#### Linking Renewable Energy and Energy Efficiency to Security and Climate Change in the Caribbean

Seminar on Climate Variability and Climate Change: The Caribbean's Response

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#### The Current Energy Regime: Key Challenges

- Nearly 100% of the electricity and transportation in the Caribbean is fueled by imported petroleum products (T&T is the exception)
- Electricity costs are high, due to international petroleum prices and small scale of generation facilities
  - Environmental impacts associated with diesel generators have negative effects on the environment and tourism economy

# **Energy Sector Vulnerability in the Caribbean**

- Fuel supply disruptions (weather threats to shipping, minimal storage capabilities, etc.)
- Fuel price fluctuations (economic hardships associated with rising costs)
- Climate risk (Hurricanes, sea level rise, increased frequency/strength of extreme weather events, etc.)



#### Addressing the Challenges: Energy Security Alternatives

#### Energy Diversification

- Use of domestic renewable resources (wind, geothermal, biomass, solar, etc.)
- Regional energy interconnections
- Exploit fossil fuel resources in the region (Barbados), diversify fuels (coal, natural gas)

#### Energy Efficiency

 Commercial (tourism) and Industrial energy conservation, and residential DSM/EE measures



In the same way that we are restructuring the banana industry and diversifying the agricultural sector in response to the realities of trade liberalization, we have also made big strides in reducing our reliance on the consumption of fossil fuel, by taking a lead in the renewable energy sector. St. Lucia Prime Minister Kenny Anthony, 2000, at The Hague Conference of Parties (COP)



- Global Sustainable Energy Islands Initiative
  - Established SEP processes: Grenada, Dominica, St. Lucia, St. Kitts & Nevis
  - Future SEP programs: Bahamas, St. Vincent & the Grenadines, Antigua & Barbuda (seeking funding – EUEI)
  - Development of RE/EE project portfolio and TA/financial brokering





- Eastern Caribbean Geothermal Development Project (Geo-Caraïbes) – GEF+ Funded
  - St. Lucia, St. Kitts and Nevis, Dominica
  - Resource exploration, Policy preparation, and Subsidized drilling risk finance
  - Catalyze multiple commercial geothermal projects and interisland electricity transmission





- St. Kitts & Nevis Bio-Energy Feasibility and Development Program
  - SKN sugar industry closed in 2005
  - OAS/GSEII team assessing biomass to energy alternatives (sugar and municipal waste)
  - Options may include ethanol, electricity, other byproducts
- Potential for replication throughout Caribbean Basin (seeking funding)





- Global Village Energy Partnership (GVEP)
  - Address rural energy needs
  - Dominican Republic
  - Guyana and Suriname
- Collaborate with other Int'l Programs:
  - Caribbean Renewable Energy Development Project (CREDP)
  - Renewable Energy and Energy Efficiency Partnership (REEEP)

# **Thank You**

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