

Hurray!

ELECTRICITY RATES GO UP!

Can the recently approved rate increases for electricity actually be good?

BY MICHAEL WATKINS

It can, if you have installed or are planning to install a photovoltaic system on your roof. Both home and business owners alike are immediately reimbursed 50–70% of their initial investment in a system and recover the remaining percent in 8–10 years by the Arizona Public Services (APS). In fact, “if rates keep going up, as they surely will, that recovery period is shortened even further,” says Jason Campbell of Architectural & Environmental Associates (AEA) in Flagstaff. Once you reach that final cost reimbursement mark, home and business owners will experience incredibly low monthly electric bills, and may even make money!

How does this work? First, it is important to note that APS has been directed to increase the amount of renewable energy they buy or use, for our electrical needs from 1.5% in 2007 to 5% by 2015, and then 15% by 2025. To do this, APS established an annual fund to reimburse residents within APS’ service territory for the cost of a photovoltaic purchase and installation. Both customers and non-customers of APS can benefit from this program. Even if you’re not tied in to the electrical grid, you can still benefit from this program.

Second, it is important to understand the general economics of going green with solar power.

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The cost of the photovoltaic panels and the inverter is covered under the APS rebate program. The homeowner or business covers the remaining cost of installation and other parts, but can also apply for both a federal and state income tax credit, once the system is approved for use. These combined savings can total up to 70% of the total cost of a system. Then, when the system is operational, generated electricity can be sold back through the grid to APS at a percentage of its standard rate. And here's the kicker, when APS' standard rates go up, so does the payback value of that generated electricity, and the shorter the timeframe to "break even."

"We are installing a rooftop system in Flagstaff that's designed to produce 265 KWH per month of electricity or about 80% of the homeowner's usage," says Jason. "The system's total cost is \$22,000, but with rebates and tax credits the homeowner's upfront cash cost is about \$13,000." The homeowner expects to earn this back in savings over the next 10 years. After that, any electricity he produces is essentially free. Even if he chooses to sell the house within those

10 years, the photovoltaic system increases the resale price of the home. So either way he gets his investment back.

For John Kelly in Winslow, installing a photovoltaic system last year for his insurance business made strong economic and environmental sense. His installation provides about 58% of the business's current electrical requirements, which includes an office with lights on all day and six computer workstations with printers and a server running constantly. He installed a \$46,000 system that, minus rebates and tax credits, directly cost him about \$25,000. John estimates his monthly electrical savings based on rates before the system was installed at over \$200 per month. At this rate he would reach his investment payback in 10 years. This doesn't factor in future rate increases or even the depreciation costs of the system that he can write off as a business expense every year! Further, he is now making an additional investment in improving the insulation in his 50 year-old office building. From this he calculates another large amount of monthly energy savings to further

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Photovoltaic panels can be installed on a flat roof or, as in the case on the previous page, incorporated directly onto a sloping roof.





Three sets of photovoltaic panels will provide most of the electrical requirements for this home under construction.



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Photovoltaic panels can be placed on a roof to minimize the visual impact on neighbors and pedestrians within this Home Owners' Association.

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shorten his payback period to below 10 years. Finally, he estimates that, since the system became operational in mid-November, he has saved over 17 tons of CO² from going into the atmosphere.

Northern Arizona gets some of the highest average sun hours per day and our high elevation means we also get some of the cleanest skies. We also enjoy the third or fourth best financial incentives in the country for installing photovoltaic systems. You also don't need direct sunlight all day long to take advantage of our solar benefits. These days there are all sorts of photovoltaic systems that work in shadier spots, or have low-profile designs or are even integrated into asphalt shingles. Plus, a recent court ruling upheld the homeowner's right to install photovoltaic systems, regardless of earlier restrictions written and imposed by Home Owner Associations.

To understand all the variables that go into designing and selecting the right system for you, talk to a dealer that will help you select a photovoltaic system that qualifies for the APS Solar Partners Incentive Program. There are several dealers throughout the country. Be sure to ask the dealer for a written proposal identifying the major components of your system and provide an itemized estimate of all costs, including installation. The system must be installed by a licensed contractor. Most dealers and installers can help walk you through the program application process and the subsequent final inspection and approval processes.

Additional information on the solar rebate program can be found at: aeapower.com, azsolarcenter.com, aps.com/mycommunity/Solar/eps.html, dsireusa.org