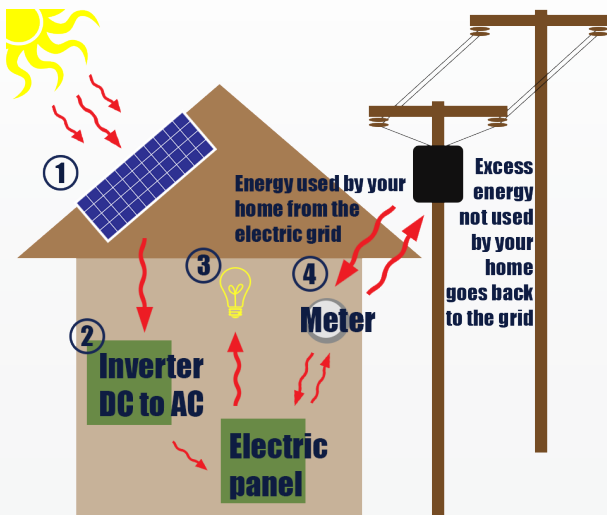


Power for your life

Net metering explained

Generating your own power

There is growing interest in small-scale, home or business-based power generation such as small wind turbines and rooftop solar panels, which are referred to as distributed generation (DG). Most members with DG systems use the electric cooperative's grid to buy power during times when their DG systems are not producing enough power to meet their needs and to sell power to their electric cooperative when their systems are producing more electricity than is needed. To encourage DG systems when they first came to market, many states approved a billing system called net metering.



Tell me simply. What is net metering?

Net metering, as the name implies, is a metering process designed to determine the net amount of energy provided to the member by the cooperative and the energy provided to the cooperative by the member. Simply put, net metering is the difference between how much energy is used at a member's home or business and how much energy the DG system at that home or business produces every month. Net metering policies vary by state, and in Missouri, electric utilities must abide by the "Net Metering and Easy Connection Act." Details of net metering in this document are based on the Missouri Act.

Give me an example

Suppose you have installed DG at your Missouri home or business and are connected to the grid. Your cooperative will net your monthly use against your monthly generation produced and delivered to the grid, measured during each billing cycle. If your monthly use is more than your monthly generation produced, you will pay the difference based on your cooperative's retail rate. If the generation your system produced and delivered to the grid is more than your monthly use, you will receive a credit, based on **avoided cost** (explained on the back), on your next monthly bill.

Net metering solar example

- 1 - Solar array converts energy from sunlight into electricity.
- 2 - The inverter converts electricity produced from direct current (DC) to alternating current (AC) for use in your home.
- 3 - The energy produced is first used in your home.
- 4 - The meter measures energy sold to and purchased from the grid.

What is avoided cost?

Per the Missouri Net Metering Act, any credit from generating more energy than you use will be based on the average monthly avoided cost of Associated Electric Cooperative, Inc. (AECI), your cooperative's wholesale power provider. Avoided cost is what it would cost AECI to generate power or purchase power from another utility. ***The credits will never be paid in cash to a member.*** They may only be used as a credit against energy used and billed at the cooperative's retail rate (see example on right). Under the Act, the credits must be used within 12 months or they expire without compensation.

You will still have an electric bill

Regardless of the amount generated by your DG system, you will always need to pay your cooperative's fixed monthly rate, also referred to as a basic charge or availability charge. This charge helps your cooperative offset operating costs for things such as poles, wires, meters, and other infrastructure to keep your power safe and reliable. ***Your net metering credits are not applied against that charge.***

How do the meters work?

Every electric cooperative member has an electric meter that records the amount of power delivered by their cooperative. As electricity is used, the meter spins forward, much like a car's odometer records miles traveled. Under net metering, your cooperative can use either a single bi-directional meter or two meters to measure the net of the energy used and produced. A single bi-directional meter will provide your cooperative with two readings - one for the energy purchased from the grid and one for the energy provided to the grid. Your cooperative will then "net" these two readings to determine the monthly bill. Alternatively, your cooperative may use two separate meters to acquire these two readings.

What are my next steps?

If you are considering installing a DG system, talk with your local electric cooperative first. Not only will this be helpful, you are also required by law to inform and work with them prior to installing a DG system that connects to the grid to be sure it meets safety requirements. Your cooperative can provide resources to help you decide if a DG system is right for you, and provide you with the proper information and forms you will need going forward.

Mr. Green's electric bill



Co-op monthly charge: \$25
Co-op energy rate: \$0.10 per kilowatt-hour (kWh)
Avoided cost: \$0.025 per kWh

Jan. - Mr. Green used 1,000 kWh
No excess produced to the grid
Billed for kWh use and monthly fee = \$100 + \$25, total bill \$125

Feb. - Mr. Green used 1,000 kWh
500 kWh excess to the grid
Billed for difference, 500 kWh
\$50 + \$25 fee = total bill \$75

March - Mr. Green used 1,000 kWh
1,000 kWh excess to the grid
Difference of zero kWh
\$0 + \$25 fee = total bill \$25

April - Mr. Green used 1,000 kWh
1,500 kWh excess to the grid
500 kWh credit (avoided cost) (+\$12.50), only can be used on used/purchased kWh
\$0 + \$25 fee = total bill \$25

May - Mr. Green used 1,000 kWh
2,000 kWh excess to the grid
1,000 kWh credit (avoided cost) (+\$25.00) plus \$12.50 from April
\$37.50 credit, only for kWh
\$0 + \$25 fee = total bill \$25

June - Mr. Green used 1,000 kWh
500 kWh excess to the grid
Billed 500 kWh, can use credit from April/May (+\$37.50)
\$50 (less \$37.50 credit) + \$25 fee = total bill \$37.50

For more specific details about how billing with net metering works, contact your local electric cooperative.



Howard Electric Cooperative

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