



Sacramento, California

Fallen Leaf at Riverbend

Treasure Homes Builds Community That Generates Its Own Power

Roseville-based Treasure Homes is on the forefront of building super energy efficient homes. *Fallen Leaf at Riverbend* in Sacramento is the answer to the common problem of urban sprawl – building desirable, attractive homes in an infill area.

By teaming up with leading industry experts in energy efficiency, including the Sacramento Municipal Utility District (SMUD), the US Department of Energy (DOE), the National Renewable Energy Laboratory (NREL), and energy consultant ConSol, *Fallen Leaf at Riverbend* is designed to save homeowners as much as 60 percent on their utility costs. The entire community will be constructed to meet near Zero Energy Home guidelines under the BuildingAmerica program sponsored by the US Department of Energy. By first constructing the most energy efficient home and then adding state-of-the-art renewable resources, these homes reduce energy costs, save money, and help protect the environment.

The homes at *Fallen Leaf at Riverbend* include a 2.4kW DC photovoltaic integrated roofing system from BP Solar which, coupled with other energy efficient features, will produce almost as much electricity as it needs to power the house on an annual basis. The homes are hooked up to the local grid, so homeowners can draw electricity

when they need it and any excess, unneeded energy produced by the near Zero Energy home is fed back to SMUD for credit and distribution to other customers.

Through its energy efficiency and renewable energy programs, SMUD is providing significant support for Treasure Homes' *Fallen Leaf* project and other Sacramento area zero-energy home communities. All homes meet the SMUD Advantage Home program requirements as well as the ENERGY STAR® Homes program and ComfortWise® requirements. SMUD Advantage Home and ComfortWise® combine to reduce heating and water heating energy use by over 15% and cooling by 30% compared to California Title-24 standards.

Each home at *Fallen Leaf at Riverbend* is designed with cutting edge energy technologies that will be independently inspected for quality and performance. Inspections and tests are performed by ComfortWise home energy raters who are certified and monitored by CalCerts or the California Home Energy Efficiency Rating System (CHEERS), certified by the California Energy Commission. Homeowners will receive a Home Energy Rating attesting to the energy efficiency of their new home.



BIRA

ConSol serves as the team leader of the Building Industry Research Alliance (BIRA) for the Department of Energy's Building America program. BIRA is a diverse group of thirty-one industry professionals involved in this private/public partnership that provides energy solutions to build production housing which cut utility bills at least 50%.





The homes built in *Fallen Leaf at Riverbend* also meet the requirements of the California Green Builder program (CGB). The program was created to encourage greater participation in green building. Developed by the California Building Industry Association as a voluntary, performance-based program, CGB provides quantifiable environmental benefits to all – buyers, builders, and local jurisdictions. It is one of the most comprehensive, builder-driven initiatives in the nation and includes an independent, third-party verification of plans and construction.

Every home includes a mechanically designed heating and air conditioning system, spectrally selective glass windows, fluorescent lighting, and tightly sealed air ducts. Additional features at *Fallen Leaf at Riverbend* include:

- 2.4 kW DC BP solar energy system – clean, quiet electricity generated from the sun
- Total wall and ceiling insulation – higher R-value due to reflective film with 20-year thermal warranty
- Radiant heat barrier – can reduce energy consumption up to 35% during peak hours
- Tyvek House Wrap – protects house from water and air infiltration, yet allows moisture vapor to escape
- Smart Vent fresh air system – automatically circulates filtered outdoor air throughout the home with all doors and windows secure
- Tankless water heater – produces up to 8.5 gallons of hot water per minute, which saves up to 30% in energy costs per year while giving homeowners endless supply of hot water
- Low-flow showers and toilets – saves water over the lifetime of the home
- State-of-the-art HVAC system – zoned heating and cooling provides comfortable indoor temperatures in two-story homes
- Energy-efficient lighting throughout – fluorescent fixtures last ten times longer and use 75% less energy than standard lighting
- Engineered foundation – ten-inch thick concrete slab, reinforced with 5/8" steel reinforcing bars
- Engineered wood products – upgraded construction materials maximize strength and minimize waste
- Spectrally selective glass for windows – dual pane windows with specially coated "Solarban" glazing to reduce radiant heat gain



Project Information

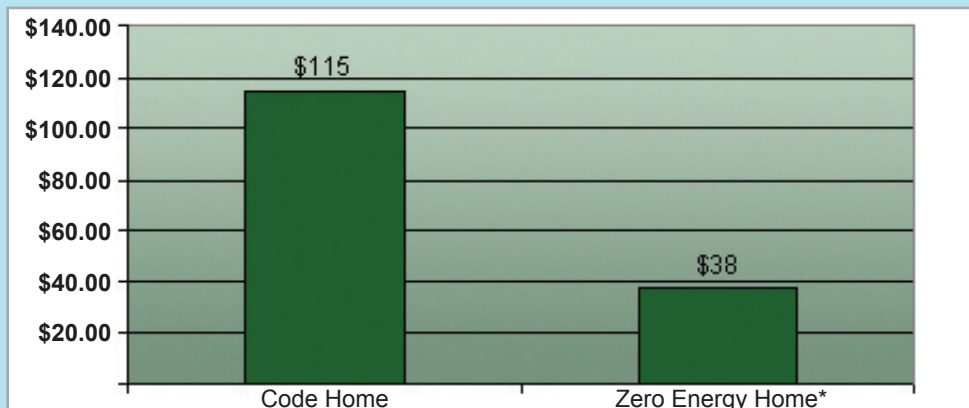
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Average Monthly Utility Bill



*with 2.042 kW AC SMUD Solar Power and Fluorescent lighting.