

The world's oceans provide two forms of energy powered by the sun: (1) Thermal energy: offshore wind and ocean thermal/OTEC; and (2) mechanical energy: waves, currents and tides. Only OTEC, currents and tides are consistent and predictable 24/7.

OCEAN CURRENTS



One of six 36 kW current turbines being installed by Verdant Power in NYC's East River in 2007.

"Ocean currents can provide vast potential for power generation - some are five times as energy-dense as the world's best wind power sites."
- Florida Atlantic University's Center of Excellence in Ocean Energy

WAVE ENERGY



Ocean Power Delivery's Pelamis wave device operating today off Portugal's coast.

"The total power of waves breaking on the world's coastlines is estimated at 2 to 3 million megawatts. Each day the oceans absorb enough heat from the sun to equal the thermal energy contained in 250 billion barrels of oil." - DOE's Energy Efficiency and Renewable Energy website


OFFSHORE WIND



A wind farm operating today off Denmark's coast installed by Vestas Corporation.

"Today wind power provides 20% of Danish electricity consumption; it is to increase to 50% by 2025, mostly offshore."
- Denmark Ministry for Transport and Energy


OTEC ENERGY



"The U.S. Department of Energy concluded in 1976 that OTEC could produce twenty million kilowatts by the year 2000, an amount three-and-a-half times the U.S. energy demand." - U.S. Department of Energy

An OTEC facility on Keahole Point, Hawaii produced 50,000 watts in 1993 outpacing a Japanese system's 40,000 watts in 1982.

TIDAL ENERGY



The world's largest tidal power plant is now under construction today off South Korea's west coast

"The Rance (France) Tidal Power Plant has operated for over 30 years without major incidents or breakdowns for 160,000 hours and has generated 16 billion kWh at a price lower than our non-tidal generation costs."
- Electricite de France (The French Government's Electric Utility)

Areas highlighted above indicate locations of major ocean energy activities today.

To learn more about the various types of ocean energy, visit www.oceanenergycouncil.com