

Powering Progress: Investing in Renewable Energy

The Maldives primarily depends on imported fossil fuels to meet its energy needs, a demand that is escalating as the nation progresses on its development journey. Currently, over 20% of the total import bill is allocated to fuel expenditures.

Transitioning to a low-carbon, climate-resilient, and environmentally sustainable economy is a key priority for the Government. This initiative aims to reduce foreign currency exposure related to fuel costs while advancing the country's renewable energy goals. His Excellency President Dr. Mohamed Muizzu pledged to meet 33 percent of the country's energy requirements from renewable energy sources by 2028 at the COP28 summit in Dubai.



With abundant sunshine throughout the year and its status as an eco-sensitive nation, the Maldives presents an exceptional investment opportunity in solar energy, as well as exploration of wave and ocean energy for prospective investors.

1. Scaling up renewable energy share in the Outer Islands of the Maldives

Category 1	 Solar PV and storage to meet 100% of the energy need for islands whose peak load is around 100kW or lower. 90 islands accounting for 7% of total energy needs and 13% of total population. These islands require 67 MW solar PV with 225 MWh of battery energy storage.
Category 2	 Solar PV and storage to meet 100% of daytime power need for islands whose peak load is between 500kW or 100KW. 70 islands accounting for 26% of total energy needs and 29% of total population. These islands require 61 MW solar PV with 190 MWh of battery energy storage.

2. Ocean Thermal Energy Conversion (OTEC) for Male' City

Ocean Thermal Energy Conversion (OTEC) technology is one potential technology suitable for Maldives to meet its energy targets. With the enormous heat capacity of the ocean, the surface temperature does not vary between day and night making OTEC a base load power generating system capable of operating 24 hours a day, throughout the year unlike solar and wind which are intermittent in nature.

The Maldives is surrounded by Deep Ocean, therefore, the country has relatively easy access to deep cold water which is necessary for the OTEC process. With latitudes between 1° S and 7° N, ensures warm surface seawater and in fact the Indian Ocean has long been recognized as an excellent thermal energy source.

In addition to electricity generation this OTEC project may provide avenues to establish following production facilities:

- Desalinated Water and bottling
- · Lithium recovery and export from the deep seawater
- Green hydrogen production

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