Innovation, Opportunities and the Caribbean Reality – Considerations for a Regional Vehicle Strategy

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CARICOM Secretariat

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ENERGY USE: TRANSPORTATION IN CARICOM

Transportation's Share of Total End-Use Energy Consumption in Select CARICOM Member States, 2017
<table>
<thead>
<tr>
<th>CARICOM COUNTRY</th>
<th>NDC COMMITMENT RELATED TO TRANSPORTATION</th>
<th>NDC COMMITMENT RELATED TO ENERGY</th>
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</thead>
<tbody>
<tr>
<td>ANTIGUA AND BARBUDA</td>
<td>By 2020, establish efficiency standards for the importation of all vehicles.</td>
<td>By 2030, achieve an energy matrix with 50 MW of electricity from renewable sources both on and off-grid in the public and private sectors</td>
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<tr>
<td>BAHAMAS</td>
<td></td>
<td>30% RE in energy mix by 2030 allow 10% Residential Energy Self Generation within the year</td>
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<tr>
<td>BARBADOS</td>
<td>A 29% reduction in non-electric energy consumption including transport, compared to a BAU scenario in 2029</td>
<td>Renewable energy: contributing 65% of total peak electrical demand by 2030. Electrical energy efficiency: a 22% reduction in electricity consumption compared to a BAU10 scenario in 2029</td>
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<tr>
<td>BELIZE</td>
<td>A 20% reduction in conventional transportation fuel use by 2030</td>
<td>Reduction in energy intensity per capita at least by 30% by 2033; Reduce fuels imports dependency by 50% by 2020 using renewable energy; 85% renewable energy by 2030</td>
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<tr>
<td>DOMINICA</td>
<td>By 2030, total emission reductions in Transport [16.9%]</td>
<td>By 2030, total emission reductions in Energy industries [98.6%]</td>
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<tr>
<td>GRENADA</td>
<td>Reduce its emissions in the transport sector by 20% by 2025</td>
<td>A 30% reduction in emissions through electricity production by 2025 with 10% from renewables and 20% from energy efficiency measures</td>
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<tr>
<td>Country</td>
<td>Action or Measure</td>
<td>Target</td>
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<tr>
<td>GUYANA</td>
<td>100% renewable power supply by 2025.</td>
<td>100% renewable power supply by 2025.</td>
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<tr>
<td>HAITI</td>
<td>Control, regulate the import of used vehicles</td>
<td>Increase to 47% the share of renewable energies in the system Haitian electricity by 2030 (hydro 24.5%, wind 9.4%, solar 7.5%, biomass 5.6%)</td>
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<tr>
<td>JAMAICA</td>
<td>Renewable Energy increase to 20% by 2030. Prime Minister announced 50% by 2030.</td>
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<td>SAINT LUCIA</td>
<td>Efficient Vehicles, Improved and Expanded Public Transit. Introduce new levy to control importation of used vehicles Reduction of excise tax and duty for importers of fuel efficient vehicles and alternative energy vehicles</td>
<td>35% Renewable Energy Target by 2025 and 50% by 2030.</td>
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<tr>
<td>ST KITTS AND NEVIS</td>
<td>At Least reduce 5% of the national fuel consumption</td>
<td>Increase the use of renewable energy sources by 50%</td>
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<tr>
<td>ST VINCENT AND THE GRENADINES</td>
<td>New policies to reduce the import duty paid on low emission vehicles</td>
<td>Generate approximately 50% of the national annual electricity consumption needs From Geothermal Energy. Energy Efficiency: 15% reduction in national electricity consumption compared to a BAU scenario by 2025</td>
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<tr>
<td>SURINAME</td>
<td>31% emission reduction by 2025</td>
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<tr>
<td>TRINIDAD AND TOBAGO</td>
<td>30% reduction in GHG emissions by 2030 in the public transportation sector</td>
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</table>
1. 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.

2. Consistency, complementarity and collaboration
The CEP is based on a principle of **COLLECTIVE APPROACH AND COOPERATION** that takes cognizance of the national energy policies for the respective member states and seek to exploit synergies, *where available*.

3. Subsidarity
The CEP seeks to emphasize **REGIONAL TREATMENT** of those actions that may gain comparative advantage vis-a-vis the “country alone” basis.
**THE VISION OF CARICOM ENERGY**

“Reliable, affordable, sustainable provision of energy services matched to the societal and development needs of the Caribbean Community over time, and based on robust, diverse energy sources and distribution systems that utilizes appropriate generation technologies, and equitably provided to all sectors of the society”

<table>
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<th>Goal 1: CARICOM citizens are well aware of the importance of energy conservation, use energy wisely and continuously pursue opportunities for improving their use of energy, with key economic sectors embracing eco-efficiency</th>
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<td><strong>Goal 2:</strong> Member States have modern energy infrastructure with clean and secure generation capacity, ensuring that energy supplies are reliably and affordably transported to homes, communities and the productive sectors on a sustainable basis</td>
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<td><strong>Goal 3:</strong> The Region is a global example for renewable energy use, providing secure intra-regional energy supplies at internationally competitive prices and a small carbon footprint, capable of supporting medium- and long-term economic growth, social development and environmental sustainability</td>
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<td><strong>Goal 4:</strong> Countries have a well-defined and established governance, institutional, legal and regulatory framework to support the future developments in the energy sector, underpinned by high levels of consultation and citizen participation in this sector</td>
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THE TRADITIONAL POWER SECTOR ARCHITECTURE

Existing utilities’ role

THE SUPPLY APPROACH

GENERATION

Fuel → Generator → Electricity network

TRANSMISSION & DISTRIBUTION

Appliance & equipment → Energy service
THE OPPORTUNITY

Emerging role for utilities: the demand-driven approach

RESOURCE

Energy resource (Capture) → Primary energy → Energy conversion (Generation) → Energy carrier

Energy storage

CONVERSION

Transmission & distribution

END-USE

Energy carrier → Energy conversion (Device) → Energy service

Energy storage

Energy storage

Energy storage
THE INTEGRATED UTILITY SERVICE (IUS)

Energy Service Contractor sub-contracts the project implementation to other contractors and technicians.

Customer is walked through a streamlined planning and installation process.

Customer selects outcomes and energy goals desired in specific packages.

Energy service providers install everything from solar to energy efficiency measures.

Utility transfers financing to contractors to perform installation.

Customer pays utility bill inclusive of new package financing, less energy savings.

Utility provides customer with less electricity.

Utility passes through financing interest.

Investors provide program capital.

Private Investors.

Subcontractors.
THE APPROACH TO THE C-SERMS

- **Regional Strategy**
  - **National Strategies & Actions**
  - **Visible & Replicable Regio-Appropriate Projects**

- **Updates**
- **Generates Information**
- **Promotes**
- **Gives Orientation**
THE CONNECTION APPROACH

High-Level

Caribbean Community Strategic Plan
- Regional Climate Change Strategic Framework
- Comprehensive Disaster Management Strategy
- CARICOM Human Resource Development Strategy

Meso-Level

Caribbean Sustainable Energy Roadmap & Strategy
- Climate-Resilient Sustainable Energy Supplies
- Regional Energy Efficiency Strategy
- Regional Quality Infrastructure for Energy
- Regional Electric Vehicle Strategy

Country-level

Integrated Resource & Resilience Planning
- Belize
- Guyana
- Jamaica
- Saint Lucia
- Trinidad & Tobago

Integrated Utility Services (IUS)
- Barbados
- Belize
- Guyana
- Jamaica

Upscaling

Market Support & Performance Monitoring
- Policy & regulatory support
- Innovative financing models
- Capacity enhancement
- Information & knowledge management
- Project development assistance
“For the things we have to learn before we can do them, we learn by doing them”

-Aristotle

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