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

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• 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
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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