



## Rural Development, Inc.

Home Ownership Program  
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### **Colrain Family Gets 96% of Their Electricity from the Sun!**

***Hard data on actual solar generation and use can be difficult to find. One year of such data on RDI's Colrain home proves that photovoltaic systems really work!***

*Colrain, MA, August 8, 2008* –Results for a full year of electricity generation and use at the Near Zero Net Energy house in Colrain, MA developed and built by Rural Development, Inc. of Turners Falls, MA. The 3.4 kilowatt photovoltaic (PV) system installed at the home produced 96% of the electricity that was used during the 12-month period from June 2007 through May 2008 – a winter with lots of snow. Steven Winter Associates of Norwalk, CT has been monitoring the home since its completion, thanks to funding from the U. S. Department of Energy Building America program. Data is sent automatically through phone lines, which allows Robb Aldrich, the energy systems engineer for the home, to monitor the amount of electricity generated by the PV panels as well as how much has been used in the home.

The Colrain house was designed to be extremely energy efficient with very low heat and electrical loads. Once the loads were reduced as much as possible solar electricity and solar hot water were added. Although conscious of how they use electricity, the family of three is not extreme in their conservation measures, nor do they need to be. In their kitchen they have an electric dishwasher, toaster oven, electric kettle and other small appliances (mixer, food processor). For entertainment they have two televisions for watching movie, two computers and several radios. All their light bulbs are compact fluorescents. They have these devices plugged

into power strips that are turned off when not in use to avoid phantom loads on the electrical service. They don't have air conditioning. Super insulated walls keep the house comfortable in summer as well as in winter. They use a vacuum cleaner like most of us. Clothes are washed in an electric washing machine, hung outside to dry on sunny days, and dried in an electric dryer when the sun isn't shining. They have a propane oven and range for cooking and baking.

The family's electric bills will be even lower next year. Until now, the system known as "net metering" has allowed homeowners who are producing electricity from renewable sources to be given credit for power that went out to their utility, but only for the next month after it was generated. Under the new net metering regulations, signed into law on July 10, 2008 as part of Governor Patrick's Green Communities Act, those extra kilowatts will roll over indefinitely as credit on future bills. This means that all the electricity generated from the Colrain homes PV panels next year will be credited toward their electrical usage and associated service fees. Although the service fees are expected to increase, paying for only 4% of the electricity they use all year will keep their electric bills very low.

For more information about RDI, please go to <http://ruraldevelopmentinc.org/>

For more information about the DOE's Building America program, please go to [http://www.eere.energy.gov/buildings/building\\_america/about.html](http://www.eere.energy.gov/buildings/building_america/about.html)

For more information about Steven Winter Associates, please go to <http://www.swinter.com/>