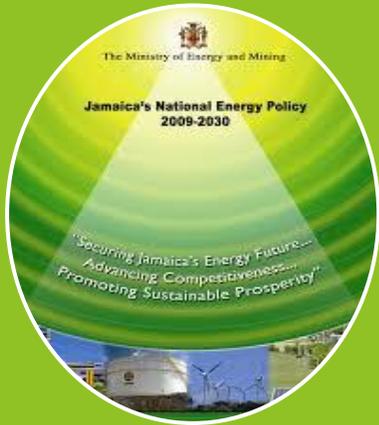


Enabling Environment For Renewables



Needed Instruments for sustainable Energy systems & growth in the Caribbean:



Policy- Policy must lay out aggressive targets for % percent renewable energy share and energy security.



Concessions-a robust enabling environment of tax exemptions and incentives.



Energy sector regulators- can facilitate renewable energy (RE) projects through the apt support of laws and policies established in the executive and legislative branches of government



Progressive Utility- Utility, government and regulator work collaboratively for mutually accepted renewable energy targets.



Strengths and limitations of different instruments

- ▶ Policies are not self Implementing- Achievement and implementation are difficult:
 - ▶ Policy must be a model for Growth
 - ▶ Enforcement of an enabling environment and strategy for diversification of National energy grids.
- ▶ Energy sector regulator:
 - ▶ Regulated vs unregulated utilities.
 - ▶ Quality of governance is the main protagonist in arguing either side.
- ▶ Concessions:
 - ▶ Exemptions and benefits must align with governments commitments, RE targets, and strategies.
 - ▶ Quantifying associated benefits must be a net positive for the country.
- ▶ Utility:
 - ▶ Proactive utility, whose long and short term strategies align with that of the nations legislation and policies, Ex: existence of a Renewable Energy Strategic Plan, up to date Renewable Energy Interconnection Programme.
 - ▶ Utility and regulator have strong communication, such that Regulatory oversight and support serves as symbiotic for both parties.

Public utilities or regulated private monopolies?

Wigton Wind Farm Jamaica



1.6 MW Grand Palladium Resort, Jamaica

- ▶ Lack of public sector capital is no Excuse!
- ▶ International involvement with regulatory oversight can be model for growth in many parts of the region.
- ▶ Public or private sector, Governance is the variable determining success.

Public utilities or regulated private monopolies? Continued...

- ▶ Increasing a nation's renewable energy share is largely agnostic of whether a National utility is Public or private. Private utilities have taken the lead simply because policy and governance have innately been more robust as is the standard with any private organization having natural monopolistic powers.
- ▶ Regardless of public or private such factors below can lead to the appropriate enabling environment:
 - ▶ Public private partnerships
 - ▶ Active regulation and oversight
 - ▶ Active Policy enforcement
 - ▶ Stakeholder involvement and agreement
 - ▶ Tax incentives and exemptions

ECERA

- ▶ The OECS Countries have agreed that a harmonized regulatory framework within the OCES will support the individual countries policy goals for the energy sector including diversification of energy sources, increased energy security and competitiveness of the electricity supply to attract more private sector investment in electricity generation.
- ▶ ECERA, Eastern Caribbean Energy Regulatory Authority, is expected to provide arms-length regulation and oversight of the electricity utilities to achieve cost efficiency in electricity supply and by extension lower electricity rates to consumers in the medium to long term.
- ▶ As a regional electricity sector regulator, ECERA aims to improve electricity service delivery and diversify sources of energy generation, including renewables, across the Organization of Eastern Caribbean States (OECS) countries. Importantly, ECERA will increase the capacity of OECS countries to implement regional arrangements for electricity supply.

Renewable Generation in the Region

Belize- Over 100MW

Aruba- over 80MW

Jamaica- 72MW

Barbados- 19MW

Dominica- 8MW

St Kitts-3.2MW

St Lucia- 3MW

Antigua- 3MW

Bahamas- 0.2MW

Solutions for Hesitancy in the transition to sustainable energy systems Caribbean

Investments in Infrastructures

Flexible Thermal generation

Convention network reinforcement

Electricity storage

Smart grids, Micro Grids, Integrated controls

Operational Measures

Dispatch strategies

Demand Side Management

Network Monitoring and control strategies

VRE curtailment

Regulatory requirements

Grid Code requirements of renewable generators

Dynamic consumption pricing

Grid Friendly RES support schemes