



# Eagle Place Townhomes

Year Built: 2007  
Multiple Units  
Contractors:  
Bella Energy (see ad on page 13)  
George Watt Architects  
Shaw Construction  
Next Generation Energy

## Efficient and Affordable

by T. Amory Host

Eagle Place is a new, affordable, energy-efficient community consisting of 60 two- and three-bedroom, family-oriented rentals in Lafayette, Colorado. It is permanently deed-restricted for families earning less than 50% of the Boulder County area median income, is estimated to exceed Colorado Built Green standards by 250%, and is the nation's first "Ultra Energy-Efficient" affordable housing.

The community is oriented on an east/west axis. Master bedrooms and living areas, each with large south-facing windows, receive maximum southern exposure while kitchens, baths, and storage areas face north. Wall, ceiling, and foundation insulation are R21, R38, and R5 respectively, and the windows are low-e rated. Appliances and light fixtures are Energy Star certified, and the community has a 5+ Energy Star rating.

There are 322 Sharp photovoltaic panels integrated into the design of the community as awnings that provide summer shading. Each panel produces 208 watts of power for a combined 67 kilowatt system.

There are also 96 solar thermal panels tied to 4,000 gallons of water storage. The integrated aqua-therm hot water and space heating system complements solar preheating by sharing a single gas burner.

Throughout the landscaped areas, low-water plantings are used, vegetation is minimized, and multi-zoned irrigation timers minimize waste. A separate dumpster was maintained to recycle lumber and paper products. All of the interiors are painted with low-VOC paint, and a radon mitigation system was installed.

The most significant achievement of Eagle Place is a new financing model it created for energy upgrades in federally-subsidized housing. Aside from limited

grant resources, there were no previous financial incentives available for affordable housing developers or owners to pursue energy upgrades due to fixed rental income and utility allowances. We proposed that multiple utility allowances be created, based upon a building's efficiency. This offers owners of affordable-housing an incentive to invest in energy efficiency, while placing no net financial burden on the residents. It simply transfers funds from non-renewable energy generation (via residents' utility bills) toward financing for conservation and renewable energy capital improvements.

The developer, Peak Properties, received support from the U.S. Department of Housing and Urban Development, the Colorado Housing and Finance Authority, and the Colorado Division of Housing to create the nation's first combined "Energy-Efficient" and "Ultra Energy-Efficient" utility allowances. Eagle Place, which uses less than 50% of the energy of comparable buildings, is the first affordable community in the country to meet these stringent standards.

Peak Properties & Development Corporation is now working with HUD to introduce this program to over 2,300 public housing authorities nationwide and to divert millions of dollars annually from fossil fuels, and toward efficiency and renewables.



T. Amory Host

### ENERGY FEATURES

- Passive solar design with living spaces oriented to maximize southern exposure
- 67 kW grid-tied solar photovoltaic system
- 96-panel solar thermal system for domestic hot water and space heating
- 13 SEER A/C
- Daylighting, pin CFLs, exterior lighting controls
- Low-e windows
- Efficient cellulose insulation
- Energy Star appliances

### GREEN FEATURES

- Advanced framing techniques
- Engineered lumber
- Low-VOC carpet adhesives, cabinets, and paint

### WATER FEATURES

- Xeriscape
- Drip Irrigation
- Low-water lawn
- Low-flow showerheads, fixtures and toilets
- Water-efficient dishwashers

### RE-USE/SALVAGE FEATURES

- Construction waste recycling