

That much in mind, do some figuring. If you had the world's best windmill, the amount of power (in watts) you could get would be just under the square of the radius (in meters) multiplied by the cube of the windspeed (in meters per second). (See Equation below)

$$P(\text{watts}) \approx 1.0 \times R^2 (\text{meter}^2) \times v^3 ([\text{meters/second}]^3)$$

(Note that it is the *radius* not the *diameter*). For example, the commercial unit I mentioned has an actual radius of 0.57 m. At 28 miles per hour (=12.5 m/s), it should produce $(.57^2) \times (12.5^3) = 634$ watts. (Well, it produces only 400 W. As I said, the formula is an overestimate. The unit doesn't get up to 600 W until a speed of about 40 mph, 18 m/s.)