



# Electricity Generation and Cost Estimates for Small to Large Wind Turbines

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## **An explanation on the estimates:**

The information contained in this document is based on actual data collected by the REC from Class 2 and Class 3 wind resources in Pennsylvania. The kilowatt hours per year (kWh/yr) outputs were calculated using the computer software Windographer which is designed specifically for such purposes. Actual kWh/yr will vary on the project site and turbine among other factors. The cost estimates were obtained from various manufacturers. These cost estimates will vary depending on the site, turbine manufacturer, interconnection, finance strategy, and other factors.

For a list of mid to large wind turbine manufacturers please visit Windustry's site <http://www.windustry.org/companies?filter1%5B%5D=187>. For a list of small wind turbine manufacturers, please visit the Small Wind section of our online Pennsylvania Renewable Energy Directory [www.francis.edu/REC\\_smallwind.htm](http://www.francis.edu/REC_smallwind.htm).

**Wind Turbine Output and Cost Estimates**

<b><u>Turbine</u></b>	<b><u>kWh/yr Range</u></b>		<b><u>Cost Range</u></b>
.9kW*	1128-1,216	\$	1,919 - 2,159
1.8kW*	4,331 - 5,100		15,000 - 16,350
10kW*	16,611 - 17,424		60,000 - 65,000
50kW*	87,382-98,542		210000 - 215,000
65 kW	102,780-108,135		247,000 - 250,100
100kW	125,122 - 190,971		300,000 - 306,500
250kW	442,773-473,156		350,000 - 400,000
330 - 350kW	551,428 - 665,933		400,000 - 500,000
600 - 660kW	1,101,975 - 1,288,504		1,150,000 - 1,600,000
750kW	1,392,223 - 1,489,869		1,000,000 - 1,500,000
800kW	1,474,800 - 1,490,365		1,000,000 - 1,500,000
850kW	1,350,288 - 1,711,116		1,000,000 - 1,500,000
900kW	1,420,239 -1,514,051		1,500,000 - 1,750,000
1 - 1.3MW	1,731,866 - 2,449,596		2,000,000 - 2,500,000
1.5 - 1.8MW	2,426,788 - 4,475,545		2,000,000 - 2,500,000
2MW	2,931,611 - 4,713,165		3,000,000 - 3,500,000
3MW	5,167,816 - 5,179,289		4,000,000 - 4,500,000
2.3 - 2.75MW	3,762,661 - 9,334,291		3,000,000 - 3,500,000

\*The cost estimates for these turbines is for total installed costs. All other cost estimates are for the turbine only.