

Synergy and Interconnection Projects

April 7 , 2011



Caribbean Basin Energy Grid as a U.S. Policy



Secretary Clinton at the
Energy and Climate Ministerial
of the Americas
April 2010

“The OAS, the Caribbean energy ministers, CARICOM, the World Bank, the IDB, and officials from Puerto Rico and the U.S. Virgin Islands launched a dialogue to explore the possibility of installing undersea electric cables in the region to give the Caribbean access to new power supplies.”

Caribbean Basin Energy Grid as a U.S. Policy



Secretary Chu at the Energy and
Climate Ministerial of the Americas
April 2010

“Some of these islands-states have wind and solar resources... in order to make them more economical it would be nice if you could connect these islands-states to each other... that would make the investment in clean energy renewables much accessible, more profitable”

Puerto Rico Proposal for the Caribbean Energy Grid

Connecting Puerto Rico – Dominican Republic – Haiti – Jamaica – Belize, Honduras – Costa Rica – Panama – Colombia – Curacao – Grenada – and other 14 Islands



Puerto Rico Energy Grid Team



Office of the Governor



Puerto Rico Department of State



Department of Economic Development and Commerce



Energy Affairs Administration



Puerto Rico Electric Power Authority



InterAmerican Energy Sources

Puerto Rico as a regional energy hub

- **Puerto Rico Electric Power Authority (PREPA) has export capacity**
 - Current excess capacity of over 1,000 MW
 - Electrical grid is reliable and redundant
- **PREPA is an active member of the U.S. energy industry**
 - PREPA's Executive Director is a member the American Public Power Association board of Directors
- **PREPA is a regional leader in technical assistance**
 - Training at PREPA's certified Distribution and Electric system training centers (CASE and CADE Spanish acronym)
 - Service for restoration during emergencies
 - Assessment of operations of electric systems including generation and dispatch
 - PREPA NET, a subsidiary company, specializes in including telecommunication cables into energy infrastructure.

Submarine Power & Telecom Cable From Puerto Rico to U.S. Virgin Islands



IAES assumes all risks for the construction, financing and operation of the project

Submarine Power and Telecom Cable Stage 1: Fajardo to St. Thomas

Underwater cable from Fajardo to
St. Thomas

Initial Minimum Load: 20 MW @ 115 KV

- 50 miles (up to 150 MW)
- **DC system technology**
 - \$176 million Est. Cost
- **AC System Technology**
 - \$120 million Est. Cost
- The cable will allow IAES to sell PREPA's excess capacity to USVI's WAPA
- This will allow USVI to have a reliable energy source
- **DOE grant of \$400K** issued to WAPA to conduct a feasibility study. Will be Finalized June 2011.



Submarine Power and Telecom Cable Stage 2: St. Thomas to BVI

Project Scope:

Route 1: St. Thomas Harley to St. Thomas East End (13 miles)

- AC system technology
 - \$15 million, Est. Cost

Route 2: St. Thomas East End Substation to Tortola (12 miles)

- Initial Minimum Load: 10 MW @ 34.5 KV.



Next Steps

PR – USVI Interconnection

- **Feasibility Study** shall be completed by June 30, 2011.
- **Environmental Assessment:** est. cost \$2 million.
- **Access to Financing**, such as Federal Grants, loans and others.
- **Technical Assistance**

Caribbean Energy Grid

- **Feasibility study** to confirm route, prices, technologies and any other power sources available in other countries in order to connect them to the Caribbean Energy Grid.
- **Form a Regional Committee** with Multilateral organizations and utilities of the Region.

Questions?