

RURAL DEVELOPMENT, INC.

Home Ownership Program

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Press Release

September 20, 2006



Megan McDonough and Adam Grandin and their daughter Cassidy

RDI Builds a ZERO Net Energy Home

The electric bill is expected to be \$199 per year!

Approximately 274 gallons of propane will be used each year to heat the house!

Megan McDonough and Adam Grandin along with Rural Development, Inc. (RDI) are today embarking on the construction of a very special affordable home for their family. Their home will be so energy efficient it will be known as a “ZERO net energy home,” meaning it will almost reach zero net energy usage. Megan and Adam’s new house in Colrain will feature both a 3-kilowatt (kW) solar electric system and a solar hot water system. The sun will heat or pre-heat water for the radiant floor heating system and for regular hot water use.

Their house is modeled to produce 3,694 kilowatts of electricity annually while using 4,339 kilowatts; the owners will therefore need to plan to purchase 645 kW a year for just under \$200 per year (with the monthly service charge). It is also modeled to use 274 gallons of propane as back up to the American Solar Works hot water system, as well as for cooking and clothes drying. A more typical 1,352 square foot home would use 1,001 gallons of propane.

The house is the greenest of green. It features double thick walls allowing for over 11 inches of recycled cellulose insulation in the walls as well as 14 inches in the ceiling. “Heat mirror” Paradigm windows and a patio door will be installed, reducing heat loss through the glass. The floor will be a rich mocha colored polished concrete warmed by hot water pipes just below the surface. These features assure that the heat will stay inside the house in the winter, keeping the McDonough Grandin family warm.

In addition to the energy savings, there will also be water conservation through the use of dual flush toilets, draught resistant grass seed, and low flow faucets. The fiber cement siding is not only a green building material, but will add architectural interest to the exterior of the house with a combination of clapboards, board and batten, and shingles. Also, attention has been paid to the indoor air quality. Non-toxic paints will be used, quiet ventilation will be in effect, and no carpeting will be installed.

Many people have contributed a great deal of thought in the design of this home. It has been made possible due to the donations of many RDI partners in both time and money. Austin Design of Colrain designed the house at no cost. Steven Winter Associates designed the mechanical engineering through a grant from the Department of Energy (D.O.E.) Building America Program. American Solar Works and the Western Massachusetts Electric Company (WMECO) will donate the solar hot water system. The extra cost of the heat mirror windows is being donated by Paradigm Windows through Rugg Lumber Company. The Massachusetts Technology Collaborative will provide a grant for the photovoltaic system through the Conservation Services Group.

During construction the house will be inspected and verified by the Energy Star Homes program and a LEED[®] for Homes inspector to insure that the actual construction meets their standards. Upon completion RDI expects the house to receive certification from both organizations.

After completion researchers from Steven Winter Associates in conjunction with the D.O.E. Building America Program will monitor the performance of the windows, the solar hot water system, the radiant heating system, and the photovoltaic system. The completed house will also be open to the public on several occasions for learning purposes.

Rural Development, Inc. Home Ownership Program builds affordable green homes in Franklin County and the North Quabbin region for people with low to moderate income. While this house is one-of-a-kind, all houses built by RDI are energy efficient, water conserving and sensitive to the environment.



Adam Grandin and Megan McDonough sign closing documents with Attorney Ted Bobetsky. Kathy Kroll of the Greenfield Housing Authority looks on.

Contacts:

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Architect: Bill Austin, Austin Design, billa@austindesign.biz, 413-624-9669

WMECO: John Walsh, walshj@nu.com, 413-787-9339

Engineer: Robb Aldrich, Steven Winter Associates, raldrich@swinter.com, 203-857-0200 x 289

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Solar Hot Water: Ed Friedman, Bill Koggan, Sales@AmericanSolarWorks.com 888-8-SOLAR-WORKS

Photovoltaics: Peter Hubbe, peter.hubbe@csgroup.com, 508-836-9500 x 3361

LEED and Energy Star: Craig Marden, craig.marden@csgroup.com, 800-628-8413 x 3427

Buyers: Adam Grandin, eclecticspecialist@mac.com, 413-218-8636 and

Megan McDonough, mcdonough.megan@gmail.com, 413-218-0683

Quotes:

Anne Perkins: "Working in collaboration with the team that is bringing this incredible home to fruition has been immensely gratifying."

Megan McDonough: "My family and I are thrilled to have an opportunity to buy such a green home. Without RDI, buying a home - especially one this energy efficient - would have been just a dream."

Ed, Bill, and Craig from American Solar Works offer three quotes:

1) RDI is doing a great job to at showing how make solar accessible to everyone. And hopefully many Americans will follow their lead towards energy independence.

2) It has been a pleasure to do our part in bringing clean renewable energy and energy independence to every American home.

3) The annual \$1,500 dollars a year in savings that the solar hot water system will generate for RDI's client shows everyone the value of the sunlight they already own, we all just need to tap it.

