

Technology developed

Name of the technology developed : Floating Platform for Hybrid Offshore Horizontal Axis Wind Turbine (HAWT) and Solar Farm

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Purpose : This Floating Platform seamlessly integrates Horizontal Axis Wind Turbine (HAWT) with solar photovoltaic (PV) arrays on a single floating structure, delivering continuous, high-yield renewable energy generation even in deep water environments. It maximizes energy output per ocean footprint, reduces infrastructure and maintenance costs, and ensures energy stability through complementary wind–solar resource utilization.

By combining proven offshore wind energy with solar energy harvesting, the platform offers:

- Higher capacity factor through dual source generation.
- Reduced levelized cost of energy (LCOE) via shared mooring, electrical infrastructure, and maintenance systems.
- Scalability and adaptability for various marine environments and energy demands.
- Sustainable energy production with minimal environmental footprint compared to traditional offshore installations.

TRL : 4

