Catalytic Capital Forum

Unlocking Private Investment for the Global Energy Transition

RMI | CLIMATE WEEK NYC

September 27, 2024 | 9:00am – 12:00pm

Scandinavia House, New York City

AGENDA

01 Presentation: Introduction to Catalytic Climate Capital

02 Panel 1: Catalytic Climate Capital

03 *Intermission & Refreshments*

04 Presentation: Creating a Transition Roadmap

05 Presentation: A Caribbean Transition Scenario

06 Panel 2: Use-cases for an equitable transition in the Caribbean

Defining Catalytic Climate Capital: Presenting the Opportunity

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What is Catalytic Climate Capital?

Definition

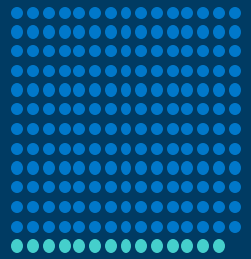
- Financial resources that **accepts disproportionate risk and/or concessionary returns** to generate positive impact and **enable third-party investment** that otherwise would not be possible.

Key Role:

- **Bridges the gap** between public/philanthropic funding and private sector participation
- **Early stage interventions/de-risking** that **unlocks** private sector capital at scale.

The Urgency

Without **scaling catalytic capital**, meeting ambitious international goals is unlikely.



Global Targets

Only 14

of 194 countries have targets to meet critical renewable capacity goals by 2030

Energy Access

Nearly 10%

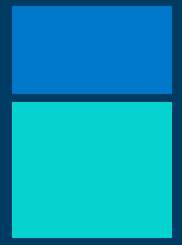
of the world, 760 million people, lacks access to electricity.

4x

Climate Finance Gap

$2.4 billion

total needed across EMDEs for climate priorities. An investment increase of $1.8tn from <$0.6tn today.

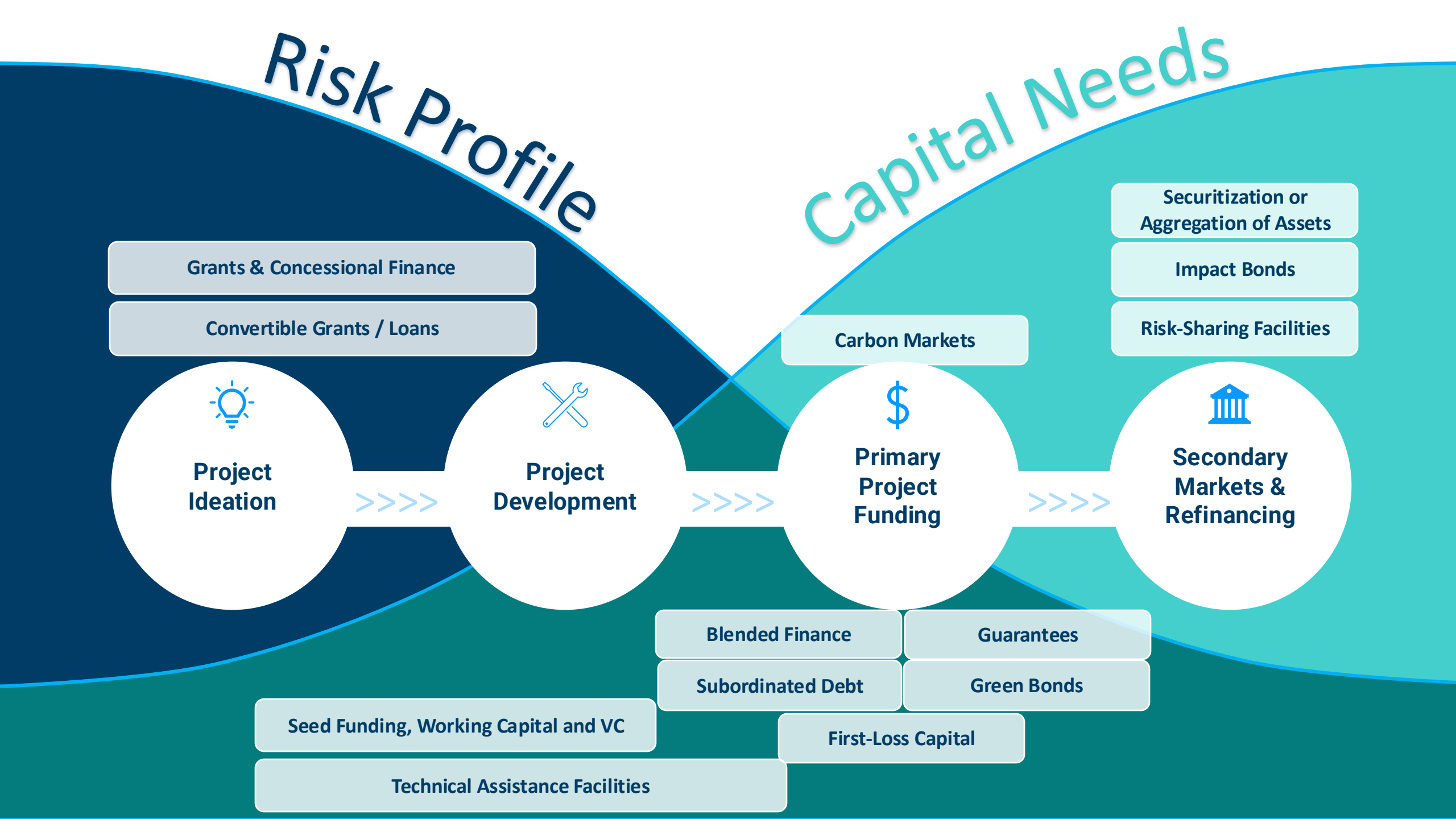


Needed Net-zero Technologies

37%

are not yet commercially available

Sources: sciencebasedtargets.org | iea.org | GFANZ


Risk Profile
Capital Needs
Grants & Concessional Finance
Convertible Grants / Loans
Carbon Markets
Securitization or Aggregation of Assets
Impact Bonds
Risk-Sharing Facilities
Project Ideation
Project Development
Primary Project Funding
Secondary Markets & Refinancing
Blended Finance
Guarantees
Subordinated Debt
Green Bonds
First-Loss Capital
Seed Funding, Working Capital and VC
Technical Assistance Facilities

Case Study: Caricom Community Resilience Fund

Pipeline: USD 250M

Community Resilience Fund (USD 135M)

Debt Sub-Fund

Equity Sub-Fund

Technical Assistance Facility (USD 7M)

Blended Finance

Both sub-funds are backstopped by a blended finance structure, with catalytic first-loss capital ***offering derisking and up to 25% first-loss protection for senior shareholders.***

First-Loss Junior Shares

Climate Resilience

Regional Impact

Robust Diversification

Capacity Building

Capital Accessibility

Risk Sharing Facilities (partial credit or loan guarantee)

Concessional Capital Providers

Concessional capital provider provides grants to program administrator

Program administrator takes on currency risk and can provide matching capital

Program administrator development finance institute

In case loan is not paid by end consumer to financer the guarantee covers loss

Local finance institutions pay a fee (below market rate) to access this guarantee facility.

Local Financer

Local financial institution provides a loan to end consumers

Loan repayment with interest

End Consumer

Participating Actors in India

Shell Foundation

Concessional Capital Providers

sidbi

Program administrator development finance institute

ELECTRIC MOBILITY FINANCIERS ASSOCIATION of INDIA

Local Financers

End Consumer

Case Study: Commercializing First-of-a-Kind (FOAK) at scale through Mark1

The Problem

First-of-a-kind (FOAK) projects face a critical development funding gap

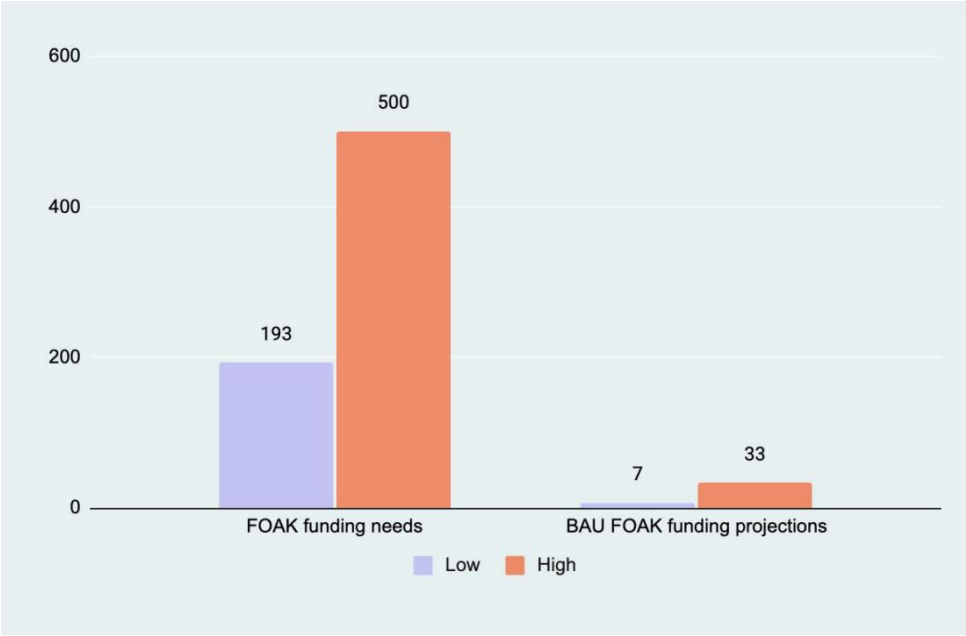
The Proposed Solution

"Developer as a Service" solution for capital intensive, first-of-a-kind technologies

Potential Impact

Scaling projects with gigaton-scale climate impact and complex engineering needs

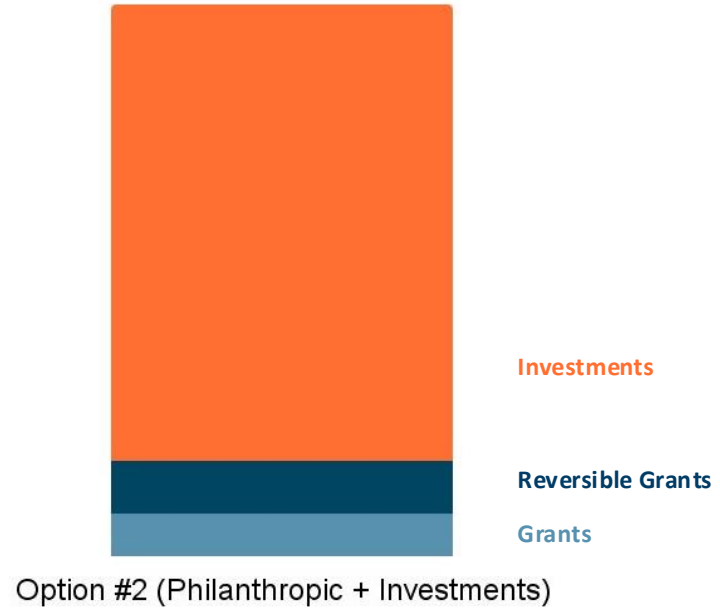
The FOAK Funding Gap



"Even when capital is found [for FOAK], it is often at the end of a long and laborious process (up to 20 years for one company, and 3-4 years of capital raising efforts on average)."

- Prime Coalition Report

Stacking Commercial Capital



Option #2 (Philanthropic + Investments)

Carla Orrego

Senior Manager
CPI

Filippo Berardi

Head of Climate Change Mitigation
GEF

Ije Okeke

Managing Director
RMI

Dan Firger

Founder
Great Circle Capital Advisors

Geraldine Alias

Managing Director
Three Cairns Group

Moderator: Benjamin Bartle

Principal, RMI


Q&A

“

We also have the responsibility – and the opportunity – to shape the future differently. We must take stock of the science, triple down on our efforts and deploy the perspective of possibility.

—CHRISTIANA FIGUERES
FORMER EXECUTIVE SECRETARY TO
THE UN FRAMEWORK CONVENTION
ON CLIMATE CHANGE

Thank You

Please help yourself to refreshments and return to your seats by 10:40pm.

Virtual attendees: We will reconvene shortly; thank you for your patience!

The Energy Opportunity: Use-cases for an equitable transition in the Caribbean

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Creating a transition roadmap

Gianni Chianetta

Founder, Greening the Islands Foundation

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RMI – Energy. Transformed.

Islands' Energy Transition: ingredients & lessons learned

Starting from a Strategic Roadmap to 100% Renewable Energy Systems

Commissioner & Steering Committee

SPA driving the energy transition agenda & facilitating multi-stakeholder engagement.
Supported by:

- International experts
- Island Multi-Stakeholder Committee

Policy & Regulatory

Set up of focused, standardized framework

- Phase out of fossil fuels' subsidies
- Environmental & Urban planning
- Permitting
- Regulatory
- Energy communities
- New competencies: workforce re-skilling

Infrastructure & Resilience

Fundamental for RES deployment

- Grid upgrades
- Nexus with other areas (eg. water, waste, mobility)
- Operations & Maintenance
- Feasibility studies, risk assessment & mitigation

Financing

Definition of the framework for the full RES roadmap:

- Public finance
- Project financing
- Private investments (eg. IPP through PPA)
- And benefits back to the local community

GTI 100% RES Islands Initiative

Framework & Methodology Overview

In cooperation with

ITC Instituto Tecnológico de Canarias

Greening the Islands foundation

Objective: demonstrate that the transition to **100% renewable energy systems** is **technically** and **economically feasible**

United Nations Department of Economic and Social Affairs

Global Renewables Alliance

Blue Planet Alliance

Global Solar Council

GWEC

Green Hydrogen Organisation

International Geothermal Association IGA

iha

LDES

Frontrunner Islands

Phase 1: Assessment and Modelling

Evaluation of data → Electricity demand → Renewables assessment → Scenarios portfolio development

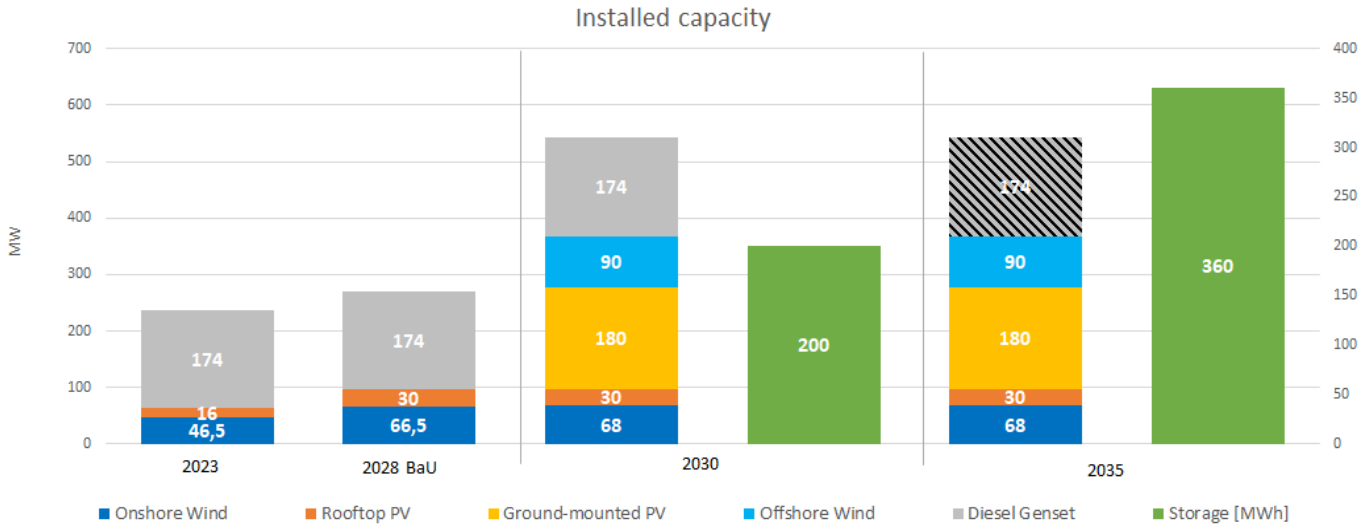
Phase 2: Implementation

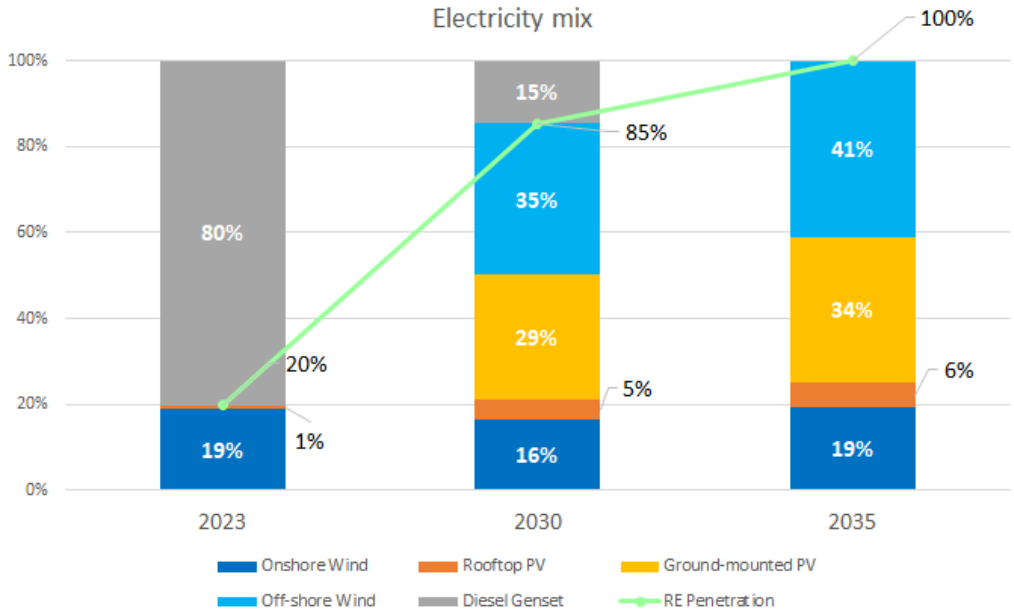
Selection of the best scenario → Definition of the roadmap → Island's project teasers map

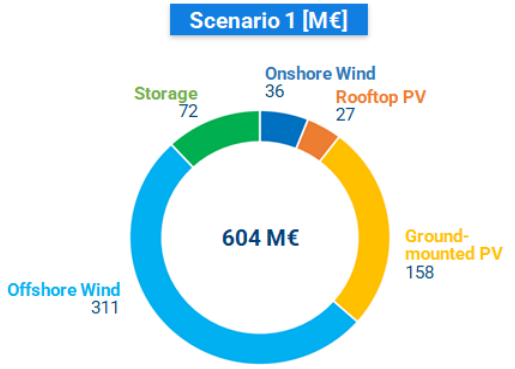
- Project Name
- Technology
- Installed Capacity
- Land Use
- Costs
- Expected Payback Time
- Expected IRR

Curaçao scenario 1: 100% RES by 2035

Preliminary Outcomes







A Caribbean Transition Scenario

Skylar Bee
Portfolio Manager, Islands Energy Program

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A Caribbean Transition Scenario

- **Overarching goal: to develop a regional energy transition scenario for the Caribbean**
- **Key output: a comprehensive roadmap for policymakers, energy leaders, and investors to accelerate the transition to renewable energy**
- **Methodology:**
  - Identify unique transition strategies employed thus far in the region and develop them into 4 case studies
    - **Jamaica** – independent power producers
    - **Grenada** – aggregated and utility scale interventions
    - **Dominica** – geothermal systems
    - **Barbados** – distributed energy
  - Use the learnings from the case studies to extrapolate transition pathways for nations in the region
  - Present a unified pathway

Caribbean transition scenario Case Study Nations

Selected Caribbean island nations to serve as case studies for the Caribbean transition scenario report

Barbados

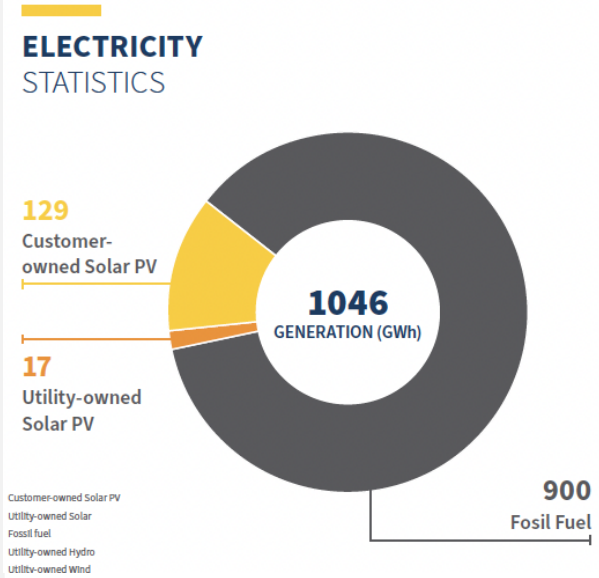
Distributed energy

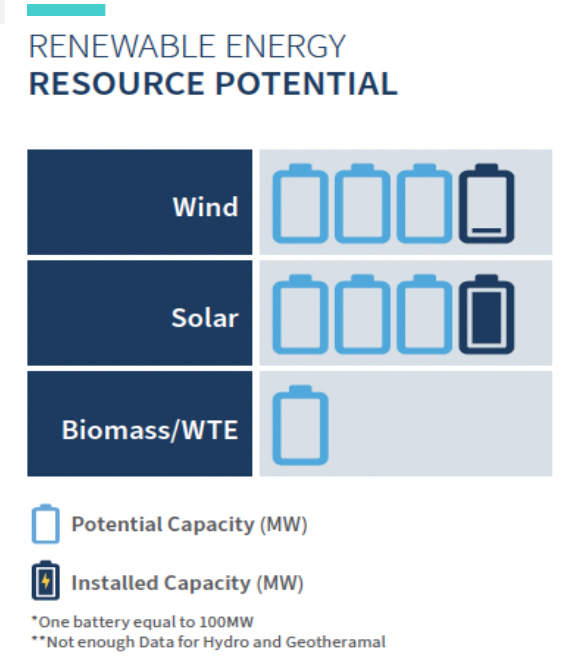
With a goal of **100% renewable energy by 2030**, Barbados has committed to democratizing renewable energy.

Of the **380MW** available solar capacity, 96 MW have been installed, with **86MW coming from decentralized sources .**

Rapid deployment of renewable energy has led to power grid stability issues, requiring the regulator to put a temporary halt on new RE interconnections.

Currently, ~333 of distributed PV licenses are waiting for approval in the queue.





Enabling factors

Government Leadership: ambitious leadership and policy support instrumental in driving the energy transition and creating a favorable investment environment.

Strong Regulatory Frameworks: mechanisms like the renewable energy rider and FiT crucial for expanding access and attracting investors.

Grid Integration: Addressing technical challenges such as intermittency and stability, and balancing supply and demand, especially as renewable energy penetration increases, is critical for successful transition.

Stakeholder engagement & alignment: Most challenges are not technical- alignment of policymakers, regulatory stakeholders, and utility providers is crucial for accelerating the transition.

Dominica

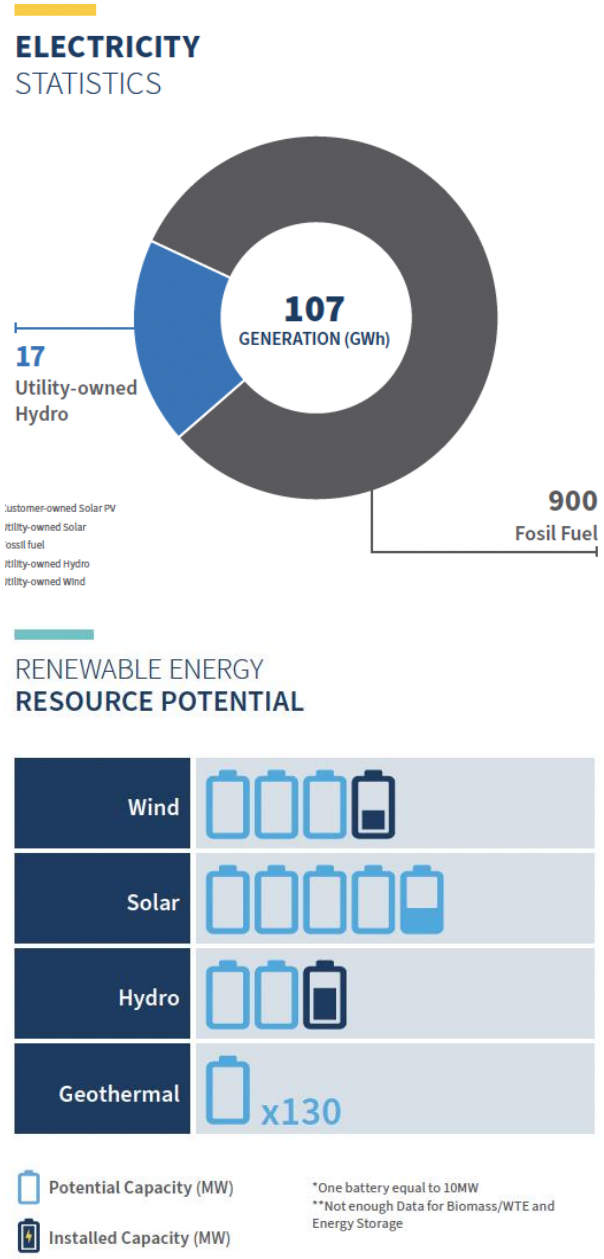
Geothermal systems

Dominica aims to be the world's first fully climate resilience nation by 2030, achieving **100 percent generation from renewable energy.**

Dominica is **leveraging its natural resources – specifically geothermal and hydro power** – to enhance resilience and economic development.

Dominica has a **geothermal resource potential of +1,390 MW** and is **installing a 10 MW geothermal power plant** to supply local demand. **However natural disasters** and **financing challenges** delayed progress in the last decade.

Dominica has persisted in developing its geothermal resources amidst challenges. The country's transition plans involve investment in geothermal, solar, and energy storage.



Enabling factors

Resilience Planning
Enhancing resilience by hardening electricity infrastructure to withstand major climate impacts.

Resource Diversification
Diversifying energy mix (with geothermal, hydro, solar, and energy storage resources) to drive long-term sustainability, energy cost reductions, and enhanced resilience.

Progressive scaling
Actively applying lessons from previous project development experiences to develop a small geothermal plant to supply local demand before expanding geothermal capacity and its supporting infrastructure.

Ambition and innovation
Geothermal potential exceeds local demand for energy. Dominica is developing long-term plans to expand geothermal capacity to support a green hydrogen industrial development program.

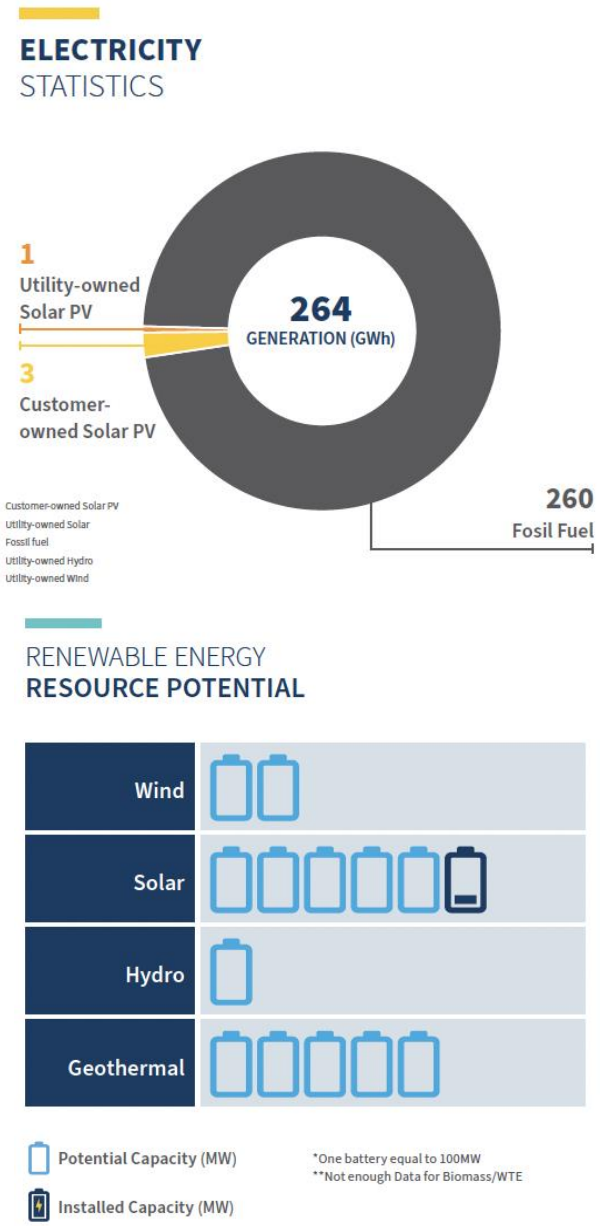
Grenada

Aggregated and utility scale interventions

Toward its goal of **100% renewable energy use in the electricity sector by 2030**, Grenada is embarking on its largest solar PV project to date.

Early analysis has identified 47 MW solar PV and 24 MWh BESS as an option for greatly increasing the RE share. First steps have prioritized an aggregated **21 MW solar PV** and **12 MW BESS** project spread across 4 sites on mainland Grenada, including upgrades to **transmission and distribution infrastructure**.

To secure funding for project implementation, many options are being explored including collaboration with **multilateral and development agencies**, and **private sector** approaches involving independent power producers.



Enabling factors

Stakeholder Alignment:
The utility, regulatory body and Grenadian public are well-aligned on RE initiatives, heavily driven by government leadership from the Prime Minister and Ministry of Renewable Energy.

Project Aggregation:
Although usually applied to smaller RE projects, this approach ensures that additional ready-to-implement projects will be in place when financing becomes available.

Financing Optionality:
Grenada is exploring business models and funding opportunities. This includes IPP-led approaches.

Resilience Planning:
Carriacou and Petite Martinique suffered severe damage from the recent Hurricane Beryl. Grenada is applying learnings from failure modes to design future Cat 5-resistant projects.

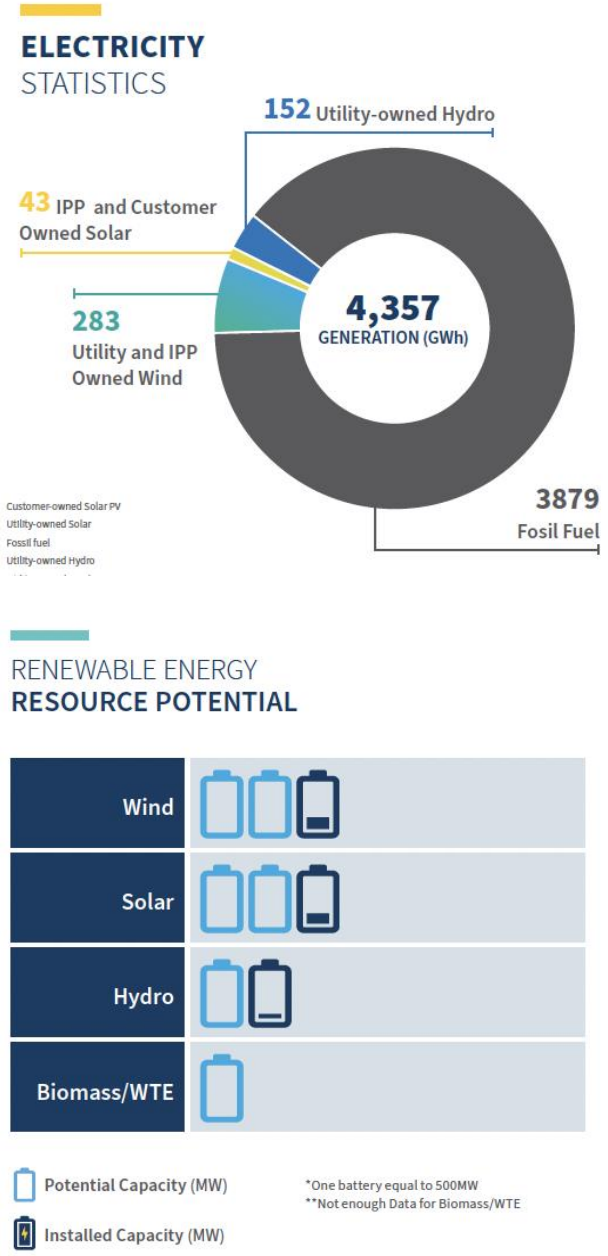
Jamaica

Independent power producers

Jamaica is actively working towards a target of **50% renewable energy generation on its grid by 2030** by diversifying its energy mix and including the use of **Independent Power Producers (IPPs).**

The **Generation Procurement Entity (GPE)** has been established to develop and manage the **competitive bidding process for generating capacity** and are guided by a **20-year Integrated Resource Plan (IRP) for the country.** The IRP calls for **268 MW of new renewable generation**; the GPE is evaluating **100 MW now** and will later go to market for the balance.

Despite an established energy sector, the need for **updated regulatory frameworks** and **increased stakeholder involvement** complicates the shift to renewable energy.



Enabling factors

PPPs and IPPs:
Effective use of PPPs and IPPs has attracted private investment, enabled large-scale renewable projects and reduced the public sector's financial burden.

Strong Regulatory Frameworks:
The National Energy Policy and IRP set a foundation for renewable energy, although delays in updates and project launches highlight the need for efficient regulatory processes.

Capacity Development:
Involving local communities and investing in education and training have been vital in building public support and developing a skilled workforce.

Stakeholder engagement and alignment:
Stakeholder engagement was crucial for early renewable energy uptake. Increased stakeholder involvement is essential to advance the energy transition.

5 Takeaways for a Regional Transition

Government leadership

- Ambitious **leadership, policy support** and **political consistency** are instrumental in driving the energy transition.
- Policy cannot be set in a vacuum and **RE targets need to be supported by planning and regulation.**

Strong Regulatory Frameworks

- **Strong regulatory frameworks are essential** to laying the foundation for renewable energy uptake.
- Regulatory processes can equally slow the transition if they are not **efficient, streamlined and grounded in long-term planning needs.**

Stakeholder engagement & Alignment

- Challenges with the energy transition are not all technical. Many arise from the **complexity of stakeholders** within the energy sector.
- **Alignment and proper consultation** of policymakers, regulatory stakeholders, and utility providers is crucial.

Resilience planning

- **Energy security is resilience.** Successful resilient energy solutions can act as blueprints for building resilience in the region.
- Enhancing resilience by **hardening electricity infrastructure** is key to sustain the energy transition and mitigate losses.

Financing

- **Financing is crucial** due to the capital-intensive nature of renewable energy projects.
- In this next phase of the transition, the **focus must be on business models and financing mechanisms that are regionally appropriate.**

Panel: The Energy Opportunity: Use-cases for an equitable transition in the Caribbean

Charlin Bodley
Associate Director Energy Innovation
Bezos Earth Fund

James Fletcher
Managing Director, Soloricon

Rodinald Soomer
Chief Executive Officer, CARICOM Development Fund

Moderator

Racquel Moses
Chief Executive Officer, Caribbean Climate Smart Accelerator

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Thank You!