable, reliable, and affordable future energy supply
- Building local knowledge, developing integrated platforms, and providing exceptional public relations

## THE TEAM FOLLOWS A THREE-TIERED THEORY OF CHANGE

1. Inclusive Energy Planning
2. Project and Program Implementation
3. Energy Leadership



Image credit: RMI staff and partners on a site visit in The Bahamas

## Inclusive Energy Planning

Building a common fact base is crucial to accelerate a transition away from imported diesel-fueled electricity to clean energy. We support islands with resilient energy planning services, and in particular with exploring and designing new business models and regulatory frameworks to accelerate action. These strategies and action plans have helped address macro- and micro-level barriers preventing the energy transition and have unlocked dozens of clean energy projects across the region—including several that are under construction. Since the 2017 hurricane season, resilience has become a key objective for many islands.

## Project and Program Implementation

Developers, energy practitioners, and decision makers share similar challenges while transitioning from diesel-generated electricity to renewable energy. To facilitate the success of these complex transitions, the program focuses on de-risking identified projects. Successful projects create inertia, build trust, and ultimately lower the financial—and sometimes political—risk of the sector and the country risk profile as a whole.

## Energy Leadership

Sharing experiences, resources, and training enables key stakeholders to reduce the uncertainty and cost of a clean energy transition. In partnership with CARILEC, we founded the CARILEC Renewable Energy Community of Practice (CAREC), an online platform (<http://community.carilec.org/>) that fosters continuous knowledge exchange among island utility engineers, government practitioners, and development partners active in the renewable energy space. The virtual community connects isolated energy practitioners to global- and regional-specific expertise as well as local knowledge to collectively build capacity.

## PROVISION OF ADVISORY SERVICES



### RESILIENT ENERGY TRANSITION PLANNING/INTEGRATED RESOURCE PLAN (IRP) DEVELOPMENT

Developing a lasting energy transition plan requires a few key elements. First, we need an assessment of the current energy system, including electrical infrastructure, operational approaches, and cost considerations. Second, the strategy requires holistically assessing all energy options, while analyzing the energy, economic, operational, and business model implications. Finally, the strategy entails bringing together governments, utilities, regulators, and other key stakeholders to facilitate a phased energy transition planning process that includes stakeholder engagement in the form of consultations and working sessions. This process culminates in an energy roadmap for the country, derived from the critical inputs and guidance of island stakeholders, and a list of low-risk projects that support the roadmap.



### ELECTRIC MOBILITY STUDIES AND PILOTS

The transportation sector is often responsible for a large portion of a country's fuel imports and is a critical sector to engage in the decarbonization of the energy sector. The program has gathered expertise from all over the world including India, the Caribbean, the United States, and China on how to decarbonize the transport sector. We have experience conducting fleet assessments to identify electrification opportunities, have conducted analysis on the impact of electric vehicles on the existing grid, and have developed electric vehicle pilots.



### ENERGY EFFICIENCY PROGRAM DEVELOPMENT

Studies routinely find energy efficiency to be the cheapest energy resource, and energy efficiency creates more than 17 jobs per US\$1 million invested (double the rate created by manufacturing or energy generation). We have experience in analyzing portfolios of buildings to determine the appropriate technical and financial solutions. In particular, RMI's work with US government buildings prepares us to improve the energy efficiency of public buildings while selectively including on-site energy production.



### ELECTRIC UTILITY BUSINESS MODEL REDEFINITION

Even the most forward-thinking countries can be unsure of how best to make utilities stable and profitable, particularly in the face of changing technology impacting primary revenue streams, including those brought on by energy

efficiency and renewable energy. We offer assistance to determine the best approach and assess the options, including but not limited to the integrated utility service model (which enables utility ownership of new types of energy efficient and renewable technologies).

### **ELECTRICITY TARIFF DESIGN**

As new generation resources are deployed, and sectors such as transportation and buildings begin to interact more with the electricity system, there is an opportunity to implement new designs for tariffs that are charged to those who use electricity. The team supports regulators and other stakeholders in exploring new electricity tariff designs, incorporating global best practices with approaches tailored to each specific island.

### **MICROGRID ANALYSES**

Microgrids are becoming a cost-effective and stable source of distributed power for isolated communities that can often promote resilience. In addition to internal resources at RMI, the team offers contracted expertise to provide world-class microgrid assessments, modeling, and microgrid design options for Caribbean utilities.

### **GRID INTEGRATION/SYSTEM IMPACT STUDIES**

Before clean energy projects are moved into the preparation phase, the team performs a grid integration analysis and a system impact study to determine the operational implications of connecting new generation (often distributed in location) to the host utility's electric grid.

### **CLEAN ENERGY PROJECT PREPARATION**

Project development is the most inherently risky phase of any renewable energy project. There is uncertainty as to the technical and financial feasibility of projects in this critical early stage. We provide comprehensive project development services to mitigate risk and lower project costs—including the cost of capital and power purchase rates. This is accomplished by mitigating risk early in the project development process and preparing projects until they achieve a shovel-ready and bankable status. With experienced project engineers and developers on staff, we prepare requests for proposals (RFPs) for engineering, procurement, and construction (EPC) or independent power producer (IPP) projects that significantly reduce risk to the developer or contractors and provide a long-term value for the utility.



Image credit: RMI staff in The Bahamas at a solar parking canopy project



### LED STREET LIGHTING PROCUREMENT AND INSTALLATION CONSULTATION

With several RFPs published or under development, the team is poised to provide objective advice and technical support to governments and utilities that want to transition to LED lighting. LED lighting delivers significant cost savings and enhanced grid-tied and off-grid lighting illumination systems and control options.



### IPP AND EPC CONTRACT NEGOTIATION SUPPORT

RMI and our partner legal team have a depth of knowledge and experience to provide power purchase contract negotiation support for utilities.



### PROJECT STRUCTURE AND FINANCE

With the expertise of our in-house global finance team and with partner Delphos International, governments and utilities are supported during all aspects of the project structuring and financing process—from project identification to implementation. Together, the team provides options for project structures as well as recommendations for optimal financing structures.



### CONSTRUCTION OVERSIGHT

As an “owner’s representative,” the team provides third-party oversight and implementation support during construction to ensure the quality, safety, and timeliness of all projects.



### LEGAL AND POLICY REVIEWS

Determining which elements of the energy transition are possible within current policy and legislation is an important foundation for renewable energy projects. Via our partnerships with law firms Sutherland, Paul Hastings, and Holland & Knight, the team provides objective reviews of legislation, regulations, and policy documents related to the development of utility-scale and decentralized energy. Reviews identify potential legal barriers to renewable penetration and inform policy and regulatory best-practice recommendations. In addition, we offer tailored legal reviews, such as general legal reviews of letters of intent and term sheets, host country and concession agreements, public-private partnership agreements, credit support, and credit agreements. The team can also provide a neutral counsel on policy, regulatory, and other legal considerations associated with natural gas energy initiatives and the like.



### STAKEHOLDER FACILITATION

Energy transition is complex and requires alignment among all energy stakeholders. By bringing together representatives from the government, utility, and regulator, we have the opportunity to align on shared goals and establish a common fact base. Stakeholder facilitation is often a core component that supports our other services described above.



### RMI COMMUNICATIONS OFFERINGS INCLUDE THE FOLLOWING

- Media and public relations—Publicizing project milestones, ensuring vendor engagement, and promoting renewable energy and energy efficiency commercial opportunities in key geographies outside the Caribbean region
- Public awareness campaigns—Supporting governments with concepts and materials for renewable energy campaigns to reach the local populace and generate greater awareness internationally
- Messaging and marketing—Disseminating messaging and marketing collateral (e.g., press releases, one-pagers, webpages, and videos)



Technical and Economic Analysis



Project Development



Regulatory Support



Communications

# BIOS



**Justin Locke, Program Director**

Justin brings over 15 years of international development and project management experience to his current position—most of which has been

dedicated to addressing the unique development challenges of coastal developing economies.

He brings a wealth of technical and operational experience in the fields of disaster risk reduction, climate change adaptation, distributed renewable energy systems, livelihoods, and social mobilization. Prior to RMI, Justin was a disaster risk management specialist at the World Bank, where he managed one of the bank's largest per capita investment portfolios. He also led national planning processes for Caribbean countries that were designed to develop and deploy tailored national adaptation and mitigation strategies for achieving climate resilience at the country level.

Justin worked for the United Nations Development Program (UNDP) Regional Pacific Center, providing technical assistance to over 14 Pacific island countries, and worked at the UNDP Multi-Country Office in Samoa where he designed and implemented the UNDP's regional flagship program in the Polynesian subregion.

He holds a Master of Public Administration in international management from the Middlebury Institute of International Studies and a dual bachelor's degree from the University of California.



**Christopher Burgess, Director of Projects**

Chris oversees and manages the Islands Energy Program's renewable energy and energy efficiency project portfolio. He has

over 18 years of experience as an environmental professional and project manager with practice in a variety of multidisciplinary energy and infrastructure projects. Chris brings a wealth of environmental, renewable energy, and project management experience to his current role.

Previously, Chris was the chief operating officer at Alpha Energy, a renewable energy development company. There he was responsible for the company's business development, feasibility studies, and project management for commercial and utility scale wind and solar installations. He managed multimillion-dollar projects both domestically and internationally with over 125 MW of installations.

He earned his master's degree in environmental science and policy from Johns Hopkins University and a bachelor's degree in coastal and environmental planning from East Carolina University.



**Roy Torbert, Principal**

Roy specializes in resilient integrated energy planning, project cost analyses, and renewable and efficiency finance to expand and accelerate the transition to a global clean energy

economy. Roy manages the Islands team helping the governments and utilities of Caribbean islands reduce their dependence on imported fossil fuels, working extensively in Puerto Rico, Saint Lucia, Saint Vincent, the Turks and Caicos Islands, and others.

He has worked with leading universities (including Arizona State University) and global multinationals (including McDonald's Corporation) to analyze net-zero opportunities and deliver roadmaps to reaching carbon reduction goals. Roy's research efforts include exploring ways to reduce the soft costs of solar (specifically financing costs), valuing all the benefits of highly efficient buildings, and assisting on analysis for RMI's Reinventing Fire initiative and book.

Prior to RMI, Roy was at Booz Allen Hamilton, working on software implementation and strategic management projects. Roy also implemented and managed a procurement-focused software system for a Department of Defense client.

He graduated summa cum laude from the College of William and Mary with a degree in international relations and business finance. He has been trained in project management, software implementation, and data analysis.



**Katie Lau,  
Communications and  
Marketing Manager**

Katie manages program communications, marketing, and the energy transition-focused knowledge

platform project, the Caribbean Electric Utilities Services Corporation (CARILEC) Renewable Energy Community of Practice (CAREC).

Prior to joining RMI, Katie was employed by ConocoPhillips and Phillips 66, multinational energy companies that specialize in upstream, midstream, and downstream assets. She held four roles spanning from corporate planning and strategy to business-to-consumer brand marketing. Notably, she was part of the knowledge management group in which she built 70+ business-focused networks where employees exchanged best practices and engaged in discussions to save the company money.

Katie received her bachelor's degree in public relations and marketing from Oklahoma State University. She has been trained in project management, Lean Six Sigma, knowledge management, and digital media.



**Kaitlyn Bunker, Manager**

Kaitlyn is an expert in microgrids and distributed renewable resources. She has been the lead engineer for several microgrid assessments and has led integrated

resource plan processes with Saint Lucia, Saint Vincent and the Grenadines, Belize, the British Virgin Islands, and the Turks and Caicos Islands.

Kaitlyn joined the team after completing a Ph.D. in electrical engineering from Michigan Technological University. Her dissertation research focused on microgrids and optimizing control strategies for distributed renewable resources. Kaitlyn is a 2010 recipient of the National Science Foundation Graduate Research Fellowship.

In 2013, Kaitlyn received the Engineering Innovations Fellowship from the National Science Foundation and the American Society for Engineering Education. This fellowship provides the opportunity to work as a researcher in a corporate setting during the summer; Kaitlyn worked with HOMER Energy on its software for modeling microgrids and hybrid electric systems.



**Stephen Mushegan,  
Portfolio Manager**

Stephen oversees and strategically supports renewable energy, energy storage, and microgrid project development and implementation in the Caribbean.

Stephen joined RMI from the Clinton Foundation, where he led a technical team to support small island governments and utilities with their renewable energy initiatives. Working in close partnership with RMI, Stephen oversaw the procurement and contract negotiations for Saint Lucia's first utility-scale renewable energy project, a 3 MW solar farm.

Prior to the Clinton Foundation, he was a Senior Project Engineer for Lockheed Martin Energy, managing a portfolio of commercial and industrial clients and identifying energy efficiency opportunities for a utility incentives program run by Southern California Edison.

Stephen received his bachelor's degree in mechanical engineering from the University of California and his master's degree in sustainable energy futures from the Imperial College London.





**Martyn Forde, CAREC Manager**

Martyn provides technical, legal, and financial advisory services on geothermal, solar, and energy efficiency projects. He is the community

manager for CAREC, an online platform designed to enable Caribbean utility companies to share their knowledge about renewable energy and energy efficiency and steward knowledge development through planned webinars, document repositories, online forums, and workshops.

Before CAREC, Martyn assisted the Climate and Energy Program of the Worldwatch Institute with research for the Caribbean Sustainable Energy Roadmap and Strategy. Martyn worked in Germany in the energy procurement department of an electricity, gas, and water utility company called Aktiengesellschaft für Versorgungs-Unternehmen (AVU).

Martyn holds a master's degree in geography and environmental studies from the University of Toronto, with a focus on environmental resource management, carbon-free energy, and climate policy. His thesis explored how to create renewable energy transitions driven by the hotel industry of island nations. He is a certified sustainable building advisor with the Canadian Green Building Council.



**Owen Lewis, Operations Manager**

Owen held the position of the government of Montserrat's project director from April 2009 to January 2016. In 2016, Owen joined the Islands

Energy Program as the Montserrat project manager.

Owen was a member of the small local team working with the RMI Islands Energy Program that delivered the Montserrat National Energy Policy, the Energy Strategy, the Sustainable Energy Plan-Initial Programme of Action, and the Monitoring and Evaluation Framework for the Sustainable Energy Plan-Initial Programme of Action 2016–2020.

He received his Bachelor of Arts in natural sciences from Castleton State College. Owen also has a degree in business management and risk management. He became a Projects IN Controlled Environments (PRINCE2) practitioner in 2007, while working within the D. A. Stuart Ltd. UK chemical management programme, the last eight years of which Owen was the UK chemical management programme coordinator.



**Megan Kerins, Senior Associate**

Megan oversees the Puerto Rico Renewable Microgrids Program, a multiyear initiative seeking to improve energy resilience by fostering the

development of renewable, community-oriented microgrids.

Megan has worked in an engineering and program management capacity for various Bay Area, California, solar companies, including overseeing a national solar quality assurance program with Sunrun. She has also actively participated in the funding, design, and installation of solar and microhydro projects in Thailand, Burma, and Ethiopia. In 2015, Megan started Solar Stewards, serving as a technical advisor to commercial-scale projects in the United States and Haiti.

Megan holds a Master of Science in civil and environmental engineering from Stanford University and a Bachelor of Arts in physics from Bard College.



**Fidel Neverson, Project Manager**

Based in Saint Vincent and the Grenadines, Fidel supports the Islands Energy Program's integrated resource planning, project

development, and project management activities across the Caribbean.

Fidel is an electrical engineer and project manager with more than 20 years of experience. He has a varied professional background, having worked in the construction, telecommunications, and electric utility sectors in the Caribbean and the United States.

Prior to working with RMI, Fidel worked for 10 years in the engineering division of Saint Vincent Electricity Services Limited (VINLEC), the public electric utility of Saint Vincent and the Grenadines, where he managed various technical studies, pilots, and full implementation projects, including several related to hydropower, wind energy, solar photovoltaics, LED street lighting, and energy efficiency.



**Ana Sophia Mifsud, Senior Associate**

Ana Sophia supports the Islands Energy Program team's efforts to complete integrated resource plans in partnership with small governments and their

utilities. Ana Sophia also supports RMI's work in Puerto Rico, helping develop a variety of programs that promote resilience to Puerto Rico through the use of microgrids. Furthermore, Ana Sophia works on a variety of electric mobility initiatives, including an electric bus pilot in Bermuda and a feasibility study for the government of Saint Lucia's vehicle fleet.

Prior to joining RMI, Ana Sophia received her bachelor's degree in environmental systems engineering from Stanford University. While at Stanford University, she worked on a variety of projects focused on sustainable development, including sustainable mobility in small island nations; household energy efficiency in Mexico; affordable housing development in San Jose, California; and renewable energy resources and climate change adaptation in Guatemala.



**Sidney Jules, Associate**

Sidney supports the Islands Energy Program's efforts to complete integrated resource plans and develop renewable energy projects on islands. These plans help to

identify the optimal resources and generation mix that will help individual islands effectively transition toward a more sustainable, resilient, and cost-effective energy future.

Prior to joining RMI, Sidney earned a Master of Environmental Management from Yale School of Forestry and Environmental Studies, and a Master of Engineering and Bachelor of Arts from the University of Cambridge. While at the University of Cambridge, Sidney worked on numerous energy-related projects on islands, among them completing an embodied and operational energy assessment of structural insulated panels and concrete masonry units in Trinidad and Tobago and supporting development work during the construction phase of a geothermal energy project in Dominica.

# COUNTRY PARTNER AND PROJECT LIST

## CLIENT LIST

### GOVERNMENTS

Government of Anguilla  
Government of Aruba  
Government of The Bahamas  
Government of Belize  
Government of Bermuda  
Government of The British Virgin Islands  
Government of Montserrat  
Government of Grenada  
Government of Saint Lucia  
Government of Saint Vincent and the Grenadines  
Government of the Turks and Caicos Islands

### UTILITIES

Anguilla Electricity Company Limited  
Antigua Public Utilities Authority  
Bahamas Power and Light Limited  
Belize Electricity Limited  
Bermuda Electric Light Company Limited  
British Virgin Islands Electricity Corporation  
FortisTCI Limited  
Grenada Electricity Services Limited  
Guyana Power and Light  
Montserrat Utilities Limited  
Saint Lucia Electricity Services Limited  
Saint Vincent Electricity Services Limited  
WEB Aruba

### REGULATORS

Belize Public Utilities Commission  
Saint Lucia National Utility Regulatory Commission  
Turks and Caicos Islands Energy and Utilities Commission

## PROJECT LIST

The Islands Energy Program is supporting the development of over 20 projects on Caribbean islands. Our support has been instrumental to both governments and utilities over the past three years to identify and advance bankable and sustainable clean energy and energy efficiency projects. Our support is comprehensive and inclusive of government, utility, and regulator partners. We support projects from conceptual design to commissioning with robust local capacity building at each stage in the process.

### CLEAN ENERGY PROJECTS

- 3 MW Saint Lucia Utility Solar
- 1 MW Montserrat Solar/Storage
- 500 kW Solar Project at Argyle International Airport—St. Vincent and the Grenadines
- 10 MW Solar Project—Saint Lucia
- Geothermal Projects—Montserrat, St. Vincent, and Saint Lucia
- 5 MW Aruba Solar for Schools
- 1 MW Anguilla Utility Solar
- 26.4 MW Aruba Utility Wind
- 1 MW Turks and Caicos Utility Solar
- Bermuda Utility-Scale Solar Project
- Saint Lucia Government Distributed Solar Projects
- Bahamas National Sporting Complex 900 kW Solar Parking Canopy
- Bahamas Anatol Rodgers High School Energy Efficiency and Solar Project
- Bahamas Family Islands Solar/Storage Project
- Ragged Island Solar and Storage Microgrid—The Bahamas
- Mayreau Solar and Storage Project—St. Vincent and the Grenadines
- Rural Village Belize Microgrids
- Puerto Rico Solar for Schools Microgrids
- Hospital Energy Retrofit Guide
- Saint Lucia Solar and Storage



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