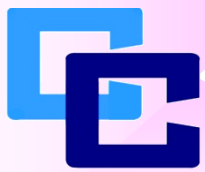




CARICOM





CARICOM

**Workshop on Energy Standards & Labelling for Appliances: Follow-up to
EASTERN CARIBBEAN ENERGY LABELLING PROGRAMME**

**16-17 March 2015
Saint Lucia**

**Energy Standards & Labelling within the
Context of the CARICOM Energy
Programme**

Tuesday, 17 March 2015

OVERVIEW

Fossil Fuel:

All CARICOM Member States depend *heavily* on fossil fuels to supply their energy demand.

The fifteen CARICOM Member States could be classified into the following broad groupings based on their import and export capabilities of petroleum derived products:

1. HYDROCARBON PRODUCERS

- (i) NET ENERGY EXPORTERS of petroleum, petroleum related products and natural gas. Trinidad and Tobago is the only major producer and net energy exporter within the region.**
- (ii) OTHER ENERGY PRODUCERS, such as Suriname, Barbados and Belize, which are producers of crude oil that supply some of their domestic needs but are overall net importers.**

2. NON-HYDROCARBON PRODUCERS

All other CARICOM Member States are non-producers of hydrocarbons; they are net importers.

CARICOM ENERGY POLICY: GUIDING PRINCIPLES

1. Community Mandates on Energy and the Revised Treaty of Chaguaramas

The CEP takes into consideration the various mandates, that are related to energy, of the various Community Organs since the Fourteenth Intersessional Session of the Conference of Heads of Governments in 2003.

2. Focus on Regional Level Energy Sector Challenges and Opportunities

The CEP is designed with focus on the following major regional issues:

- (i) WEAK SECURITY of energy supplies in the region
- (ii) The LOW AFFORDABILITY of energy and the low competitiveness of the majority of CARICOM economies, which result from *high, unpredictable* cost of imported fuels
- (iii) ENERGY POVERTY at various levels
- (iv) A need to lower carbon footprint and INCREASE CLIMATE COMPATIBILITY of the energy sector

CARICOM ENERGY POLICY: GUIDING PRINCIPLES

3. Recognition that Member States' Energy Resources and Level of Energy Sector Development Varies

The CEP is crafted with the understanding that Member States will only “commit” to take individual actions that are both *relevant* and *feasible*.

4. Consistency, Complementarity and Collaboration

The CEP is based on a principle of **Collective Approach and Cooperation** that takes cognizance of the NEPs for the respective Member States and seek to exploit synergies, where available.

5. Subsidiarity

The CEP seeks to emphasize **regional treatment** of those actions that may gain comparative advantage vis-a-vis the “*country alone*” basis.

CARICOM ENERGY POLICY

- The CARICOM Energy Policy (CEP) was **adopted** at a Special COTED on Energy, held in Port of Spain, Trinidad in March 2013
- The CEP was formulated to lend itself to **targeted and programmatic implementation** of its constituent elements, with significant amounts of harmonization
- Harmonization requires **regional coordination**, which comes with unique sets of challenges:
 - The **diversity of regional members** must be recognized and respected, and a consolidated effort must be made to ensure that each is willing and able to contribute to a joint program for regional sustainable energy development
 - Member states must **agree on how** to share burdens fairly and equitably in a practicable way
 - Implementation must be **MEASURED, REPORTED, AND VERIFIED** in a transparent manner
 - Realizing the full benefits of a transformational shift to renewable energy and energy efficiency requires **regional cohesion coupled with support mechanisms** to keep each actor on track to achieving common goals

CARICOM ENERGY POLICY

5. ENERGY CONSERVATION & EFFICIENCY

“to promote energy savings efforts in all sectors”

- **Promote energy conservation, energy efficiency, reductions in energy intensity and establish appropriate measurement and monitoring standards and guidelines adopted at a regional level**
- **Promote energy saving measures through introduction of fiscal and other incentives**
- **Implement intensive energy saving and energy efficiency programmes, to include: (i) energy audits of residential, commercial, public and industrial properties; (ii) energy management guidelines; and (iii) retrofitting**
- **Develop regional public sector energy efficiency programmes**
- **Promote energy efficiency, renewable energy and sustainable “green” design features in the design, construction, refurbishment and upgrade of public, commercial and residential buildings through building codes**
- **Establish regional energy efficiency institutional networks and energy efficiency testing facilities**

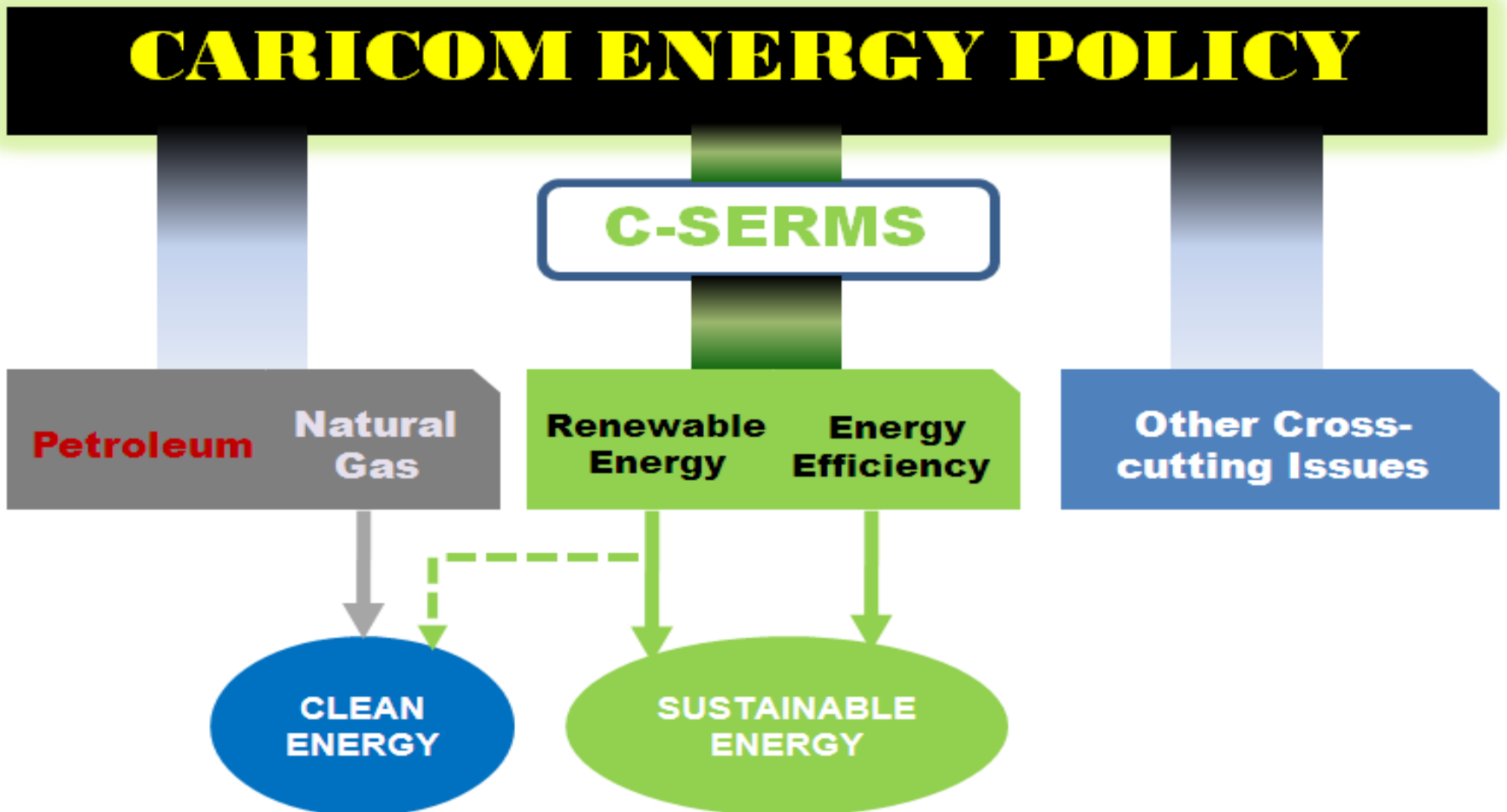
CARICOM ENERGY POLICY

5. ENERGY CONSERVATION & EFFICIENCY

“to promote energy savings efforts in all sectors”

- **Set minimum efficiency standards that require electric utility and electricity producers to decommission inefficient generating equipment and conduct Demand Side Management programmes**
- **Establish national and regional training programmes in energy auditing, energy efficiency and conservation, and other relevant disciplines**
- **Establish a regional collaboration mechanism with CROSQ for the creation and implementation of standards and labelling for energy consuming equipment, electrical appliances and vehicles and adopt and enforce such strategies at a national level, to include active encouragement for the use of energy efficient appliances and lighting**
- **Enact energy efficiency legislation**
- **Introduce regulations and fiscal incentives to encourage the use of SWH**
- **Support the development and implementation of a Regional Strategy on Energy Efficiency**

The **Caribbean Sustainable Energy Roadmap and Strategy (C-SERMS)** is a regional energy planning and management and implementation framework being developed by CARICOM for expediting the implementation renewable energy and energy efficiency dimensions of the CARICOM ENERGY POLICY



THE CARIBBEAN SUSTAINABLE ENERGY ROADMAP & STRATEGY (C-SERMS)

- Is a **sustainable energy planning (management) and implementation framework**, as well as a communication, tool
- Is expected to provide a more Strategic Approach to sustainable energy “design and implementation” at the Regional Level
- Will address the challenge of lack of consistent focus and intensive effort on the energy sector; it is expected to reduce the risk of the “stop and go” *approach that is typically based on oil pricing and “political seasons”*
- Will facilitate the setting of regional goals, with specific subsector and national targets and strategies to achieve same; *Some initial targets have been established by the Baseline Assessment and was adopted by the March 2013 Special COTED on Energy*
- Will facilitate **continuous dialogue and coordination** among all the major players
- Is **indifferent to who is implementing**

C-SERMS, PHASE 1

Assessing Current Status and Potential

Energy System Analysis:

- **Electricity Sector**
- Transportation Sector
- Production, **Consumption**, Transmission & Distribution
- **CO₂ Emissions**

Identifying Potential:

- Renewable Resource Potential
- **Energy Efficiency Potential**
- Infrastructure Needs

Policy Assessment:

- Governance & Administration
- **RE and EE Support Goals & Policies**
- **Emissions Reduction Goals & Policies**

Setting a
common vision

Reg'l & Nat'l Targets

2017

- Renewable Power Generation

2022

- **Energy Efficiency Improvements**

2027

- CO₂ Emissions Reductions

Roadmap for
the Caribbean

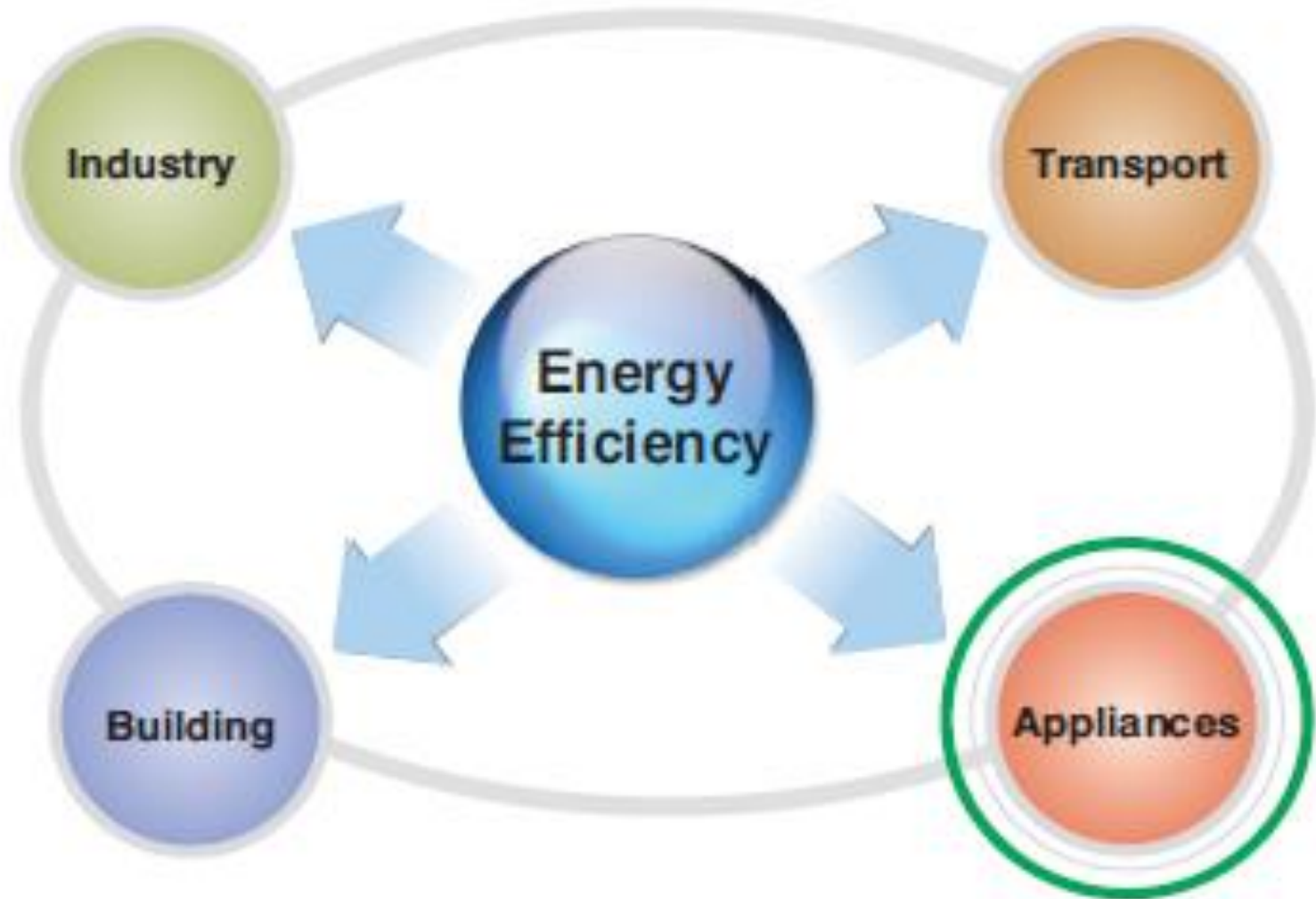
Priority Initiatives, Policies, Projects, & Activities (PIPPA)

- Regional Recommendations
- National Recommendations

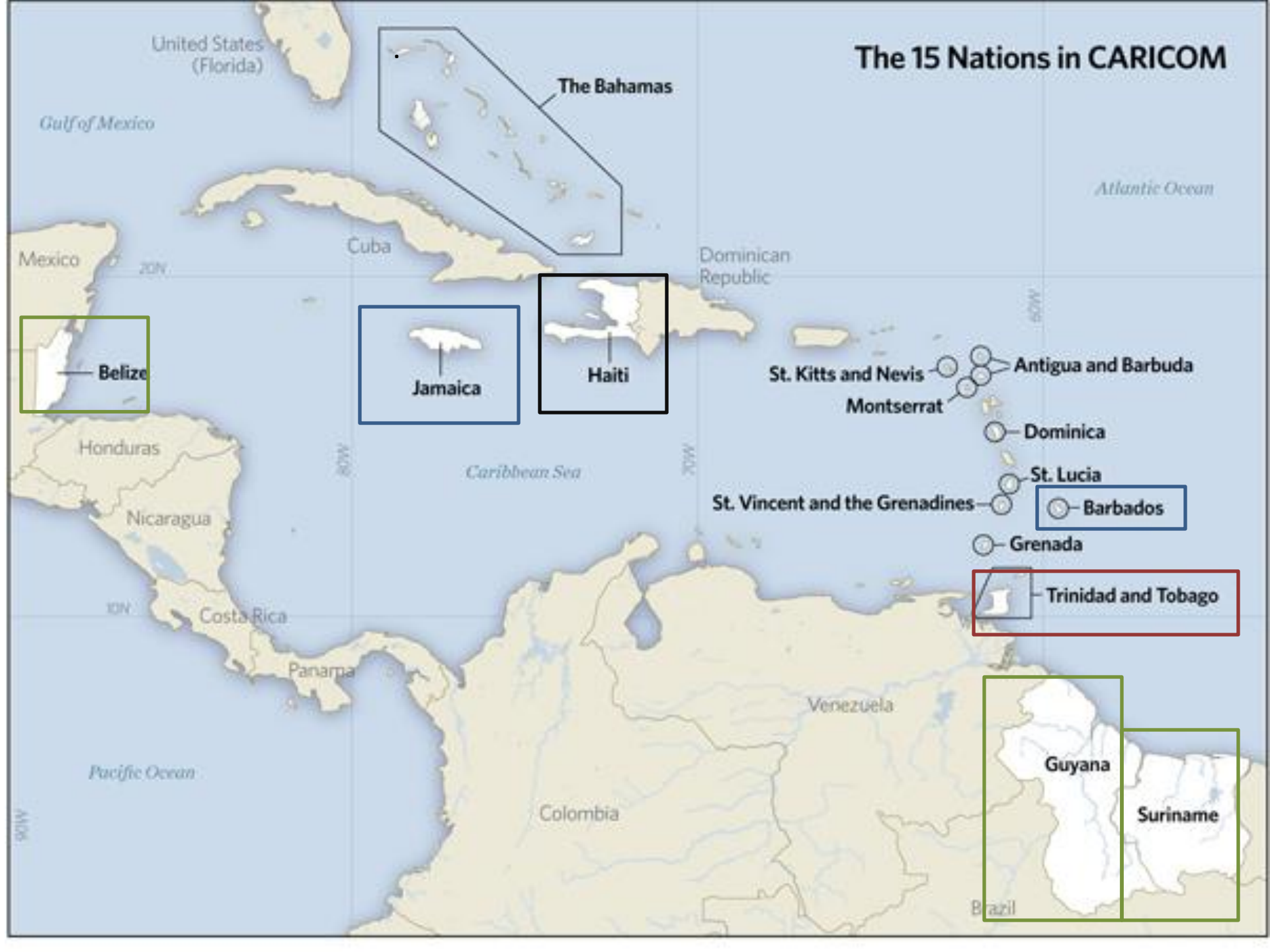
CARICOM ENERGY PROGRAMME

- Increasing the capacity for **energy planning and implementation** in Member States, to include the strengthening **Regional coordination** capabilities
- Mainstreaming Climate Adaptation into Regional energy planning
- Increasing the efficiency in the production, delivery and use of energy
- Increasing the share of **cost-effective renewable energy** within the regional energy systems

CARICOM EE PRIORITY AREAS



The 15 Nations in CARICOM



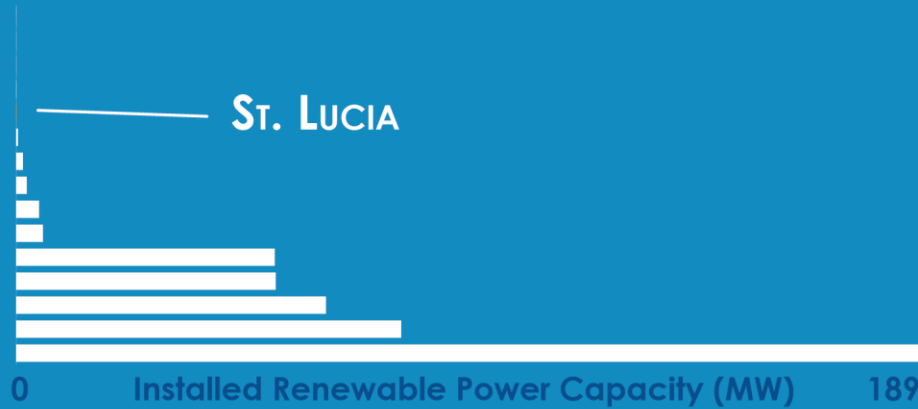
SIDS-appropriate Sustainable Energy Options, Select Caribbean

Technology	Solar PV	Wind	Hydro <i>Run-of-river</i>	Geo. <i>Binary</i>	Biomass <i>Gasification</i>	Biomass <i>Anaerobic</i>	Biomass <i>Liquid biofuels</i>	OTEC	Ocean <i>Current</i>
Countries									
Antigua & Barbuda	■	■	□	□	■	■	□	■	□
Bahamas	■	■	□	□	■	□	□	■	□
Barbados	■	■	□	□	■	■	□	■	□
Belize	■	■	■	□	■	■	■	□	□
Dominica	■	■	■	■	■	■	□	■	■
Dominican Republic	■	■	■	□	■	■	■	■	■
Grenada	■	■	■	■	■	■	□	■	■
Jamaica	■	■	■	□	■	■	■	■	■
St. Kitts & Nevis	■	■	□	■	■	■	□	■	■
St. Lucia	■	■	■	■	■	■	□	■	■
St. Vincent & the Grenadines	■	■	■	■	■	■	□	■	■
Suriname	■	■	■	□	■	■	■	□	□
Trinidad & Tobago	■	■	■	□	■	■	□	■	□

St. Lucia

INSTALLED RENEWABLE
POWER CAPACITY

0.07 MW



INSTALLED CAPACITY

86 MW



PROJECTED CAPACITY
NEEDS IN 2027

250 MW



INDICATIVE COUNTRY TARGETS TO
MEET REGIONAL GOALS

69%

Estimated National Renewable Share
of Installed Capacity to Meet
Regional Target of 47% by 2027

100%

Estimated CO₂ Emissions Reduction
(against business as usual in 2027)

RENEWABLE ENERGY
POTENTIAL (MW)



Geothermal
170-680



Wind
40



Solar
36



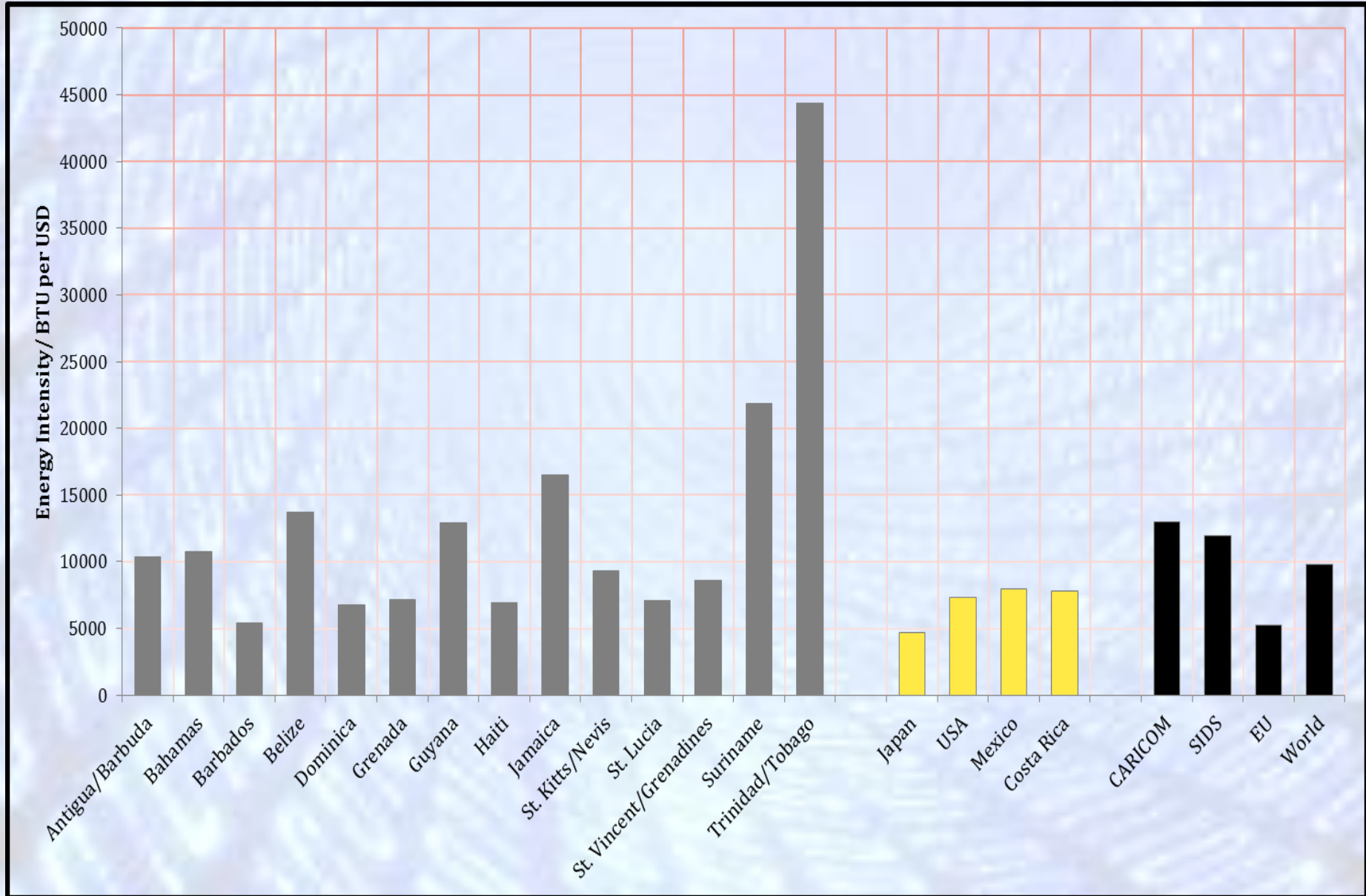
Biomass/Other
1.2

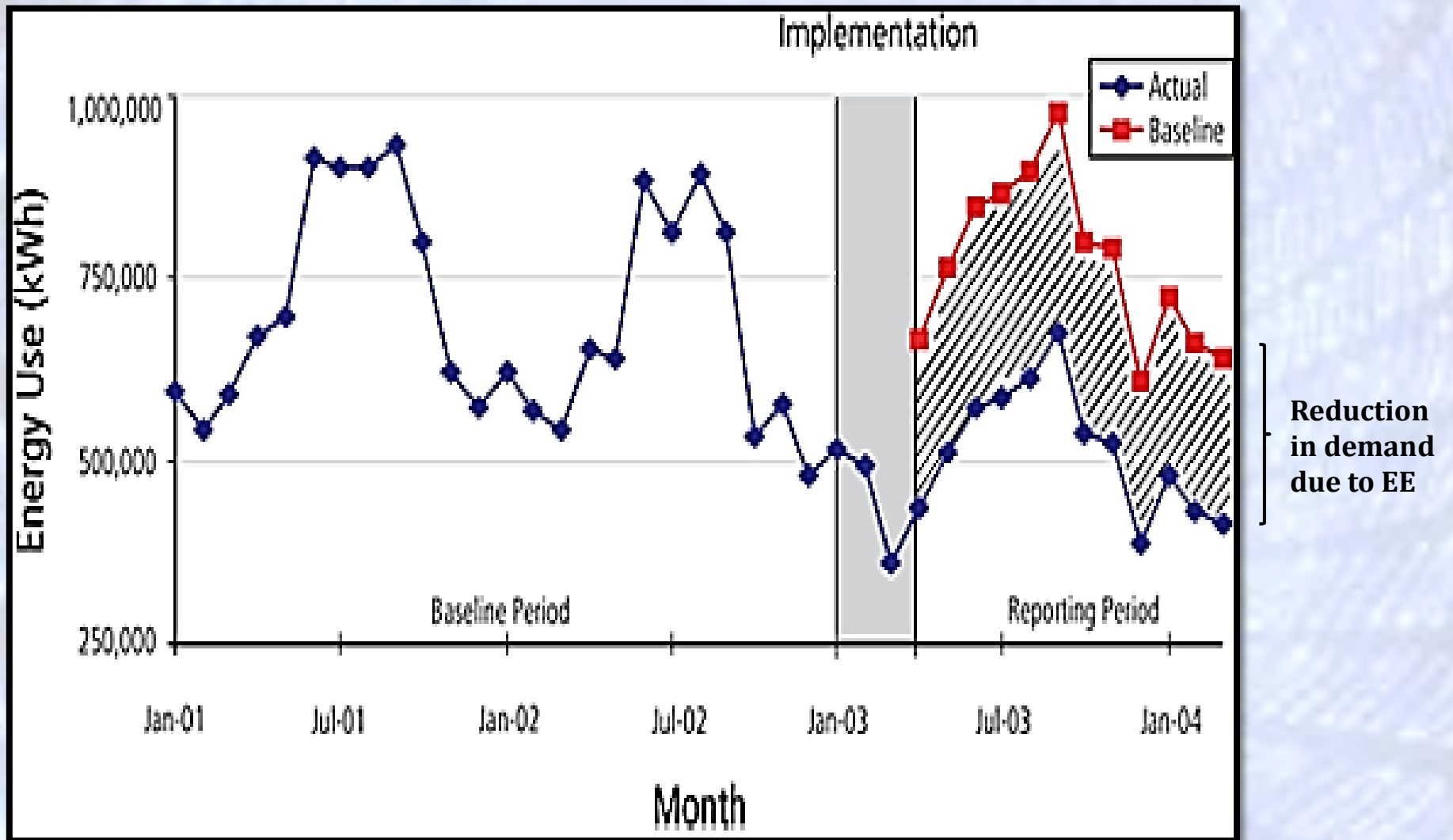


Hydro
0.15

Energy Intensity, CARICOM States (2013)

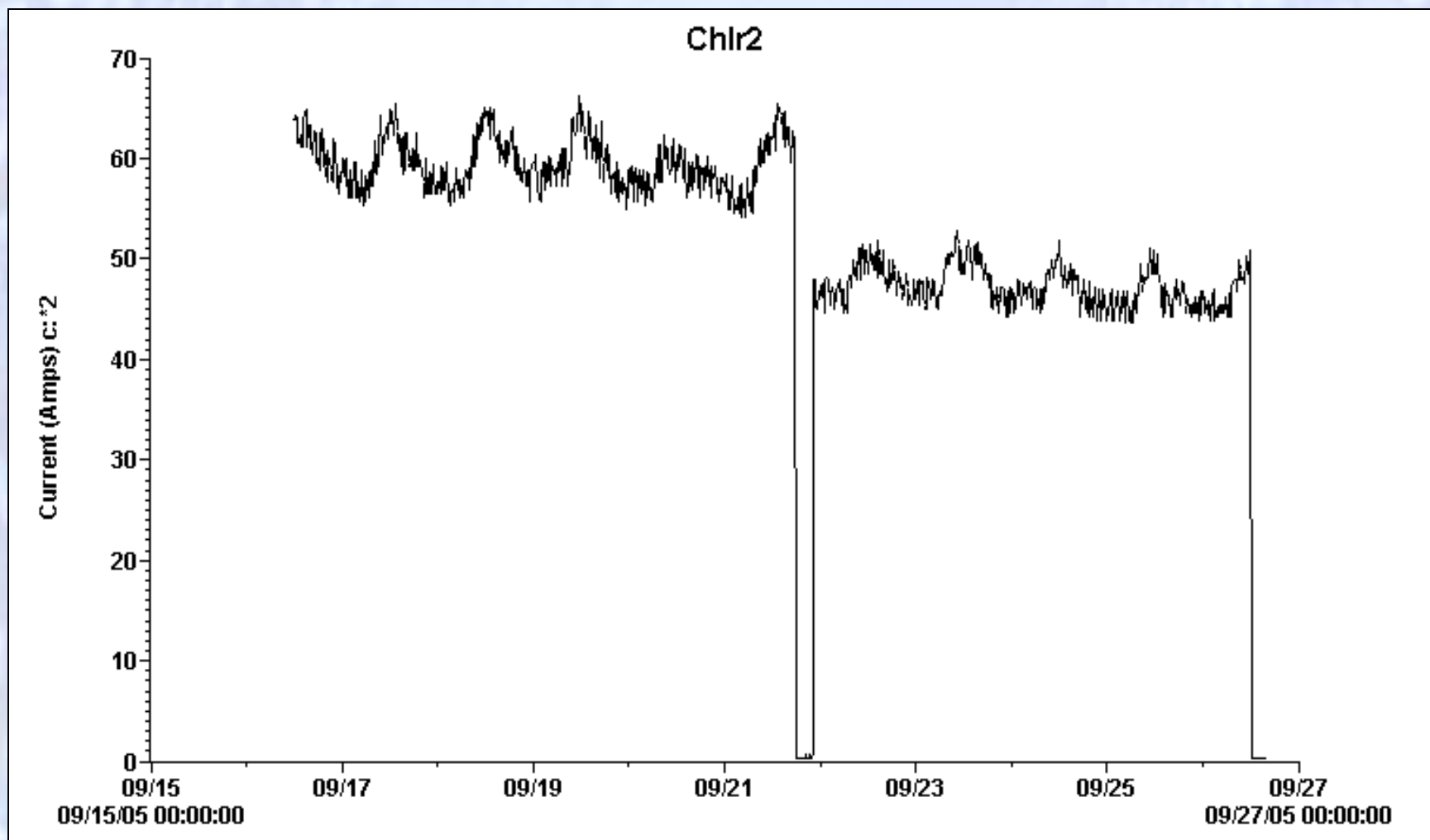
Source: UN Statistics Database



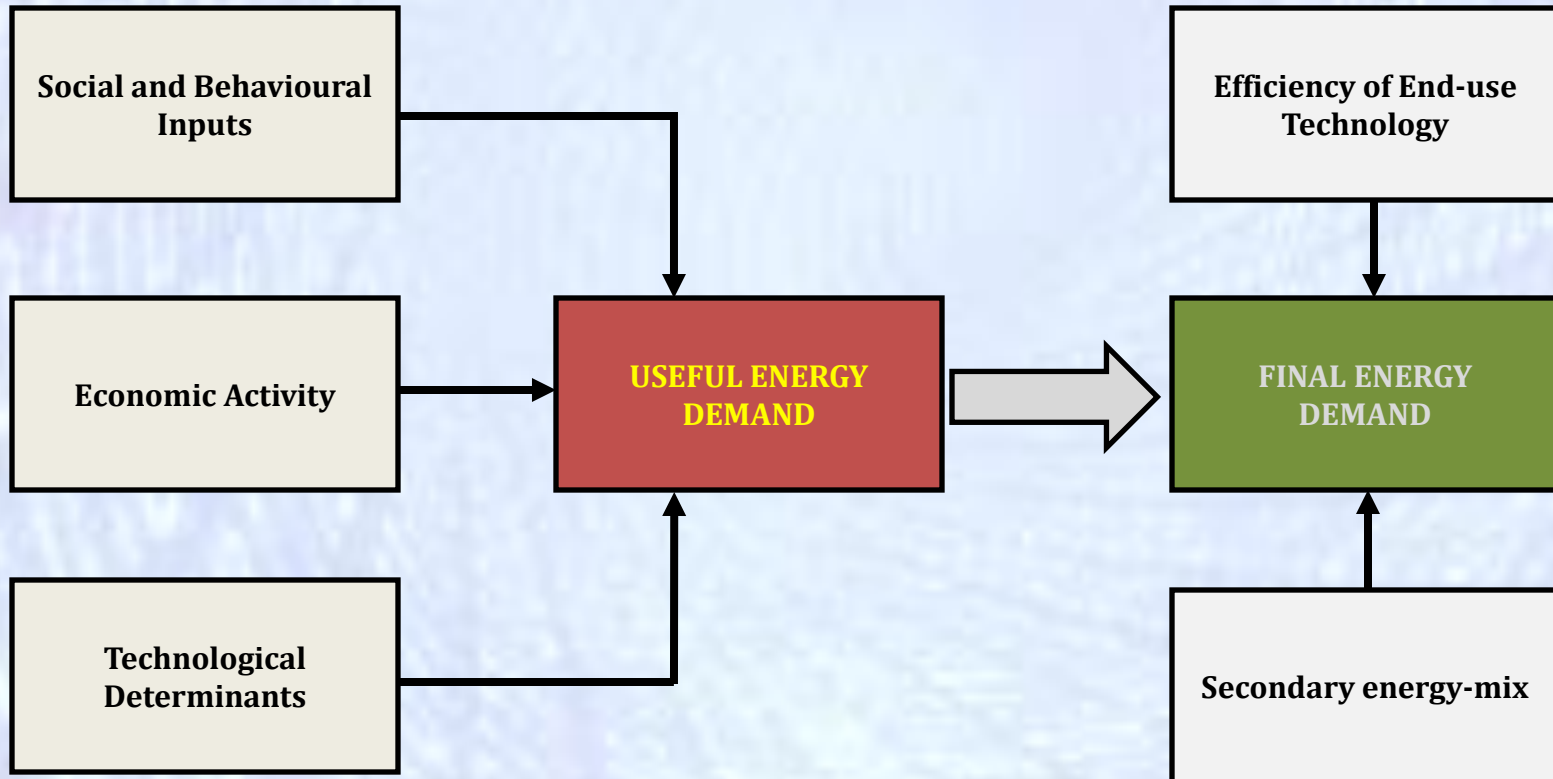


“BEFORE” AND “AFTER” PERFORMANCE DATA COLLECTED FROM AIR CONDITIONING EQUIPMENT THAT WERE RETROFITTED.

THE GRAPH BELOW SHOWS THE DIFFERENCE IN CURRENT DRAW BY A CHILLER COMPRESSOR BEFORE AND AFTER THE R22A RETROFIT.



ENERGY DEMAND MODEL

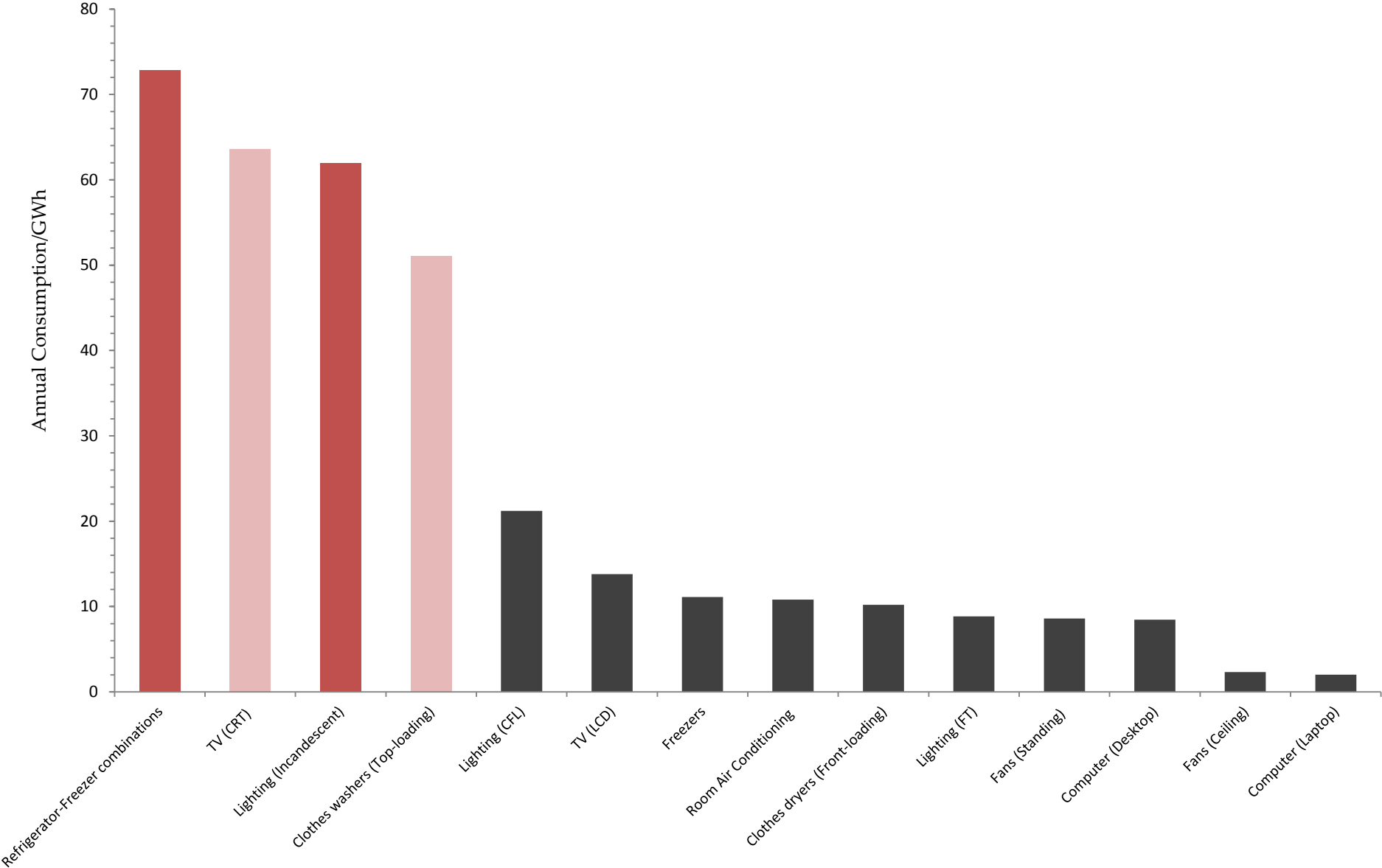


Electricity Consumption by End-use for OECS, Commercial and Residential Sector

Source: ECELP/GIZ (2013)

END-USE	CONSUMPTION/ %
Refrigeration	19.6
Air conditioning	29.1
Water Heaters	2.6
Electric Stoves and Ovens	3.4
Lighting	30.8
Other	14.6

RESIDENTIAL APPLIANCE CONSUMPTION, OECS



SPLIT INCENTIVES



Nationalization vs. Regionalization



Coordination of regional efforts;
Monitoring and verification of national progress toward targets;
Assistance and support to member states

Ensure consistency between national and regional targets and implementation strategy.

National contribution to regional targets;
Domestic policy design, implementation & reform;
Domestic institutional & regulatory reform



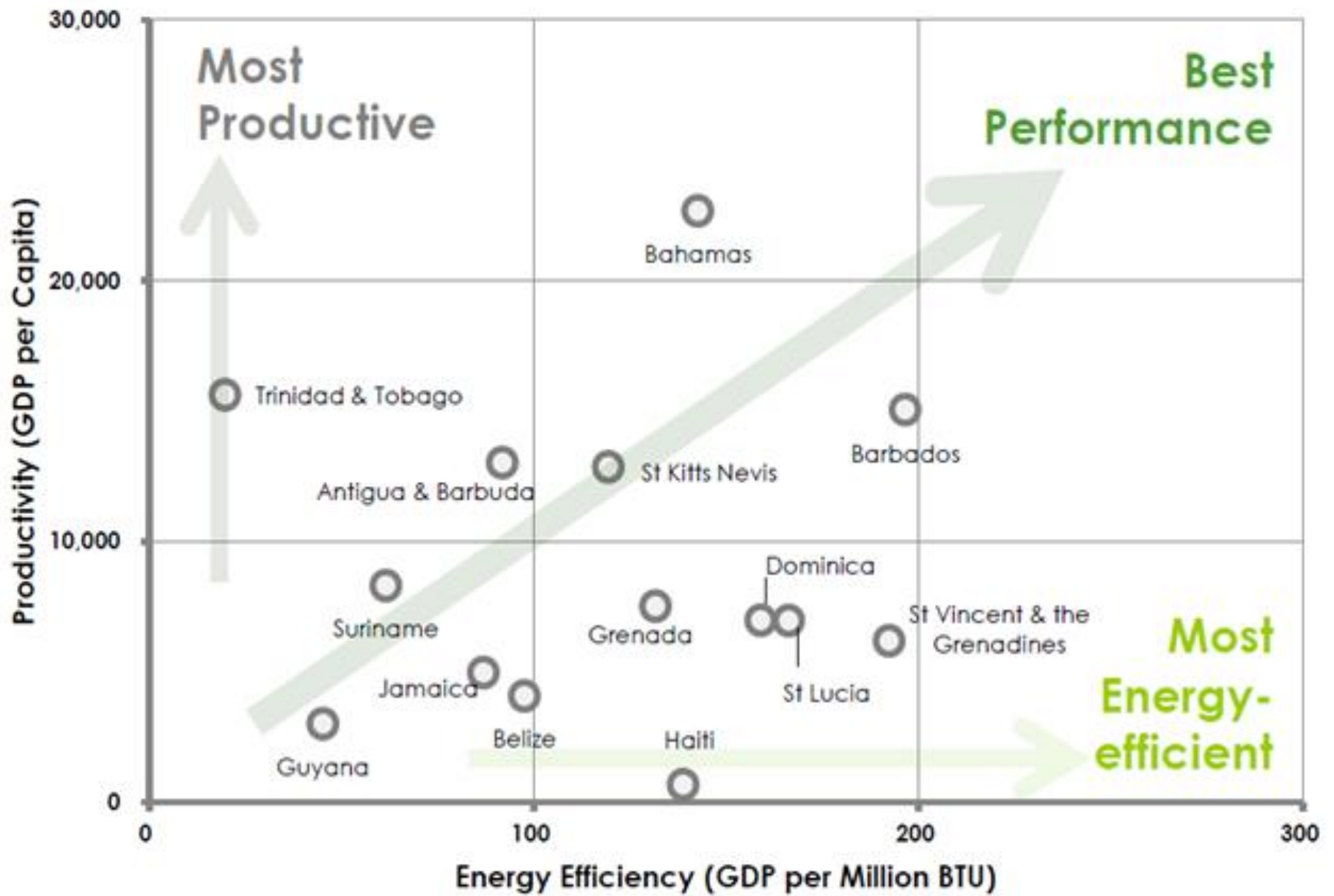


Figure Economic Productivity and Energy Efficiency (2010)

OECS CHALLENGES

- In small countries, such as the OECS islands, the markets are too small to introduce *independent* national Energy Efficiency Standards & Labeling systems, especially those that may require testing for compliance with their respective national standards
- Currently the OECS import electrical household appliances from various countries; primarily USA, Mexico and China
- The Bureaux of Standards, in most instances, do not have the capacity to develop and manage independent EE S&L systems
- Many OECS countries are also challenged in the management of their ports and typically prioritize issues related to the prevention of narco-trafficking and revenue loss

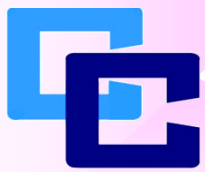
CARICOM MANDATE

The Caribbean Community (CARICOM) convened the 41st Special Meeting of the Council for Trade and Economic Development (COTED) for Energy from 27 February to 1 March. The Meeting:

- (1) *“**agreed** that the Regional Building Code being developed by the CARICOM Regional Organization for Standards and Quality (CROS-Q) should explicitly address energy efficiency in new and existing buildings”*
- (2) *“**mandated** the CROS-Q to **develop a regional energy efficiency labelling standard** for electrical appliances and luminaries used in residential and small business sectors”*

EXPECTATION

- **Regional Energy Labelling will be introduced:** This will allow buyers to compare the energy efficiency of the products they are considering purchasing. Information on how much energy a model uses, and how this compares with other models, can be included in a prominent label or tag attached to the product itself.
- Energy labelling provides buyers with information that is consistent and reliable, but *does not force suppliers* to introduce more efficient products or to remove less efficient ones from the market.
- **Minimum Energy Performance Standards (MEPS) will be promoted, with adoption expected on a state by state basis:** This is a legally enforceable minimum level of energy efficiency for select electrical household appliances. Labelling and MEPS programs can and do work together. For labelling and MEPS to work efficiently together, they should have the same legal basis and administrative structure, and rely on the same energy tests.



CARICOM

DR. DEVON GARDNER

Programme Manager, Energy

CARICOM Secretariat
Turkeyen, Greater Georgetown
Guyana

Phone: **+592-222-0001/75, ext. 3521/2**
Email: **devon.gardner@caricom.org**
Skype: **devon.gardner**