

Wind Power

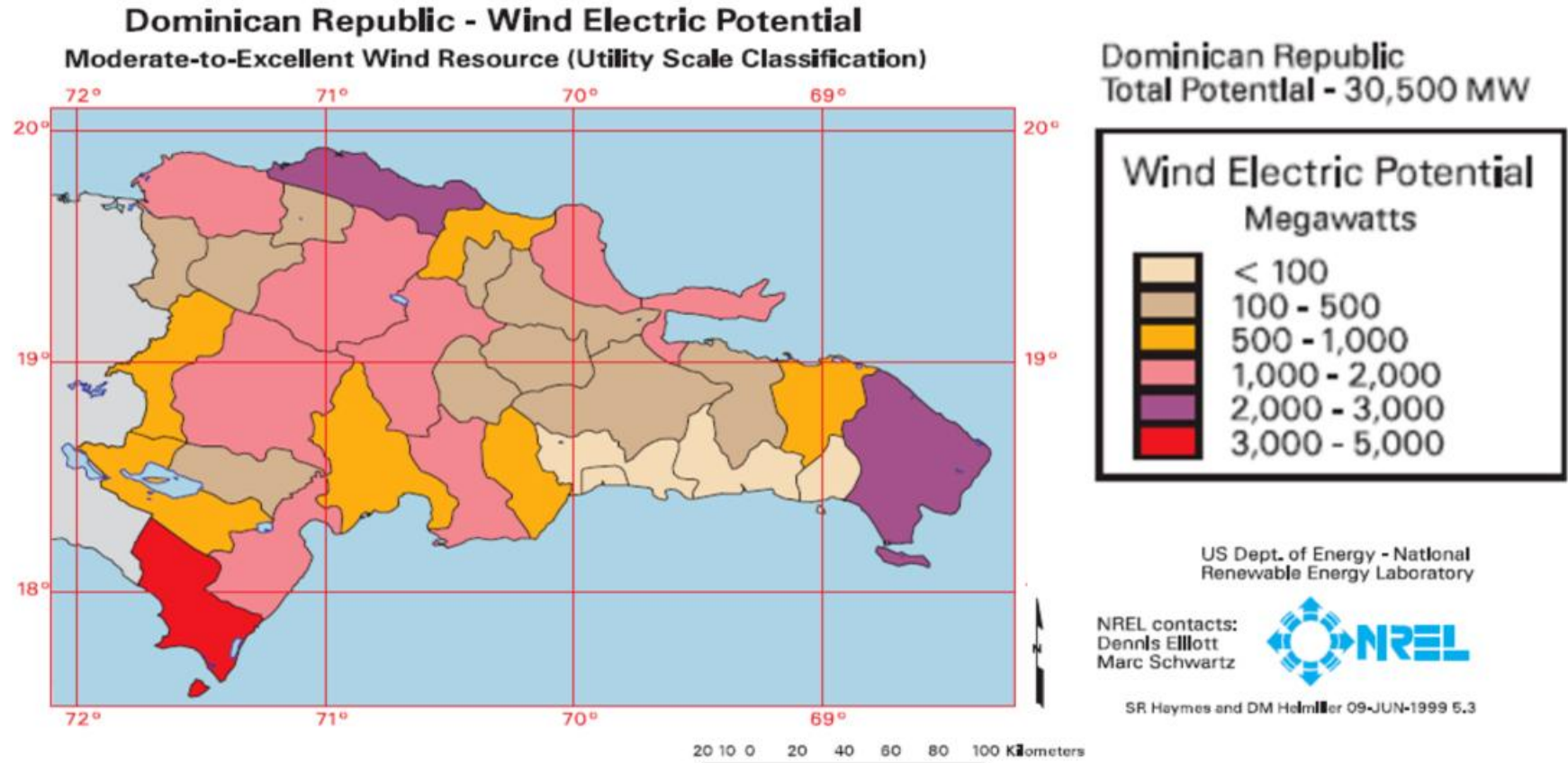
The Dominican Experience



The first Wind Farms in the Dominican Republic



Wind Resource available in DR



The expected capacity factor in Pedernales is 30%.
In comparison, only 20% is required to install a wind farm in Germany.

**Wind
Measurements
1-2 years**

**Processing
2-3 years**

**Construction
8-12 months**

Development of a Wind Farm in the Dominican Republic

Process:

- Set up of the measurement tower
- Selection of the site
- Assessments: wind resource + environmental + financial
- Land agreements
- Interconnection studies
- Financing
- Permits
- Equipment purchase
- Construction contracts.
- Operation and maintenance.

The company received significant support from the National Energy Commission as regulatory entity. There were significant challenges in implementing the newly enacted Law on Renewable Energy.



Our Experience



Timeline

- Development → 2002
- Measurements → 2003
- Investment decision → 2005
- First attempt to built a wind farm → 2006
- Beginning of construction in Pedernales → 2010
- Inauguration of Los Cocos and Quilvio Cabrera → 2011

National Barriers

- Technical
- Land ownership
- Bureaucracy



Details of the Projects



Project Location



Juancho, Pedernales

56 Km Transmission line



Description of the Wind Farms



Los Cocos (EGE Haina)

- 14 x Vestas V90 WTG
- 25 MW
- Blade measurement: 45 mts. (90 Mts. diameter)
- Tower measurements: 80 mts.

Quilvio Cabrera (CEPM)

- 5 x Vestas V82 WTG
- 8 MW
- Blade measurement: 41 mts. (82 Mts. diameter)
- Tower measurements: 72 mts.



Description of the Wind Farms



- Weight of the **windmills** → 100 tons
- **Crane** tonnage for the assembly → 1,250 tons
- **Tower Base** →
 - 26 tons of rebars
 - 300 mt³ of concrete
- Two **substations** → Los Cocos and Cruce de Cabral
- **Transmission Lines** → 56 Km, voltage level of 138KV



Wind mill models



VESTAS V82



VESTAS V90

Social and Environmental Benefits



- It will produce enough energy to power **60,000** homes.
- The country will avoid purchasing **200,000** barrels of oil per year.
- It will prevent the release of **70,000** of CO₂ into the atmosphere per year.
- Currently in the process of registering as a United Nations Clean Development Mechanism (UNECCC).

Social Program



- We develop our projects within a corporate framework that is both environmentally and socially responsible.
- We contribute to improve the lives of the wind farm neighbors by working hand in hand with the communities and developing alliances with national and international institutions.



Agriculture and Fishing

We support their main economic activities, contributing to develop their capabilities and generating alliances that favor their efforts to generate income.

- **Agriculture:** We are setting up and providing energy to the irrigation system that brings water to the lands where the wind farm is built. We will also provide assistance and counseling to the Asociación de Productores Agrícolas de Juancho.
- **Fishing:** We work with the fishermen of the area to broaden their capacities, organize them and promote sustainable fishing practices.



Education and Sports



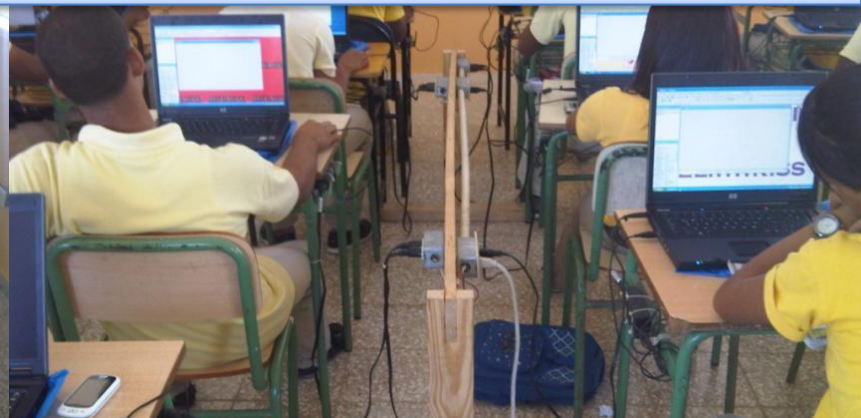
- **Sponsorship of Juancho's Elementary School** (with the Ministry of Education and AMCHAM).
- **Training for teachers and students** (with AMCHAMDR and the Eco Schools Program)
- **Donation of Solar Panels** for Guarocuya Technical School in Enriquillo.
- **Donation of books and equipment** to the Antonio Guzmán Fernández High School in Juancho.
- **Literacy Program for 500 adolescents and adults** (with Sur Futuro).
- **Lighting of the basketball court** of Juancho.
- **Remodeling of the baseball field** of Juancho.



Solar Panels for computer lab



Enriquillo's High School



Environmental resources handling and Hygiene



We worked with Caribbean Student Environmental Alliance, Ocean Conservancy and with Peace Corps volunteers on:

- Training the community on techniques for water purification
- Providing a system for water treatment to Juancho's High School
- Promotion of ecotourism
- Beaches and mangroves clean up

Other initiatives:

- Relocation of Juancho's waste dump
- Donation of trashcans
- Repaired a local bulldozer for infrastructure projects in Juancho



Beach Clean up



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