

Energy Situation of the Caribbean: New Opportunities and Green Energy Deployment



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COA Energy Action Group

- Americas Society/Council of the Americas Energy Action Group (EAG) brings together the public and private sectors to develop strategic energy policies for the Americas.
- The EAG hosts forums in cities across the Americas and publishes working papers and recommendations on key energy and climate topics.

Energy Costs in the Caribbean

- High, volatile energy costs, excessive dependence on fossil fuels
- Effects on economic growth
- Electricity rates are up to four times more expensive than in Florida
- Impacts on tourism, the main driver of the economy
- Electricity 50 percent of operating costs in hotels

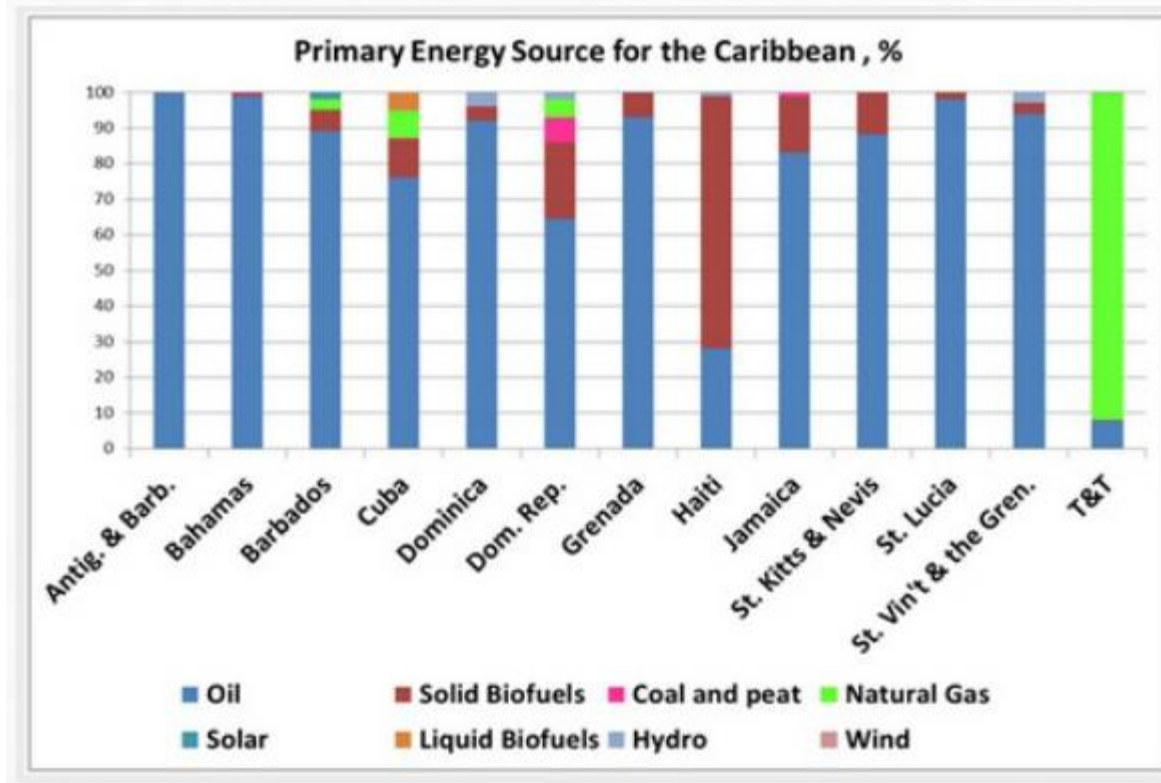
High electricity rates in the Caribbean

Florida: \$0.12
per kilowatt hour

Source : IADB

AVERAGE RETAIL TARIFFS PER UTILITY		
COUNTRY	AVERAGE TARIFF (2012)	
• Antigua and Barbuda	\$ 0.43	
• Bahamas	\$ 0.26	(2010)
• Barbados	\$ 0.32	
• Dominica	\$ 0.43	
• Dominican Republic (east)	\$ 0.20	
• Dominican Republic (north)	\$ 0.20	
• Dominican Republic (south)	\$ 0.22	
• Grenada	\$ 0.40	
• Guyana	\$ 0.32	(2011)
• Jamaica	\$ 0.36	
• Haiti	\$ 0.38	
• St. Lucia	\$ 0.38	
• St. Vincent and the Grenadines	\$ 0.36	(2011)
• Suriname	\$ 0.05	(2011)
• Trinidad and Tobago	\$ 0.06	(2011)
AVERAGE	\$ 0.33	

Primary Energy Sources for the Caribbean



Source: Global Business Reports, "Caribbean Energy Integration: From Policy to Business"

Obstacles to Energy Reform

- High upfront costs
- Fiscally constrained governments
- Weak regulations
- Lack of regional coordination

Petrocaribe (1)

- Caribbean nations spend around 13 percent of GDP on oil imports
- Petrocaribe allows governments to pay for petroleum over time
- 25 year term, barter exchange
- October 2000: Caracas Energy Agreement
 - Belize, Costa Rica, DR, El Salvador, Guat, Honduras, Haiti, Jamaica, Nicaragua, Panama
- July 2005 – first Petrocaribe summit
- Now 17 members of Petrocaribe
- Over the last 5 years, imports from Petrocaribe increased 394%: from an initial \$95.45 million in 2008 up to \$583.2 million in 2013.
- In the same year, Venezuela supplied Petrocaribe with 103 thousand b/d of byproducts.

Petrocaribe (2)

- Oil agreements to member countries, pay 60 percent of bill within 90 days
- Remaining 40 percent can be financed over 25 years at 1 percent interest, if oil > \$40/barrel
- Goods and services
 - Beans, sugar, doctors
- Past six years: 232 million barrels to Petrocaribe
- Cuba – separate relationship with VZ
- Easy credit: electricity and transportation sectors
- Diplomatic success for VZ

Petrocaribe (3)

- Quantity of crude oil and refined products
 - 2008: 86,000 b/d
 - 2012: 121,000 b/d
- Debt
 - DR: \$3.8 billion
 - Jamaica: \$2.7 billion
- Average retail tariff
 - 2010: \$0.27
 - 2012: \$0.33/kilowatt hour



CARICOM Efforts

- Caribbean Renewable Energy Development Program (CREDP)
- Among its objectives, is the promotion of sustainable energy development towards long term energy security
- Ability to create one market for renewables deployment
- Caribbean Clean Energy Technology Symposium (CCETS)
 - CCAA, DOE, IDB, USVI



Caribbean Energy Security Initiative

- Engagement at White House level
- COA co-hosted CESI Summit (Jan 2015), brought together Carib leaders, multilaterals, private sector, USG
- Fiscal, energy, and environmental challenges
- “Propitious moment” – high growth rates, declining oil prices, falling renewable energy costs
- Fixing the roof
- Promoting private sector investment in the Caribbean
- Active involvement from OPIC, who will disburse an initial \$43 million for the Blue Mountain Renewables wind project in Jamaica.
- Coordination, expanding markets



Natural Gas

- Trinidad and Tobago
 - Largest oil and natural gas producer in the Caribbean
 - World's 6th largest LNG producer
- LNG cheapest form of delivery
 - More efficient than CNG
 - More practical than pipeline system
- Dominican Republic
 - Home to AES Andes LNG import terminal+
- U.S. LNG exports
- Need for more import terminals

Renewables

- Story of Caribbean
 - Factor endowments: sun, wind
- Success stories: USVI, PR, Barbados, Jamaica, Grenada
- Not short or medium-term strategy for baseload energy needs
- Geothermal not economically viable on a large scale
- Fossil fuels 75 percent of energy mix in 2035
- Grouping of markets together to scale up investments
- Caribbean Electric Utility Services Corporation (CARELIC)

Thank you!

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