



Energy Security for Economic Development in Latin America and the Caribbean

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Key challenges associated with the electricity sector

- ◆ **Generation requirements**
 - ▶ Increasing demand (additional generation capacity, interconnections among countries)
 - ▶ Extension of transmission and distribution lines (rural poverty)
 - ▶ Reliable supply of fuels (security of gas pipelines, droughts, natural disasters, acts of terrorism)
- ◆ **Rising/fluctuating fossil fuel prices (fixed at international markets)**
 - ▶ Dependence on fossil fuels imports in most of the region



Key challenges associated with the electricity sector

◆ Environment

- ▶ Pollution: smog, other emissions, image.
- ▶ Concentration of CO₂: climate change, natural disasters.

◆ Geography

- ▶ Region with abundant albeit unevenly distributed resources
- ▶ Broad variation of consumption patterns (economic variations)
- ▶ Highly-urbanized region



Strategies that encompass energy security challenges and development

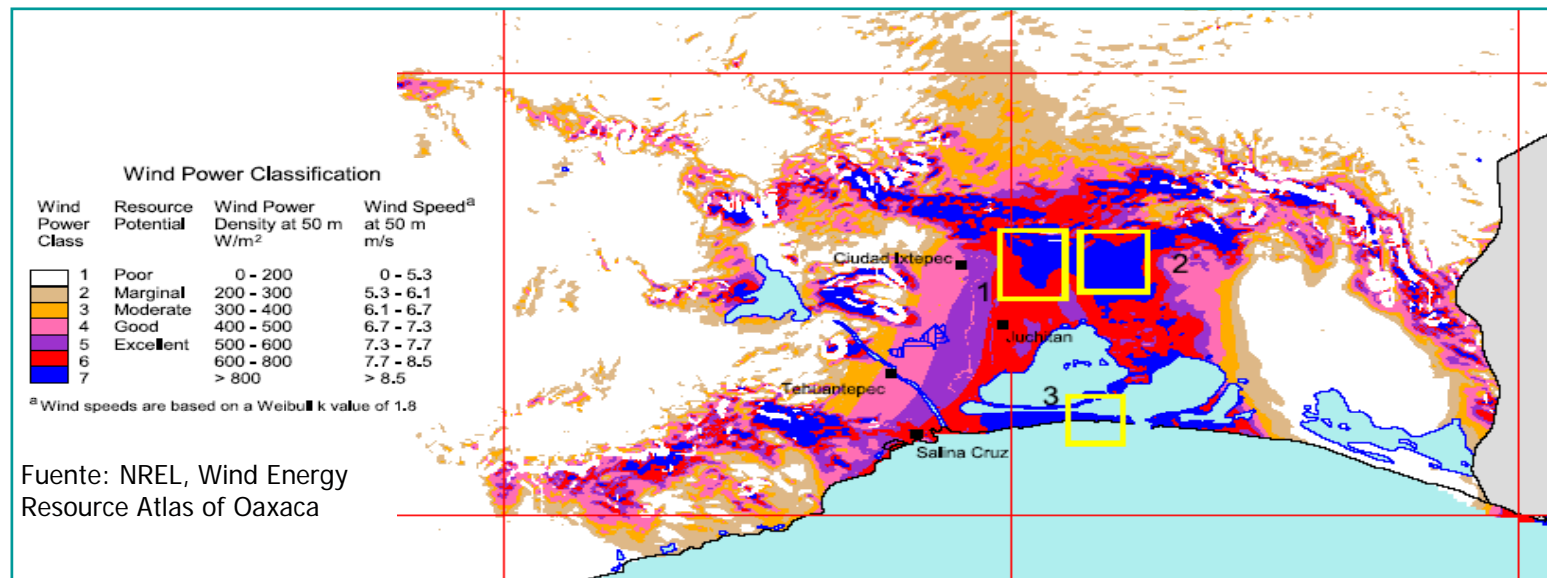
- ◆ Diversification of energy sources
 - ▶ Expanded portfolio of electricity generation fuels and resources
 - Renewables, fossil fuels, nuclear energy.
 - ▶ Diversified transportation fuels options
 - e.g.: biofuels in Brazil, hybrid vehicles in the US.
 - ▶ Diversified sources of fossil fuel supplies



Key challenges associated with the use of renewable energy technologies

◆ Gaping knowledge of:

- ▶ Actual energy potential
- ▶ Proven new energy efficiency technologies
 - Example addressing the knowledge of the actual energy potential:
 - Mapping of wind resources in Mexico
 - La Venta I, II = 90 MW Installed; Almost 2,000 MW planned





Key challenges associated with the use of renewable energy technologies

- ◆ Access to adequate project financing:
 - ▶ Limited amount of financing for the preparation of projects
 - ▶ High upfront investment costs
 - ▶ Long-term financial requirements extended throughout long risk periods
 - Lack of long-term power purchase agreements
 - ▶ Small projects when compared to conventional energy projects
 - Transactions costs are extremely high
 - ▶ Lack of specific incentives



Key challenges associated with the use of renewable energy technologies

- ◆ Example dealing with the issue of financing barriers to renewable energy:
 - ▶ Climate change investment funds
 - The funds (US\$ 6,100 million) available in the form of donations, soft loans, and/or mitigation instruments will be managed by multilateral development banks and the World Bank
 - Clean Technologies Fund and Strategic Climate Fund
 - Launched in 2009
 - www.worldbank.org/cif



Key challenges associated with the use of renewable energy technologies

- ◆ Policies, regulations and markets favor conventional energies
 - ▶ Need of long-term power purchase agreements
 - ▶ High upfront investment costs
 - ▶ Lack of fiscal incentives
 - ▶ Infrastructure designed for conventional energy
 - ▶ Specific rules for the development and use of renewable energy and energy efficiency systems



Key challenges associated with the use of renewable energy technologies

- ◆ Establish goals
 - ▶ Renewable energy laws
 - California
 - ▶ Mandates to electric utilities
 - Brazil (PROINFA)
 - ▶ National Energy Plans
 - Saint Lucia
 - ▶ Summit of the Americas 2009
 - 50% RE by 2050
- ◆ Establish mechanisms for the purchase of renewable energy
 - ▶ Feed-in Tariffs
 - Ecuador
- ◆ Projects bidding processes
 - Mexico
- ◆ Fiscal Incentives Law
 - Guatemala, Dominican Republic





DSD/OAS Energy Program Sustainable Energy Partnership for the Americas - SEPA

- ◆ Assistance in the development of sustainable energy policies
- ◆ Technical assistance on renewable energy and energy efficiency
- ◆ Knowledge and information management / hemispheric energy partnerships
- ◆ Facilitate access to financing sources





DSD/OAS Energy Program Sustainable Energy Partnership for the Americas - SEPA

- ◆ Assistance in the development of sustainable energy policies
 - ▶ Initiative of Sustainable Energy Policies (capacity building)
 - ▶ Renewable Energy Incentives law in Guatemala
 - ▶ Sustainable Energy Plans (St. Lucia, Dominica, St. Kitts & Nevis, Grenada)
 - ▶ Mexico (RE regulations)





DSD/OAS Energy Program Sustainable Energy Partnership for the Americas - SEPA

- ◆ Technical assistance on renewable energy and energy efficiency
 - ▶ Bioenergy feasibility study
 - St. Kitts & Nevis
 - ▶ Bioenergy Initiative for the Caribbean Basin (concept)
 - ▶ Eastern Caribbean Geothermal Energy Project
 - Dominica, St. Lucia, St. Kitts & Nevis
 - ▶ Rural Schools Electrification Program (FEMCIDI/OAS)
 - Honduras, El Salvador, Guatemala.
 - ▶ Geothermal workshop for the Andean Region
 - Chile, Argentina, Bolivia, Peru, Ecuador.
 - ▶ Assessment of solar and wind energy sources
 - Central America (PNUMA)





DSD/OAS Energy Program Sustainable Energy Partnership for the Americas - SEPA

- ◆ Knowledge and information management / hemispheric energy partnerships
 - ▶ Renewable Energy and Energy Efficiency Partnership (REEEP)
 - The OAS/DSD operates as REEEP's Regional Secretariat for Latin America and the Caribbean
 - ▶ Global Village Energy Partnership (GVEP)
 - The OAS/DSD organized a hemispheric conference and provides technical assistance





DSD/OAS Energy Program Sustainable Energy Partnership for the Americas - SEPA

- ◆ Facilitate access to financing sources
 - ▶ Collaboration with the Sustainable Energy and Climate Change Initiative of the IADB
 - ▶ Access to financing from the Global Environment Facility (GEF) and the World Bank
 - ▶ Technical assistance in climate change issues and tools of the Clean Development Mechanism (CDM)





Thank You!

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