

Vertical Axis Small Wind Turbines / Wind and Solar Hybrid Power Application System

Dancing with the Wind,
High-efficiency Vertical Axis
Wind Power Generation



▶ About Hi-Vawt Technology

Hi-Vawt Technology Corp. was established in 2005, and its wind turbine products were commercialized in 2006, becoming a pioneer in the development and manufacturing of vertical axis wind power in Taiwan.

Hi-Vawt Technology's vertical axis wind turbine technology owns more than 10 international patents. It not only overcomes the noise and turbulence challenges horizontal axis wind turbines faces, but also resolves previous predicament of poor efficiency of vertical axis wind turbines and its inability to overcome low wind startup. The vertical axis wind turbine produced by Hi-Vawt Technology has passed the domestic BSMI certification, Japan's Class NK, the US' SWCC, and the international IEC61400-2 standard certification. Therefore, it is expected to contribute towards environmental protection, energy conservation, carbon reduction, and create new opportunities for green energy development.

新高能源科技

Hi-Vawt Technology Corp.



Tel / +886-2-8601-4373
Fax / +886-2-8601-1263
Address / No.168, Zhulin 1st Rd., Linkou Dist., New Taipei City 244016
sales@hi-vawt.com.tw



▶ Vertical Axis Small Wind Turbines

Locations for the installations of large scale horizontal axis wind turbines have numerous restrictions, therefore it is crucial to choose open areas with abundant wind energy, such as coasts, plains, and outlying islands, requiring a huge investment in dollars and manpower as well. In contrast, small vertical axis wind turbines can overcome the noise and turbulence challenges from traditional horizontal axis wind turbines and resolves the difficulty of low wind startup and poor efficiency of vertical axis wind turbines. In addition, as the product is highly mobile and could be installed on any building rooftops; it is suitable to promote for installation within metropolitan areas to achieve the goal of decentralized energy supply.

The vertical axis small wind turbines developed by Hi-Vawt Technology adopt an advanced maximum power tracking function, so that the power generation and the load are optimally matched. Furthermore, it can perform battery storage and discharge functions, thus overcoming the instability and restrictions of wind energy. It can also be used with supply mains to increase power supply stability.



Low wind startup



High power generation efficiency



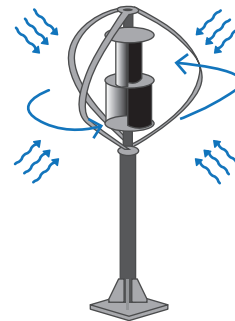
Low noise



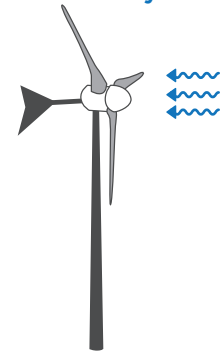
Easy maintenance



High mobility



Vertical Axis Wind Turbines
Generate power by catching wind from various directions



Horizontal Axis Wind Turbines
Generate power with one directional wind exposure

Comparison of Power Generation from Vertical and Horizontal Axis Wind Turbines



▶ System Integration and Other Applications

Electricity generated by small wind turbines could be converted into DC power through the charge controller and stored within the battery to be used by independent load; or the supply mains parallel technology can be used to convert the generated power into AC power and merge into the mains. It can also be used with solar energy for complementary applications. Hi-Vawt Technology could provide total solutions for system integration and design planning of renewable energy such as wind power, solar power, etc., including:

1. Wind and solar hybrid power application on street lamps
2. Wind, solar and diesel hybrid power system integration (for telecom base stations and energy cabinets)
3. Design and research development of off-grid system for offshore islands

