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Eastern Caribbean Geothermal Development Project (Geo-Caraïbes)

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The Foundation for the Geo-Caraibes Project



- **The Opportunity:** The island nations of Dominica, St. Lucia, and St. Kitts and Nevis possess geothermal resources that may be exploitable for commercial power generation



The Foundation for the Geo-Caraibes Project



- **The Challenges:**
Despite repeated attempts, efforts to prove the geothermal resources and develop commercial power have been unsuccessful



The Foundation for the Geo-Caraibes Project

Geo-Caraibes



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- **The Response:** The Countries, OAS, UNEP, AfD and others, have secured grant assistance from the Global Environment Facility to address the Challenges



What is the Vision for the Project?



- **Create the conditions for the “best case” commercial development of geothermal energy in the Eastern Caribbean**
 - ◆ **“Best Case”**
 - ☞ **Maximum Power**
 - ☞ **Low Cost Electricity**
 - ☞ **Safe Conditions**
 - ☞ **Environmental Protection**

How is the Vision Achieved?



- **Maximize Geothermal Development by Aggregating Demand including Inter-island transmission**
- **Create market conditions (policies, financing, human/institutional capacity) for development**
- **Attract proven geothermal developers**



Watten Waven, Dominica

Pursuing The Vision – Financial Resources



- OAS, UNEP, Dominica, St. Kitts and Nevis, St. Lucia, AfD, EDF, CFG... Have secured grant funding from the Global Environment Facility (GEF)

- **Phase 1 (GEF PDF/B):**
 - ◆ Pre-feasibility assistance toward geothermal development in the project countries
 - ◆ US\$700,000 (GEF) + Matching funds (AfD, EDF, OAS, Countries)
 - ◆ 12 months (April 2004 – April 2005)

- **Phase 2 (GEF Full Project):**
 - ◆ Feasibility and commercial development of several geothermal energy projects
 - ◆ US\$7.5 MM (GEF) + Matching Funds
 - ◆ Up to six years

Pursuing the Vision – Three Project Pillars



- I. **Technical:** Assess the resource/technical potential for the several sites and electricity interconnection scenario = **Reduce resource uncertainty and development risks**
- II. **Policy/Legal:** Reform legal framework and Develop Local/Regional Capacity = **Reduce contract/policy uncertainties, expedite licensing/permitting, and strengthen local inputs**
- III. **Financial:** Prepare Geothermal Drilling Risk Fund = **Reduce financial risks associated with initial commercial exploration**



Sulfur Springs, St. Lucia

I. What Are the Technical Expectations for the Project?

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- Resource Evaluation: The Project will deliver predictable geology, geochemistry, and geophysics data
- Infrastructure Assessment: Analyze local and regional power demand, and feasibility of inter-island electricity transmission
- Highlight Commercial Project Development Scenarios
- Facilitate Arrangements For Project Deals (Assist project countries with bidding (RFP or sole source negotiations))



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II.a What are the Policy/Legal Expectations?



- Enable sound, transparent Legislation, Regulations, Contracts, Licenses, International PPAs, Treaties
 - ◆ Balance protection of national resources and attraction of investors
 - ◆ Establish geothermal-specific laws
 - ◆ Eliminate existing legal disputes
- Create commercially acceptable legal environment to attract and arrange for project deal

II.b What are the Capacity Building Expectations?



- Develop local expertise to support legal, technical, and financial aspects of project development
 - ◆ Establish national government geothermal desk
 - ◆ Build local expertise in legal sector
 - ◆ Create cadre of young geothermal professionals

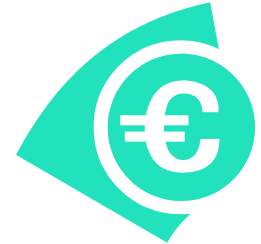


III. What are the Geothermal Finance Expectations?



- Reduce the Risks Associated with Geothermal Exploratory Drilling

- ◆ Despite the potential, there has not been any exploratory drilling in Dominica nor St. Kitts and Nevis
- ◆ The high cost / high risk of exploration deters drilling activities



Project Approach - Finance



- Establish an Eastern Caribbean Geothermal Drilling Risk Fund
 - ◆ Up to \$10,000,000 total fund
 - ☞ \$5,000,000 from GEF
 - ☞ Additional from AfD, FFEM, EU, others
 - ◆ Drilling funds will be available to developers on a competitive basis
 - ◆ Fund design will be led by AfD
 - ◆ Concept: Funds are as a loan for successful projects; grant for unsuccessful project

Timeline



- Six to Twelve Months
 - ◆ Create legal environment, technological proof of concept, institutional arrangements for international deal(s), domestic wherewithal to administer investment and revenue flow
- Nine to Eighteen Months
 - ◆ International Project Arrangements
- Two to Three Years
 - ◆ Launch Project Investments
- Three to Four Years
 - ◆ Turn power on
- Five to Ten Years
 - ◆ Turn the power up
- An investment in the Future... A vision for generations

Thank you



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