



Clean. Simple. Smart.

Extreme Wind 1.1 kW

The Windspire® wind turbine is an aesthetically designed vertical axis wind turbine that operates quietly while generating electricity for immediate use in your home or business.

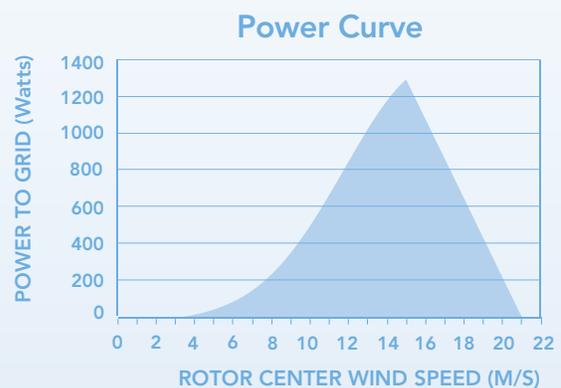
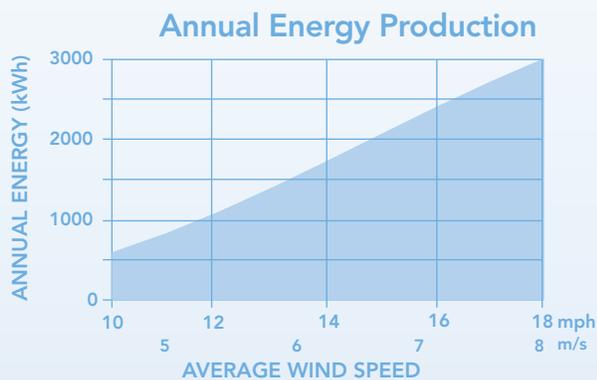
The Windspire for extreme wind conditions is a specialty product for use in areas that periodically experience very high wind events.

Windspire invites everyone to explore the potential of clean energy from the natural power of the wind.

WINDSPIRE® SPECIFICATIONS - EXTREME WIND 1.1 KW UNIT

Annual Energy Production (AEP)	2050 kWh ¹	General
Instantaneous Power Rating (IPR)	1.1 kW (1100 watts) ²	
Standard Unit Height	23 ft 7.1 m (pole extension options available)	
Total Weight	567 lb 257 kg	
Unit color	Soft Silver	
Sound output	6 dBA above ambient (15 mph wind, 6 ft from base)	Rotor
Warranty	5 Year Limited	
Rotor Type	Vertical Axis - Low Speed Giromill	
Rotor Height / Diameter	13.2 ft 4 m / 4 ft 1.2 m	
Swept Area	52.7 sq ft 4.89 sq m	
Max Rotor Speed	400 RPM ³	Electronics
Tip Speed Ratio	2.3	
Speed Control	Redundant Electronic	
Wind Tracking	Instantaneous	
Generator	High Efficiency Brushless Permanent Magnet	
Inverter	Inverter Custom Integrated Grid Tie 120 VAC 60 Hz	Wind Ratings
Inverter Certification	Meets IEEE 1547.1; UL 1741	
Performance Monitor	Integrated Wireless Zigbee Modem	
Cut-in Wind Speed	8 mph 3.6 m/s	
AEP Average Wind Speed	15 mph 6.7 m/s	
IPR Rated Wind Speed	30 mph 13.4 m/s	Construction
Survival Wind Speed	168 mph 75 m/s	
Foundation	Poured Concrete	
Foundation Size	2 ft diameter by 6 ft base ⁴	
Rotor Material	Recycled Aircraft Grade Extruded Aluminum	
Monopole/Structure Material	Recycled High Grade Steel	Construction
Paint	2 Coats, Corrosion-Resistant Industrial Grade Paint	
Coatings	Rust Veto & Zinc Olive Drab	

Notes: 1: AEP is based on the power curve and standard assumptions including a Rayleigh wind distribution and sea level air density. 2, 3: Performance is based on initial field test data. Final testing is currently underway. 4: Foundation size may vary for non-standard soil conditions or non-standard heights.



MADE IN USA



5450 Louie Lane, Reno NV 89511 · 775.857.4888 · www.mariahpower.com



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FREQUENTLY ASKED QUESTIONS

What is the difference between Energy and Power?

At wind speeds greater than 8 mph, the Windspire will begin producing power, which is measured in Watts (W) or kilowatts (kW). Power output jumps up and down as quickly as the wind changes speed, so the industry measures output over time in kilowatt-hours (kWh) which is how many watts of power are consumed over a full hour. Your electric company charges you for energy usage based on a rate/kWh. Over the course of a year, the 1.1kW Windspire for extreme winds will produce approximately 2050 kWh in 15 mph average winds to help offset the energy you require from the electric company. This is approximately one quarter of the energy usage of an average home.

How Much Does a Windspire® for Extreme Winds Cost?

In the US, a Windspire® for Extreme Winds typically costs between \$11,000 and \$14,000, fully installed. After rebates the cost can be as low as \$5200.

Are There Tax Credits Available?

The Federal Government provides a 30 percent tax credit for the total cost of the unit, including installation. Many state and local municipalities also offer rebates, as do local power companies.

Is it Safe for Birds?

The Windspire® rotates at a lower speed than most wind turbines and is more visible to flying birds. So far, we have had no reports of collisions – and we have had one report of a nest built under an active unit.

Are There Specific Requirements for Potential Customers?

A Windspire® site requires land with unobstructed wind and adequate space for installation. The Windspire® for extreme winds also needs at least class three winds (an average of 12 mph) – ideally higher (15 mph average) and a tie to the power grid.

Is the Windspire a Grid-Tie or Off-Grid Product?

The currently available Windspire® is grid-tie, which requires the unit to be tied into the local utility grid. An off-grid version of the Windspire® is in development and will be available soon.

Can I sell electricity back to the grid?

Some utilities offer net metering agreements that allow credit for, or in a few places the sale of excess power back to the grid using feed-in tariffs.

Is the Windspire® Independently Tested and Certified?

The Windspire® is independently tested at Windward Engineering in Spanish Forks, Utah. This testing allows customers to know what level of power production to expect from specific wind ranges. The Windspire® received ETL certification as of March 2008 for the U.S. and Canada, which includes UL and IEEE testing.

What Is the Maintenance?

The Windspire® requires no scheduled maintenance, with moving parts designed for a 20+ year life and ball bearings that are greased for life. Durable construction enables it to produce power for 20+ years. A dual-layer paint coat, rust proof spray, and zinc plating are applied for weather protection.

