

**Year Built** 2005  
**Home Size** 3300 Sq.Ft.  
**Contractors:**  
**Simple Solar Systems**  
*(see ad on page 15)*  
 EcoFutures Building  
 Solar Enterprises



# Solar Harvest

## One Year Later: Better than Net Zero

Eric Doub & Catherine Childs

More than ever, our nation needs less violent and more sustainable resource and foreign policies. Striving to build a home that will be viable and affordable 50 years from now is one way to embrace the coming shift from fossil fuels to renewable energy.

While applying to college in 1980, I wrote that studying nuclear energy for a school paper “has been an initiation into energy research, and a synthesis of goals – of self-preservation and academics – that may be the most important thing that’s happened to me yet.

Current events make it desperately clear: We’re in transition to a post-petroleum civilization. War in the Middle East, the arms race, revolution in Third World countries all point to a reorganization of the planet’s resources. And American lifestyles and consumption are at the center of the crisis. When good, obedient, middle-class Americans – those who guard the system – cannot buy gas or pay the heating bill or get enough to eat, our society will turn upside down. Historian Howard Zinn calls this the Revolt of the Guards. When this happens I want to be a citizen who knows, who has researched, who has hope: for a sane, decentralized, democratic energy system where the power is in the hands of the people and in biomass, efficiency, hydro, wind, solar, and cogeneration.”

So, when asked how I came to start my company EcoFutures Building, I sometimes say it’s not my fault – I was brought up

in North Boulder and just turned out that way. In 1982 I designed and built my first solar project, an attached greenhouse on my parents’ house on 9<sup>th</sup> St. In 2005, Catherine and I finished Solar Harvest, expressing the same values but on a larger scale.

Our first winter in the home was warm and toasty, with the radiant floor heat turning on only about 10 times. The record-breaking hot summer of 2006 brought Al Gore’s film and also, for us, a home that was cool and refreshing inside – without an AC system or evaporative cooler. We are extremely pleased to report that the house is turning out to be better than net zero energy and are delighted to share this work and harvest with our community!

### RE-USE/SALVAGE FEATURES

- Minimized and recycled construction waste
- Salvaged hardwood flooring, doors, cabinets, sinks, and windows



**Eric, Catherine & Family**  
 Photo courtesy of Michelle Maloy Dillon  
[www.mmdphotography.com](http://www.mmdphotography.com)

### ENERGY FEATURES

- 6.84 kW grid-tied PV system
- 12-panel solar thermal, drainback system
- 6,000 gallon water storage tank
- Passive solar design with sunspace greenhouse and distribution ducts and fans
- Double 5/8” sheetrock on some walls and ceilings
- Expanded foam insulation
- Extensive engineered HRV system
- Intake air to HRV through PVC pipe buried underground
- CFL lighting throughout home
- Energy Star rated appliances
- Power strips and occupancy sensors on applicable electric appliances
- 1” rigid foam insulation on perimeter walls, 2x2’s and wall and ceiling members
- Greenblock ICF’s in basement walls
- R-15 glass in north windows

### WATER FEATURES

- Low/no water lawn
- Drip irrigation
- Xeriscaping
- Previous pavement on driveway

### GREEN FEATURES

- Fly ash content concrete for foundations and slabs
- FSC certified lumber for framing
- IPE/Pau Lope decking
- Formaldehyde free cabinets and carpet
- AFM Safecoat paint and stains
- Roofing made of 100% recycled carpet
- High-density bamboo flooring