

Net Metering



Net metering is an important policy some utilities offer that can help make small wind systems more economically viable and attractive to consumers. Net metering is a simple yet effective way to encourage small-scale renewable energy and its associated public and private benefits.

What is net metering?

Net Metering is a policy implemented by some states and electric utilities to ensure that any extra electricity produced by an on-site generator, such as a small wind system, can be sent back into the utility system for fair credit. For example, if a home's (utility-connected) small wind turbine produces more electricity than the home can use, the excess electricity is sent back into the distribution system to be used by someone else. This excess generation can cause the small-turbine owner's home electric meter to spin backwards to indicate essentially "negative" electricity usage, effectively "banking" excess production. Net metering allows such a customer to be credited at the end of the billing period, usually a month or sometimes a year, for any "net" consumption or production of electricity. Since a single meter is used to measure in- and out-flow, the customer automatically receives compensation from the utility for any excess electricity produced at the full retail electricity rate.

Dual metering. Without net metering, a small-wind system owner would be required to use two electric meters--one to measure electricity consumed from the grid, and the other, installed at the customer's expense, to measure any extra electricity sent back to the grid when the turbine produces more than needed. Unlike net metering, however, excess electricity produced by the generator is credited to the owner by the utility not at the full retail price, but rather at a reduced rate known as "avoided cost," or wholesale rates.

Annualized net metering averages a user's net electricity consumption or production over the span of one full year, rather than a shorter period. Doing so accounts for seasonal variations in electricity usage, thereby allowing for more accurate measurement of consumption or production.

Why is net metering important?

(1) Because wind energy is a variable resource, the need for energy may not align exactly with its availability. Through use of the grid and net metering, a customer can obtain the full value of the electricity produced on-site without needing expensive battery storage systems. (2) Net metering reduces installation costs for the customer by eliminating the need for a second energy meter. (3) Net metering provides a simple, inexpensive, and easily-administered way to encourage the use of small-scale wind energy systems, which provide important local, national, and global benefits to the environment and the economy.

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What are the benefits and costs of net metering?

Net metering benefits both utilities and consumers. Utilities avoid administrative and accounting costs of dual metering and purchasing small amounts of excess electricity produced by small-scale wind systems.

Consumers are rewarded for generating greater amounts of clean, renewable energy and avoid the cost of buying a second meter. A homeowner with a 10-kilowatt turbine generally saves between \$10-40 per month under net metering as opposed to a dual metering policy. Though this represents lost revenue for a utility, this indirect “cost” is at least partially offset by administrative and accounting savings, which can exceed \$25 per month.

The only cost associated with net metering is indirect: the customer buys less electricity from the utility, which means the utility is collecting less revenue from the customer. However, the same would be true if, instead of installing a small wind turbine, the customer used more energy-efficient appliances or otherwise used less electricity.

Can I use my existing meter to take advantage of net metering?

Most of the time, yes, but check with your utility. The standard kilowatt-hour meter used for most residential and small commercial customers accurately registers the flow of electricity in either direction. This means the ‘netting’ process associated with net metering happens automatically — the meter spins forward (in the normal direction) when the customer needs more electricity than is being produced, and spins backward when the customer is producing more electricity than is needed in the home or building. The meter registers the net amount of energy produced or consumed during the established billing period.

Is net metering offered in my area?

Check with your electric utility or visit <http://www.dsireusa.org/> or the *Freeing the Grid (2006)* report listed below. Currently, most states require at least some utilities to offer net metering for small wind systems, although the requirements can vary widely. Most state net metering rules are enacted by state utility regulators and apply only to utilities whose rates and services are regulated by states.

Where can I find more information about net metering?

American Wind Energy Association

www.awea.org/policy

www.awea.org/faq/netbdef.html

Network For New Energy Choices, *Freeing the Grid (2006): How Effective State Net Metering Laws Can Revolutionize U.S. Energy Policy*

<http://www.newenergychoices.org/uploads/netMetering.pdf>

Public Utilities Regulatory Policy Act of 1978 (PURPA), Section 210

www.ferc.gov/whats-new/comm-meet/011906/E-3.pdf

U.S. Dept. of Energy / Energy Efficiency & Renewable Energy

www.eere.energy.gov/greenpower/markets/netmetering.shtml