Power for your life

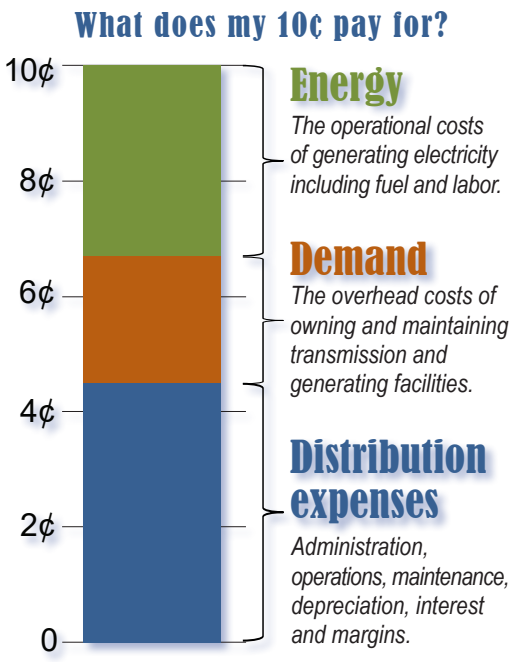
Missouri cooperatives and net metering

Understanding your power bill

Most cooperative members have a fairly simple rate structure made up of two parts – a member charge and a kilowatt-hour (kWh) charge. The member charge is a fixed amount, and the kWh charge varies based on the amount of kilowatt-hours a member uses each month.

The member charge helps the cooperative recover a small part of the fixed distribution costs of serving members, including expenses such as administration, operations and maintenance. However, the majority of revenue needed to cover these distribution costs comes from kWhs sold to members.

The cost per kWh is made up of three components – energy (kilowatt-hour), demand (kilowatt) and distribution expenses, shown proportionally in the graph on the right, using an average of 10 cents per kWh.



Missouri net metering

Net metering is a process that enables members with a wind or solar system on their home or business to export power that is in excess of their immediate on-site needs. This offsets an equal amount of power supplied by the cooperative at a different time within the same monthly billing period. In this situation the member is billed at the regular cooperative retail rate for the "net" amount of power used that is in excess of power the member generates on site.

If members generate more power than their home uses during the monthly billing period, the excess is metered and put out onto the electric grid. The cooperative subtracts the amount of power purchased from the grid from the amount generated out to the grid and provides the member with a "credit" for the "net excess" power. For most Missouri cooperatives, the credit is calculated by multiplying the number of "net excess" kilowatt-hours times Associated Electric Cooperative's cost to purchase the fuel needed to generate a kilowatt-hour (called avoided cost).

Example:

Member solar panels generate to the grid:	1,000 kWhs
Member receives from the grid:	- 950 kWhs
Member receives avoided cost credit for:	50 kWhs

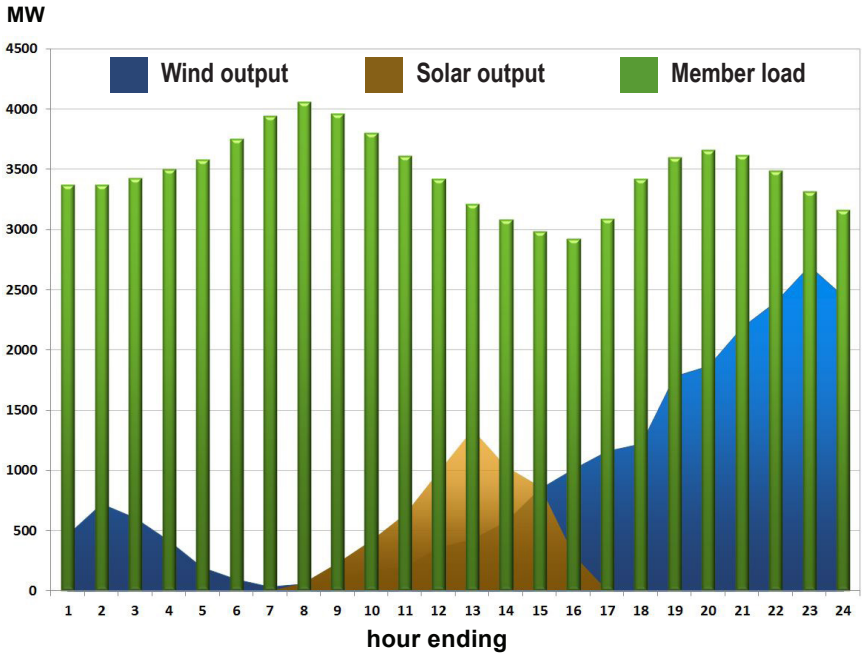
(Continued on back)

Missouri net metering (cont.)

Under current net metering laws, the co-op is not able to recover distribution expenses and demand costs through kilowatt-hour sales when a member installs a solar array or wind turbine. Those costs are then spread to the cooperative membership without solar or wind to maintain vital infrastructure – distribution lines, poles and equipment, along with the transmission network and power plants delivering 24/7 electricity to all members.

Why are all these resources needed? The energy output from solar or wind does not typically coincide with members' peak load – early in the morning on a cold winter's day. That is why a diverse power supply, including coal and gas, is so important. The chart on the right shows replacing Associated's existing baseload resources with 5,000 megawatts of wind or solar leaves a huge gap between what our members need to power their homes and what wind or solar would provide on a peak winter day.

Peak load comparisons - Jan. 18, 2016



Information is based on actual hourly output from existing AECI wind generation and the Platte-Clay Solartech community solar project extrapolated to equal 5,000 megawatts of capacity.

Expanding net metering laws would harm most members

Renewable interest groups and solar vendors would like to see significant changes to current net metering statutes that would increase subsidies paid by members who don't have wind or solar. Key points of their suggested changes are listed below.

Increase system size: The current law limits net metering to systems of 100 kilowatts or less; these groups would like to increase the size to 500 kilowatts or less. This would allow businesses to put in larger arrays that generate more electricity, reducing the kilowatt-hours they purchase from the cooperative. This shifts more costs of maintaining the grid to the rest of cooperative members.

Retail rate credits for net excess: Paying the retail rate for a kilowatt-hour unfairly shifts more costs onto cooperative members who do not have a wind or solar system. It also forces a cooperative to pay a higher cost to purchase power than they would incur with their own generators.

Annualized net metering billing: This has the same effect as paying retail for any net excess. Annualizing the net metering account would carry the monthly net excess forward as kilowatt-hours at a retail rate, not a credit for kilowatt-hours at avoided cost.

State income tax credit: Wind and solar are already heavily subsidized with a 30 percent federal income tax credit and current net metering laws. Renewable interest groups encouraged implementing a state tax credit that would mean more subsidies and cause additional burden on Missouri taxpayers, possibly leading to tax increases to comply with the balanced budget requirement.

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