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Plain Talk about Energy, Conservation, and Efficiency

Bob Allen, Arkansas Tech University professor and newspaper columnist, built an energy efficiency home near Dover in 1985 and then put his money where his mouth is when he added a solar array. The 40 panels are not on the roof but 100 yards away in a field, powering the house and feeding excess energy into the grid.

Dr. Bob lives in a rural area south of the Ozark National Forest. He was the contractor for his house, which is surrounded by an abundance of trees and packed with energy efficiency features – such as a wood-burning stove, a metal roof, extra insulation and low-E glass in double-paned windows. Low-E glass coatings work by reflecting infra-red radiation. The south side of the house is all glass with eaves so that the low sun enters the home in the winter, but the high summer sunlight is blocked. The house design accommodates conveyance of heat in the winter. In 2009, Bob took advantage of a federal tax rebate, built a rack for solar panels and had them installed. He sold timber from his 100 acres to finance the purchase of solar panels. He

Bob and his wife Susan practically have no energy bills year-round. Their PV System will produce about 20 kWh a day on average, but the house uses only 13 kWh each day. Most days, his electricity meter runs backward. The excess goes into the electricity grid, and Bob earns credits that move forward to reduce each month's bill until the end of each year. Currently, Bob's solar panels produce 30% more energy than his house consumes. Arkansas Valley Cooperative is appreciative of Bob's efforts. The excess energy production covers meter fees, so many of Bob's electricity bills are absolutely zero.

"It was the right thing to do," Bob says. "Burning fossil fuels is trashing the planet. Solar panels are expensive, but they reduce costs associated with environmental degradation, blowing the tops off beautiful mountains to get to coal, asthma and respiratory illnesses on the rise, health issues related to mercury levels, damage caused by fracking, loss of species, and global warming."

Bob has taught Environmental Chemistry since 1981 and is currently semi-retired, teaching only part-time now. He writes a bi-weekly column for the *Russellville Courier* on energy issues, focusing on alternatives to fossil fuels. He is chair of the Arkansas Chapter of the Sierra Club. A visit to Bob's facebook page reveals his love for the great outdoors.

"Incentives are important," Bob added. "If we can get a feed-in tariff in Arkansas, I will expand my solar array and feed more energy into the grid without increasing pollution." A feed-in tariff allows producers of renewable

energy to receive a renewable energy payment or premium for actual renewable energy production going into the grid. There are no middle men or burning of fossil fuels. Many states provide for feed-in tariffs, but currently Arkansas does not.

Bob summed up his opinion on the energy market and conservation, “We must reduce our total demand for energy. Before you install solar panels, look at your energy consumption and bring down your demand. Then add alternative energy sources. Do it because it is the right thing to do – not to save money on your bills. But you can do that too.”

The Allen’s solar array is visible from a country road. People often stop by to ask questions. His neighbors’ comments have all been positive. Bob will be opening up his home on Saturday, October 6, as part of the ASES National Solar Tour. For updated tour sites and more information, go to [AREA website](#).