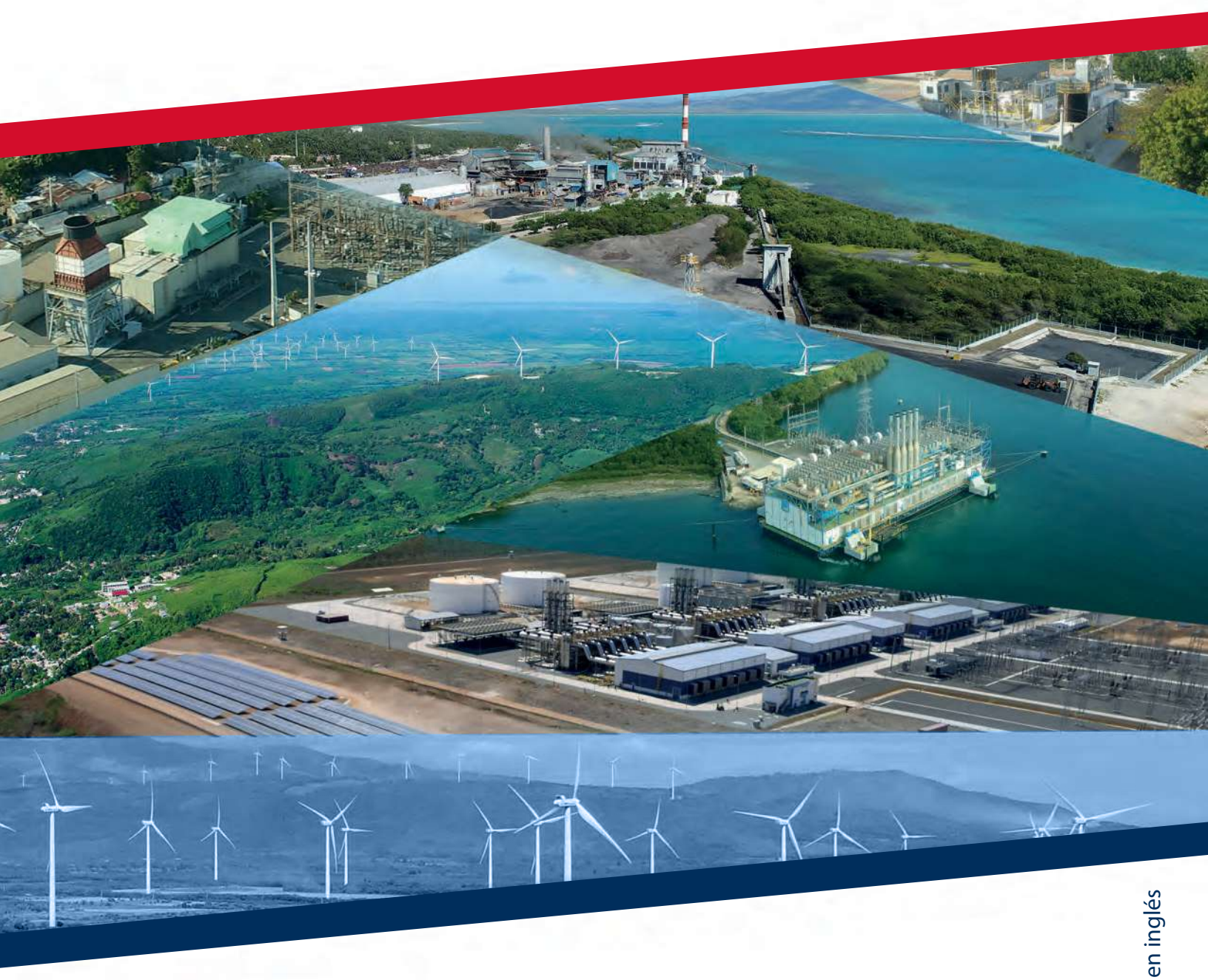
ENERGY
DOSSIER



PRO DOMINICANA
CENTRO DE EXPORTACIÓN E INVERSIÓN DE LA REPÚBLICA DOMINICANA.

Versión en inglés

The Dominican Republic offers a highly favorable climate for private investments in various projects related to energy. This, based on a favorable legal framework for both conventional energy generation projects and alternative sources.

The Dominican energy market is based on generation, transmission and distribution-commercialization companies. Enterprises that wish to run generation duties must comply with all the requirements established in the environmental and current regulations of the subsector. The transmission system operates on a free access basis, with regulated transmission charges.

The National Interconnected Electric System (SENI by its acronym in Spanish) is composed of generation plants, transmission lines, electrical sub-stations, and distribution lines, all interconnected, that enable electricity to be generated, transported, and distributed. It is formed by the National Energy Commission (CNE), the Superintendence of Electricity (SIE), the Coordinating Body (OC), the generation companies, the transmission (ETED) and the distribution companies.

Furthermore, the electricity market is made up of two types of markets, the contract and the spot market.

- **Contract Market:** In this type of market, the parties involved agree on the purchase and sale of energy and capacity based on quantities, prices and specific terms. Contracts between generators and distributors show as an energy purchase agreement, where generators sell amounts of capacity and energy at the distributor's point of consumption, regardless of where it is generated; however, the agreements of power sale do not involve the buyer in the economic dispatch of the seller.

- **Spot Market:** It works based on the energy transactions as they occur. As the difference between the total energy dispatched by the generators in the economic dispatch and the energy actually demanded in accordance with the contracts. Likewise, the spot market is also made up of strong power transactions determined by the Coordinating Organism.

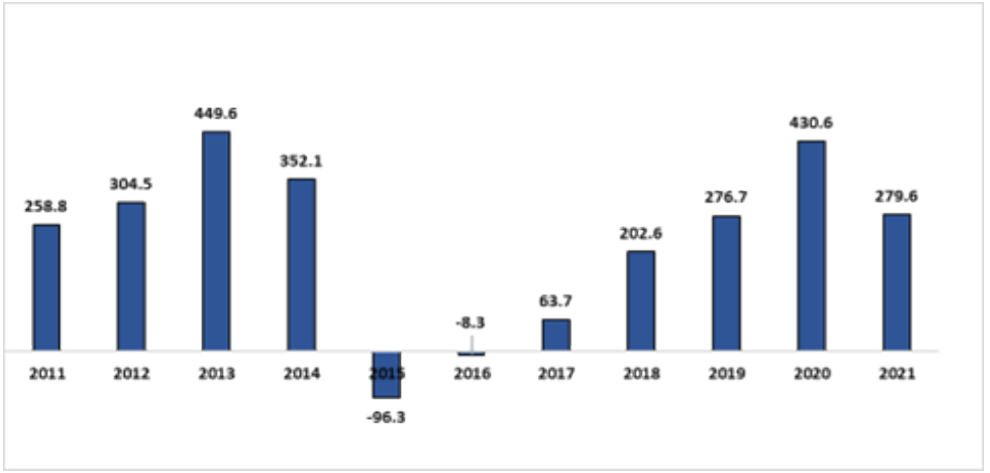
The spot price is calculated hourly based on the short-term marginal cost, which is defined by the production variable cost of the last generated unit that was dispatched to serve an additional 1 kWh. If the system is rationing, the marginal cost is set by the Superintendence as the cost of energy undelivered.

This market is fundamentally made up of generation, transmission and distribution companies. In the Dominican energy system, the energy sources included in the Energy Balance are simplified according to the following categories: oil and derivatives, natural gas, mineral coal, renewables and electricity.

Growth and trends of the Sector

During the 2011-2021 period, the Foreign Direct Investment (FDI) in the conventional energy sector reached US$2,513.50 Million, representing the 8.66% of the global amount of FDI attracted by the Dominican Republic in 2021. For january-march 2022, the amount registered for Foreign Direct Investment of the sector was of US$142.2 million, performing as 13.8% of the total FDI retained for the period.

FDI Flow in the Energy Sector, 2011- 2021
Value in US$Million



Source: Datamarket with Central Bank of the Dominican Republic data.
Note: The years with negative values, correspond to operative losses, divestment and/or dividends payment.

GENERATION BY TECHNOLOGY

2020

Natural Gas	Coal	Hydroelectric	Fuel Oil	Solar	Wind	Biomasa MSW
44%	31%	10%	7%	2%	5%	1%

2025

Natural Gas	Coal	Hydroelectric	Fuel Oil	Solar	Wind	Biomasa RSU
43%	21%	8%	4%	7%	12%	5%

2030

Natural Gas	Coal	Hydroelectric	Fuel Oil	Solar	Wind	Biomasa RSU
46%	15%	8%	1%	11%	13%	6%

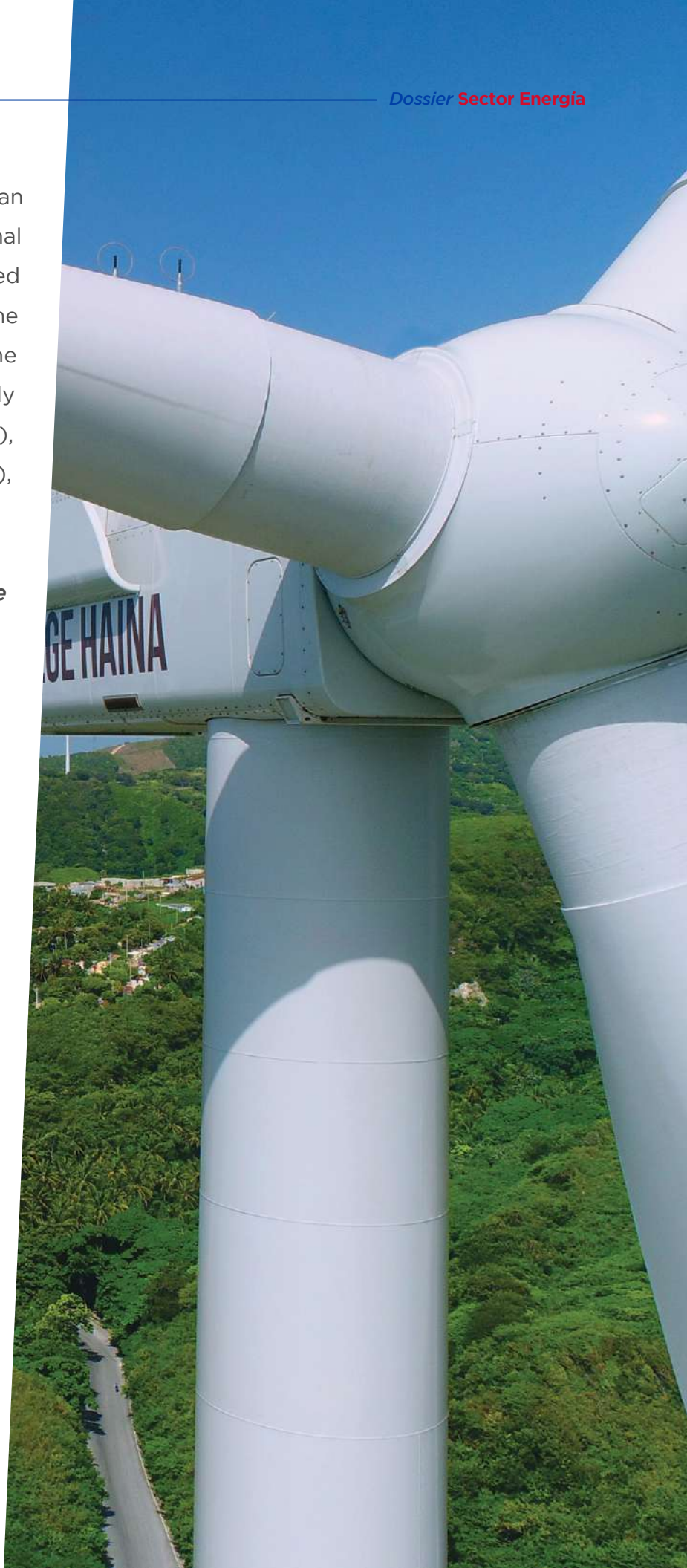
Fuente: Comisión Nacional de Energía,

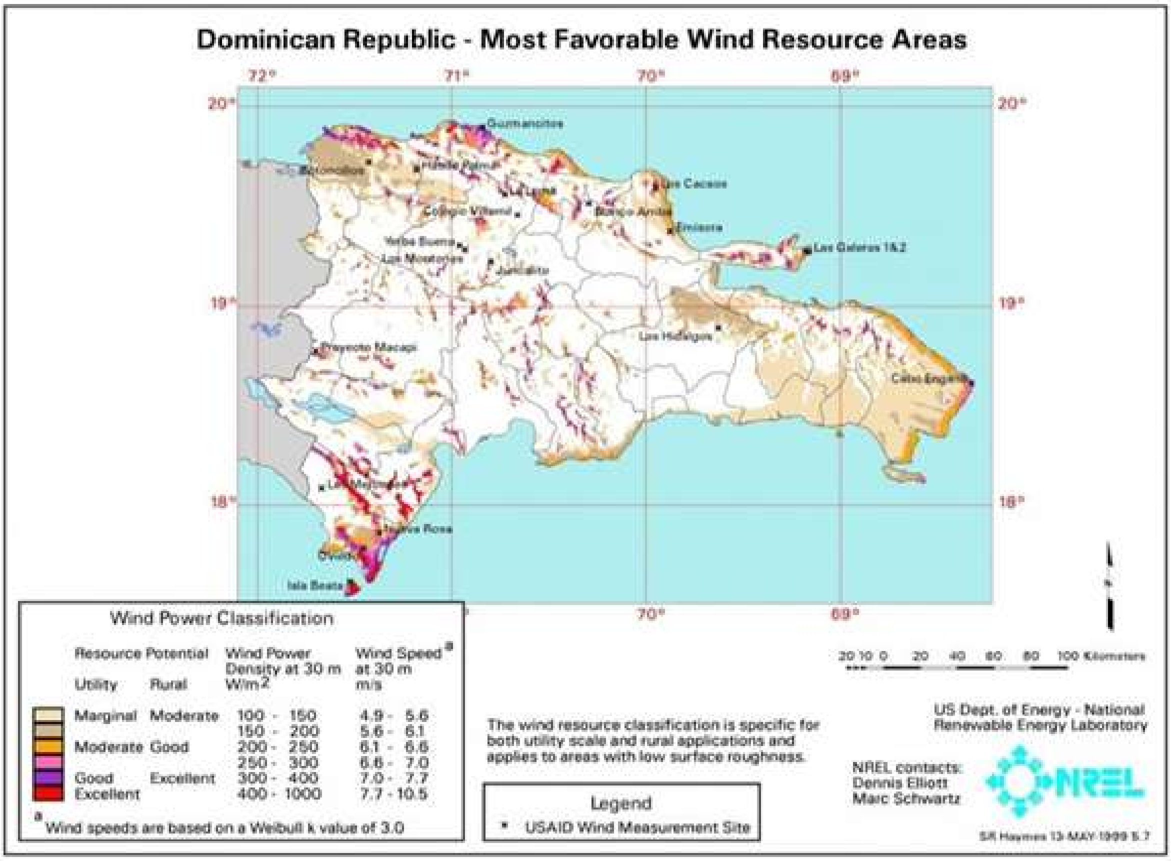
Energy generation in the Dominican Republic is dominated by thermal plants that mostly run on imported fuel or gas (or liquid natural gas). The total energy generation of the Dominican Republic is mainly composed of: natural gas (44%), crude oil (7%), mineral coal (31%), water (10%) and wind (5%).

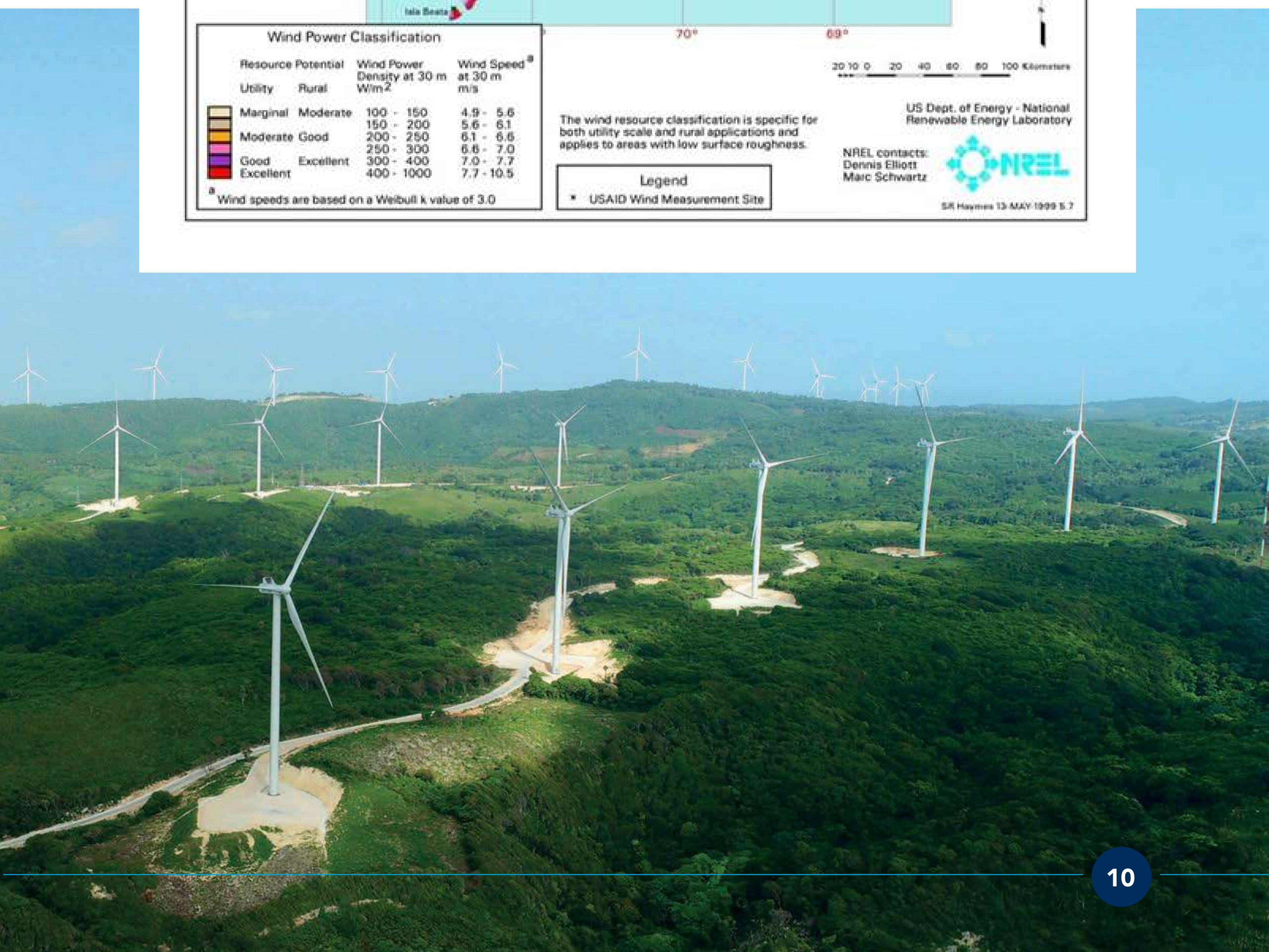
Conventional and Alternative Energy Sources

Wind power

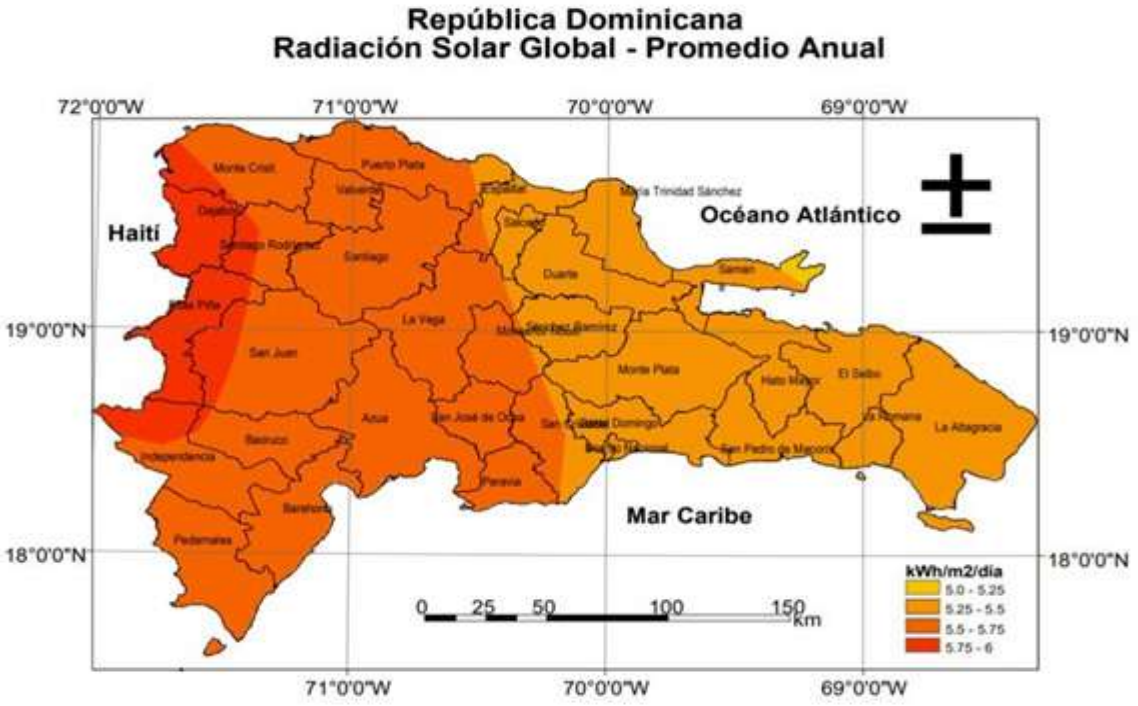
The Dominican Republic has a potential of 30,000 MW in wind power generation. The coastal regions of the southwest and north of the country are the ones with the greatest potential, as it can be seen in the map below. It is the renewable source that currently has a greater margin of use (more than 100 MW excluding hydro), which has attractive possibilities for private investment.




Dominican Republic - Most Favorable Wind Resource Areas
72°
71°
70°
69°
20°
19°
18°
Guzmancitos
Los Cacaos
Juncalito
Las Galeras 1&2
Las Hidalgos
Proyecto Macapi
Cabo Engaño
Isla Beata
Wind Power Classification
Resource Potential
Utility
Rural
Wind Power Density at 30 m W/m2
Wind Speed[a] at 30 m m/s
Marginal Moderate 100 - 150 4.9 - 5.6
150 - 200 5.6 - 6.1
Moderate Good 200 - 250 6.1 - 6.6
250 - 300 6.6 - 7.0
Good Excellent 300 - 400 7.0 - 7.7
Excellent 400 - 1000 7.7 - 10.5
[a] Wind speeds are based on a Weibull k value of 3.0
The wind resource classification is specific for both utility scale and rural applications and applies to areas with low surface roughness.
Legend
USAID Wind Measurement Site
20 10 0 20 40 60 80 100 Kilometers
US Dept. of Energy - National Renewable Energy Laboratory
NREL contacts:
Dennis Elliott
Marc Schwartz
NREL



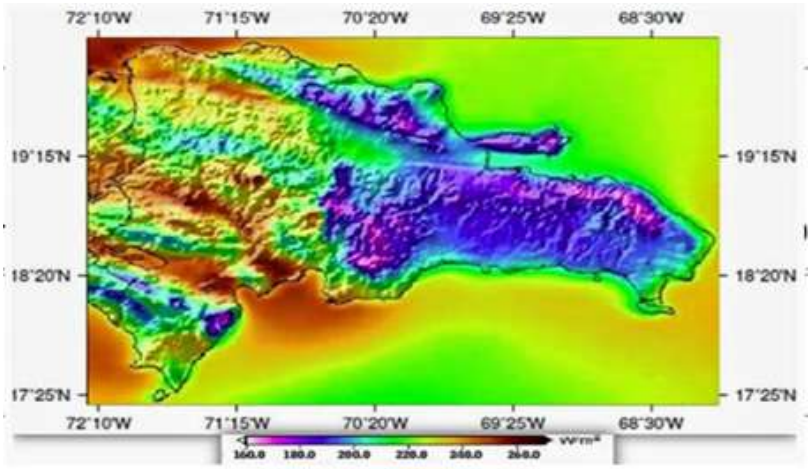
Photovoltaic Energy



Currently, investments in this sector are those with the greatest potential even though, they have been made to a lesser extent, highlighting a considerable number of individual (residential) projects and private companies that are self-generating solar energy.

The entire national geography has an estimated generation potential of 50,000 MW of energy, thanks to its geographical position in the Caribbean and the excellent levels of solar radiation throughout the year. Currently its use for power generation adds up to more than 621 MWp in definitive concessions and 2,012 MWp provisionally concessioned, both connected to the SENI.

According to the information provided by the "Solar and Wind Energy Resource Assessment " program, the annual average of global solar radiation is between 5 kWh/- 6 kWh/, levels of insolation that are considered optimal for thermal applications (heating of water) and for the generation of electricity (photovoltaic solar)



Irradiación Normal Directa

Biomass

There is potential within the country, mainly with the waste generated in agricultural activity, such as bagasse and rice husk; such being the case of the San Pedro BioEnergy biomass plant, located in the city of San Pedro de Macorís with a generation of 35 MW of electrical energy with sugarcane bagasse.

• CONCESSIONS

Thanks to the trust in the sector and the favorable environment for investment, we have significant dynamism in the electricity subsector, in which a significant number of investments are being allocated to the generation of electricity from renewable sources. Currently we have 29 provisional concessions, 57 definitive and 62 in process.