



Benefits of Green Homebuilding

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Benefits of LEED-Certified Homes: Savings, Value, Well-Being, Trusted

Savings: Reducing Energy & Water Consumption

The typical household spends about \$2,150 a year on residential energy bills¹.

LEED-certified homes are:

- Built to be energy-efficient, ensuring that the home can be comfortably heated and cooled with minimal energy usage;
- Individually tested to minimize envelope and ductwork leakage;
- Designed to minimize indoor and outdoor water usage;
- Predicted to use an estimated 30 to 60% less energy than a comparable home built to International Energy Conservation Code.

Based on the average HERS ratings for each level of LEED certification, these homes could potentially see energy reductions of:

- Up to 30% (for LEED Certified homes)
- Approximately 30% (for LEED Silver homes)
- Approximately 48% (for LEED Gold homes)
- 50-60% (for LEED Platinum homes)

LEED for Homes projects must meet ENERGY STAR for Homes, which can cut energy bills by 20%², saving between \$200 to \$400 annually, adding up to potentially thousands of dollars saved over the seven or eight years that the typical homeowner lives in a home³.

Value: Green Homes are Dream Homes

Researchers found that between 2007 – early 2012, the value of homes in California with a green certification label was an average of 9% higher than comparable, non-certified homes⁴.

Consumers ranked green/energy efficiency as their top requirement for their dream homes

- 60% said that green and energy efficient are amenities they want in their next home⁵
- A 2008 study conducted by McGraw-Hill Construction and USGBC found that the mean price of green homes purchased by survey respondents was \$296,000; the median was \$239,000

Green homes can be built for the same cost as — and even less than — conventional homes.

- Sometimes there are upfront costs which on average are 2.4% and can be quickly recouped with the homeowners saving money for the rest of the home's lifespan⁶
- Green homes have a higher resale value and are on the market for less time than comparable conventional homes. The Earth Advantage Study in 2011 found that, on average, green-certified new homes sold for 8% more than non-certified green homes. Resales of existing green homes sold for an average of 30% more than conventional homes⁷

Well Being

LEED-certified homes require proper ventilation, high efficiency air filters and measures to reduce mold and mildew.

Trusted

Each LEED home undergoes onsite inspections, detailed documentation review, and as-built performance testing.

Green Home Market

- More than 110,000 housing units are registered under the LEED for Homes rating system. More than 38,000 of those units have been certified under LEED for Homes; , nearly half of those units are in the affordable housing sector.⁸
- McGraw Hill Construction estimates that the green market was 2% of residential starts in 2005; 6-10% in 2008; and will be 12-20% by 2013⁹
- 48% percent of LEED-certified home units fall in the affordable housing sector

Environmental Impact of the Residential Market

Energy:

- Households use about one-fifth of the total energy consumed in the U.S. each year; the residential sector is responsible for 21% of the nation's carbon dioxide emissions¹⁰
- Since 1985, residential energy consumption, measured as total energy (i.e., including electricity losses), increased overall by about 34%¹¹
- It's expected that by 2016, 90% of all residential construction will have energy efficient features¹²
- To date, more than 1 million ENERGY STAR-qualified homes constructed save consumers an estimated \$200 million annually in utility bills¹³

Water:

- Total U.S. residential energy consumption is projected to increase 17 % from 1995 - 2015¹⁴
- Total residential water use: 29.40 billion gallons per day or 7.1% of U.S. total water use¹⁵

Waste:

- Total estimated construction and demolition (C&D) generation amount for residential construction in 2003: 10 million tons. Average residential C&D debris generation rate in 2003: 4.39 pounds per square foot¹⁶

¹U.S. Department of Energy/Energy Information Administration (Nov. 2010). Short-Term Energy Outlook. <http://205.254.135.7/forecasts/steo/outlook.cfm>

²U.S. Environmental Protection Agency (Sept. 2011). ENERGY STAR Qualified Homes – Assured Performance in Every Qualified Home. Accessed Dec. 19, 2011 via

[http://www.energystar.gov/ia/partners/publications/pubdocs/ES%20Homes%20V3%](http://www.energystar.gov/ia/partners/publications/pubdocs/ES%20Homes%20V3%20Final.pdf)

³U.S. Environmental Protection Agency (March 2009). ENERGY STAR Qualified New Homes. Accessed Dec. 19, 2011 via http://www.energystar.gov/ia/partners/downloads/consumer_brochure.pdf

⁴Kok, N. and Kahn, M. (2012) The Value of Green Labels in the California Housing Market. Accessed July 27, 2012 via <http://www.nilskok.com/2012/07/greenhomes.html>.

⁵Yahoo! (Dec. 2011). Yahoo! Real Estate Home Horizons Study – American Dream Homes Turn Green. Accessed Dec. 20, 2011 via <http://realestate.yahoo.com/promo/yahoo-study-american-dream-homes-turn-green.html>

⁶Kats, G. (2009). Green Buildings and Communities: Costs and Benefits. Accessed Dec. 20, 2011 via <http://www.goodenergies.com/news/-pdfs/Web%20site%20Presentation.pdf>

⁷Earth Advantage Institute (June 8, 2011). Certified Homes Outperform Non-Certified Homes for Fourth Year. Accessed Dec. 20, 2011 via <http://www.earthadvantage.org/resources/library/research/certified-homes-outperform-non-certified-homes-for-fourth-year/>

⁸As of June 1, 2013.

⁹McGraw-Hill Construction (2009). 2009 Green Outlook: Trends Driving Change Report

¹⁰U.S. Department of Energy's Energy Information Administration. www.eia.gov

¹¹U.S. Department of Energy (Oct. 2008). Energy Efficiency Trends in Residential and Commercial Buildings. [http://apps1.eere.energy.gov/buildings/publications/pdfs/corporate/bt_stateindustry](http://apps1.eere.energy.gov/buildings/publications/pdfs/corporate/bt_stateindustry.pdf)

¹²McGraw-Hill Construction (2012). World Green Buildings Study. Accessed Nov. 29, 2012 via <http://analyticsstore.construction.com/index.php/2012-world-green-building-trends-key-facts.html>

¹³U.S. Environmental Protection Agency. Energy Star and Other Climate Protection Partnerships – 2010 Annual Report

¹⁴U.S. Department of Energy's Energy Information Administration. www.eia.gov

¹⁵U.S. Geological Survey (2005). Estimated Use of Water in the United States. Accessed Dec. 20, 2011 via <http://ga.water.usgs.gov/edu/wudo.html>

¹⁶U.S. Environmental Protection Agency (2003). Estimating 2003 Building-Related Construction and Demolition Materials Amounts. Accessed Dec. 20, 2011 via <http://www.epa.gov/osw/conservation/rrr/imr/cdm/pubs/cd-meas.pdf>



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