Wind turbines using components that are in compliance with an electrical standard, such as those with a UL label, are not necessarily in compliance with any of the other standards. Some fast-talking promoters have tried to falsely link compliance with electrical standards to a broader approval or endorsement of the wind turbine’s basic design. Compliance with electrical standards only suggests that when used in the manner prescribed the equipment won’t cause a fire.

Standards and certification for small wind turbines have been a long time coming, but they’re finally here. In early 2008, the British Wind Energy Association (BWEA) adopted a certification requirement for small wind turbines. AWEA followed in 2009.

The absolute minimum a consumer should demand of any manufacturer are the results of performance tests conducted in accord with standard international practice. This information should be available either in product literature or on the manufacturer’s website. The manufacturer should clearly state whether the tests were done to the international standard. The resulting data can be presented in tabular form, as a power curve, or as a curve of estimated annual energy production (AEP).

Most importantly, data collected on the performance of a wind turbine must be “averaged” over a period of time—10 minutes for large wind turbines, and often 10 minutes for small wind turbines, though 1-minute averaging periods may be acceptable.

It is the averaging of test data that winnows the chaff from the grain in wind turbine testing.