

To us, 20 years of solid performance in the most extreme environments is just the beginning.

That's why we've remanufactured the E15 wind turbine generator to give you the most advanced, efficient wind turbine available in its class.

Combine that with an unrivalled system warranty and service structure, and it's easy to understand why EMS is Reliable with Every Turn.<sup>™</sup>

Operating Characteristics (35/65kW)

Cut in windspeed:  
9 mph

Cut out windspeed:  
60 mph

Tip Speed:  
72 mph / 98 mph

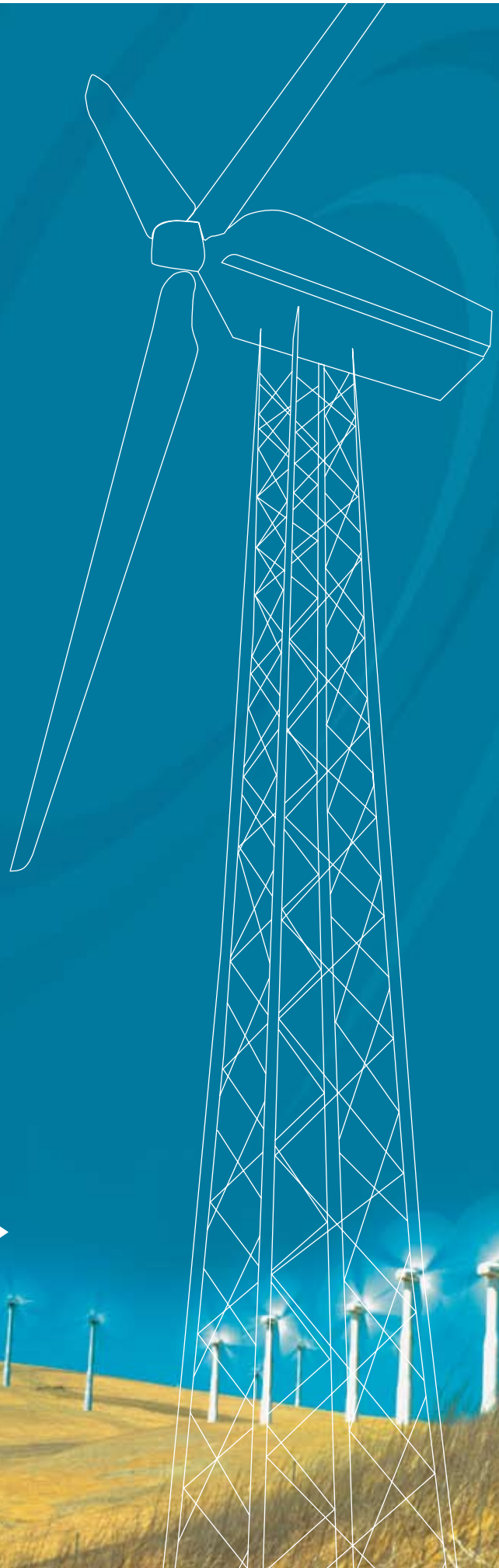
Hub Height:  
80 ft (or 110 ft with optional tall tower)

Survival windspeed:  
100 mph

Rotor speed:  
40 rpm / 55 rpm

Regulation:  
Stall

Orientation:  
Upwind



# E15

RELIABLE WITH EVERY TURN.<sup>™</sup>  
35/65kW WIND TURBINE



<b>Weight</b>	Rotor: 2,420 lbs	Nacelle: 9,000 lbs	Tower: 9,500 lbs (80 ft) 18,500 lbs (110 ft)			
<b>Gearbox</b>	Configuration: 3 stage parallel shaft	Gear Ratio: 1:22.4				
<b>Control Panel</b>	Logic: Modular PLC	Enclosure: Type 12	Listing: UL			
<b>Tower</b>	Height: 80 ft or 110 ft	Material: Hot dip galvanized lattice	Ladder: Staggered foot pegs (to access exterior man baskets)	Safety: Safety cable (harness with fall arresting device)	Configuration: 4-legged (80 ft) 3-legged (110 ft)	
<b>Nacelle</b>	Welded plate steel bed plate (galvanized) with reinforced fiberglass hood					
<b>Yaw System</b>	Friction bearings on geared slew ring with electric worm gear drive (control input from nacelle mounted wind vane)					
<b>Rotor</b>	Number of blades: Three	Diameter: 50 ft	Swept Area: 1964 ft <sup>2</sup>	Material: Fiberglass reinforced polyester	Pitch: Fixed	Power regulation: Passive stall
<b>Brake System</b>	Aerodynamic: Centrifugally actuated blade-tip brakes		Mechanical: Fail-safe hydraulic disc brake on low speed shaft			

Standard Warranty  
Two years parts

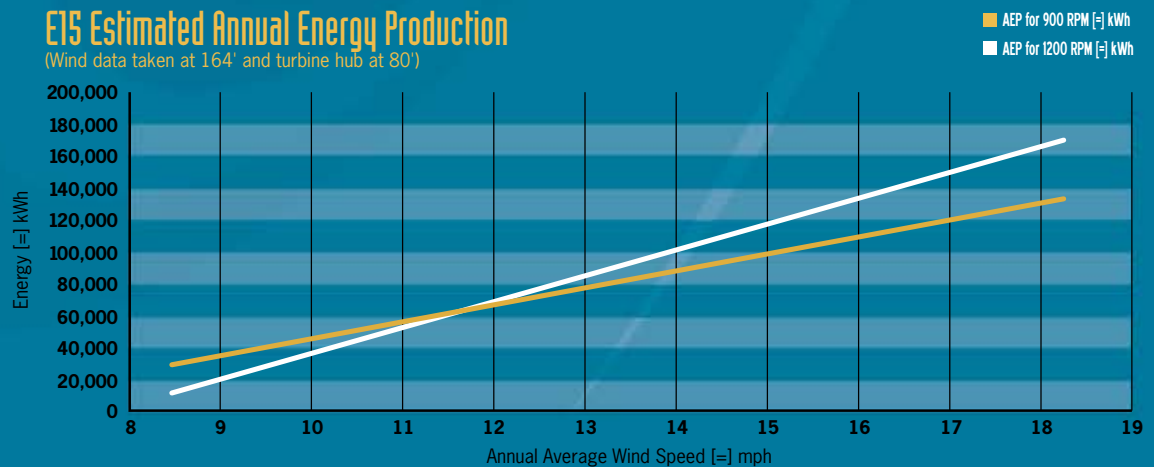
# E15 35/65kW WIND TURBINE

## Safety Systems

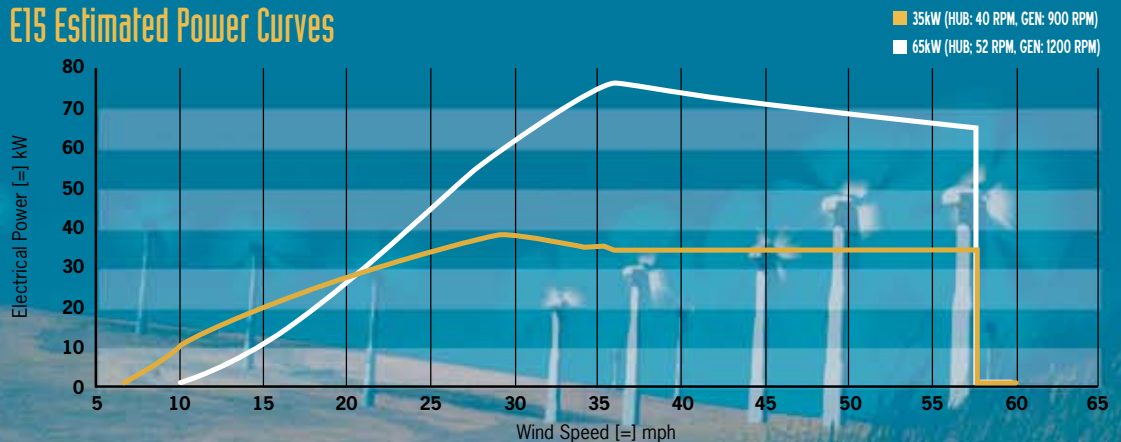
- Induction generator has inherent anti-islanding
- Centrifugally actuated blade-tip brakes
- Fail-safe hydraulic disc brake
- Grid monitoring for fault shutdown inputs: Line Voltage, Line Frequency, Overproduction
- Over-speed monitoring on hub and generator for fault shutdown
- Thermal protection on generator
- Vibration sensor for fault shutdown
- Automatic cable untwist with emergency override for fault shutdown
- Thermal protection for pump and yaw motor circuits
- 90° nacelle yaw on fault events
- High wind speed fault shutdown

## E15 Estimated Annual Energy Production

(Wind data taken at 164' and turbine hub at 80')



## E15 Estimated Power Curves



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