Future50

Energy

Renewable Energy Generation

Hydro Wind Energy

https://hw.energy/

#ClimateTech
#NatureBasedSolutions

Headquarters and Middle East operational countries:

United Arab Emirates

Summary

Hydro Wind Energy describes itself as developing a **disruptive technology** to provide **low-cost clean electricity**, **grid scale energy storage**, and seawater desalination. The company details that its **solution OceanHydro Omni** works with wind offshore in deep waters using vertical axis wind rotors and ocean-based mechanical energy storage systems.

Impacts

Hydro Wind Energy states that its solution works towards lowering the cost of electricity, eliminating the volatility of **wind power** and **harnessing the entirety of the wind resource from 4m/s to 40 m/s.**

The company claims that its technology can therefore help increase energy generation, and helps to open up access to **offshore wind in deep waters where 80% of the world's wind resource exists.**[103] It notes that this contributes to lower deployment, operational and management costs.

OceanHydro Omni is a hybrid system that provides both grid services and on-demand energy storage capability. This helps increase grid stability that balances generation and consumption.

Hydro Wind Energy aims to reduce **CO2 emissions by 1 billion tonnes** by 2030. This is the equivalent of 2% of total carbon emissions globally.[104]

Highlights

Hydro Wind Energy is part of the **Masdar Innovate Programme**[105] and indicates also participating in Shell StartUp Engine. To further its development, the company has sought participation in other accelerator programmes, such as Techstars Hub71 Accelerator in Abu Dhabi,[106] AWS Clean Energy[107] Accelerator Programme and the C3 HSBC Social Impact Accelerator.[108]

Hydro Wind Energy reports **raising more than US$55 million** from investors, such as **Techstars**, **Hub71**, **Global Emerging Markets, Seedrs**, as well as private investors.[109]

Strategic alliances:

- Government (Central Authorities)
- Research Institutes
- Utilities
- Multilateral Development Banks

List impact technologies:

Offshore Wind Power, Energy Storage, Water Desalination