

Mangled Terms

Nitpicking Word-Nerd Power

by Ian Woofenden

As with any field, the renewable energy industry has its jargon—and its misuse of jargon and terminology. In this column, I'll survey a few key terms that are mangled or misused, starting with obvious errors and moving toward some personal preferences. Let's see if you're as much of a nitpicker as I am...

First, some words and phrases that are just plain wrong:

Photovoltaic. This too-common mispronunciation of "photovoltaic" is sometimes used jokingly by industry insiders. The real term comes from the Greek root *phot*, meaning light, and *volt*, so it means electricity from light. The phrase "solar photovoltaic" seems redundant to me, since almost all photovoltaic applications are designed to use sunlight.

Watts per hour. This nonsensical phrase tops my electrical terminology pet peeve list. A watt is a rate of energy generation, transfer, or use—it stands for joules per second, so it already has a time component built in. You will *never* see an appliance or device rated in "watts per hour," nor will you see this phrase in any textbook—it's just plain inaccurate. See my columns in *HP71* and *HP72* for more explanation. Also avoid writing watt-hours as "watt/hours" or "W/H." That implies "watts per hour" and furthers the confusion.

Amps per hour. While this one is just as wrong as "watts per hour," it's a little more understandable that people make this error. "Ampere-hour" sounds almost like "amp per hour," but is actually named after nineteenth-century French physicist André Marie Ampère. An ampere-hour, or amp-hour for short, is a measure of the quantity of charge cycled through a circuit or battery.

Deep-cell battery. The correct phrase here is "deep-cycle battery," describing a chemical energy storage device that is intended to be discharged deeply. All batteries include a cell or cells, the building block of these electrochemical storage devices. But the physical depth of the cell is not important, while the cycle depth—how much you can discharge them without damaging the battery—is crucial.

Anemometer. Many otherwise fluent people make this pronunciation mistake, swapping an "n" for the first "m" in this word. *Anemometer* (remember your mom when you say it) is based on the Greek word *anemos*, which means spirit

or wind. *Meter*, also from Greek, means to measure. An anemometer measures the wind. This word should get the tongue-twister award.

Now we move into the realm of personal preference and style:

Modified sine wave. This phrase, invented by inverter marketing departments, tries to make a stepped AC wave sound smoother. It would be more accurate to call this waveform "modified square wave," but it's harder to sell inverters that way, since it sounds like a lower quality waveform. The savvy consumer won't be swayed by the phrase, but will look for inverters that produce a smooth sine wave. This only applies to battery-based inverters, not batteryless, grid-tie inverters, which all produce high-quality, grid-synchronous sine waves.

Power. Technical nitpickers (ahem) still would love to see this term used in its technical sense—the rate of energy generation, transmission, or use. But in common speech, we use it to mean energy, electricity, and political pull, among other things. I suggest that we be careful in the way we use this word in electrical circles, so we don't entirely lose the technical distinction between power and energy. Often, we mean "electricity"—a perfectly good word, which we should use.

Solar. I think that this word should remain an adjective, and not become a noun. My response to someone who wants to "get some solar" is that I might decide to buy some lunar instead. 'Nuff said?

Solar panel. This phrase is so common, but so confusing. It could mean a solar-electric module, a solar thermal collector, a breaker panel for a solar-electric system, or a group of my esteemed colleagues speaking at a conference. Let's be specific about what we mean, so others can understand us.

Solar system. I'd rather *live* in a solar system than buy one. Again, what does it mean—planets rotating around a sun, a solar-electric system, or a solar hot water or air system?

Wind tower. I can't explain why this phrase bugs me—maybe I've been exposed to too much wind. I prefer to say "wind generator tower," since that's what the tower supports. But I suppose we could start talking about radio wave towers,

patriotism poles, or other such phrases that don't very accurately describe the item. Additionally, using "windmill" as a synonym for a wind turbine is quaint to me, but not very accurate, since wind generators don't mill anything.

Alternative energy. We might continue to view renewable energy technologies as an alternative—and not the standard—if we continue to use this phrase. Renewable energy has a much longer history than "conventional" energy, and the sun is the source of almost *all* energy. So it's the short blip of our reliance on fossil fuels that should be seen as the alternative—perhaps renewables should be called "normal energy."

Of course, using renewable energy is more important than using the terms correctly. If you have to make a choice between installing an anemometer and pronouncing the word correctly, I'd much prefer the former. But with a little care and attention, we can implement renewable technologies *and* describe them in clearer ways, to advance the renewable energy movement in an intelligent and understandable way.

Access

Have you heard other mangled RE terms or phrases? Drop me a line at: Ian Woofenden, PO Box 1001, Anacortes, WA 98221 • ian.woofenden@homepower.com



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