

Green Building Facts

Energy

- Buildings represent 38.9% of U.S. primary energy use (includes fuel input for production)¹
- In the U.S., buildings account for 38% of all carbon emissions².
- Buildings represent 72% of U.S. electricity consumption³

Water

- Buildings use 13.6% of all potable water, about 15 trillion gallons per year⁴

Materials

- Buildings use 40% of raw materials globally (3 billion tons annually)⁵
- U.S. EPA estimates that 170 million tons of building-related construction and demolition debris was generated in the U.S. in 2003 - 61% from nonresidential and 39% from residential sources⁶

What is LEED (Leadership in Energy & Environmental Design)?

- An internationally recognized green building certification system that can be applied to any building type and any building lifecycle phase
- Promotes a whole-building approach to sustainability by recognizing performance in key areas: sustainable sites, water efficiency, energy & atmosphere, materials and resources, indoor environmental quality, locations and linkages, awareness and education, innovation in design and regional priority
- A voluntary third-party certification system that provides a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions, ensuring that buildings are constructed as intended

Why Building Green? Building Green Saves Money

- The cost per square foot for buildings seeking LEED certification falls into the existing range of costs for buildings not seeking LEED certification⁷
- An upfront investment of 2% in green building design, on average, results in life cycle savings of 20% of the total construction costs – more than 10 times the initial investment⁸
- Real estate and construction professionals overestimate the costs of green building by 300%⁹
- Building green decreases operating costs, increases building value, improves return on investment and improves occupant productivity

[1] Environmental Information Administration (2008). EIA Annual Energy Outlook.

[2] Energy Information Administration (2008). Assumptions to the Annual Energy Outlook.

[3] Environmental Information Administration (2008). EIA Annual Energy Outlook.

[4] U.S. Geological Survey (2000). 2000 data.

[5] Lenssen and Roodman (1995). Worldwatch Paper 124: A Building Revolution: How ecology and Health Concerns are Transforming Construction. Worldwatch Institute.

[6] U.S. Environmental Protection Agency (2009). Estimating 2003 Building-Related Construction and Demolition Materials Amounts.

[7] Davis Langdon (2007). Cost of Green Revisited: Reexamining the Feasibility and Cost Impact of Sustainable Design in the Light of Increased Market Adoption.

[8] Kats, G. (2003). The Costs and Financial Benefits of Green Buildings: A Report to California's Sustainable Building Task Force.

[9] World Business Council for Sustainable Development (2008). Energy Efficiency in Buildings.

[10] Political Economy Research Institute & Center for American Progress (2008). Green Recovery: A Program to Create Good Jobs and Start Building a Low-Carbon Economy.

- Building green stimulates the economy by creating a demand for green jobs. If the proposed green economic recovery program is instated, the US economy could generate 2 million green jobs in two years¹⁰

Summary of 2010 Green Building Legislation

Sustainable Construction and Energy Independence – Green State Buildings

- All major state-funded new construction building projects over 5,000 sq/ft, must be designed, constructed, and at least certified as receiving two globes using the Green Globes Rating System or receiving LEED Silver certification and
- Earn at least 20% of the available points for energy performance under 'C1.1 Energy Consumption' in the Green Globes Rating System or reduce energy use 24% over the ASHRAE 90.1 2007 for new buildings or a 20% reduction over ASHRAE 90.1 2007 for existing buildings (renovations).
- Must be inspected by a third-party commissioning agent, at a minimum, in the fifth, tenth, and fifteenth year following certification. The third-party commissioning agent shall determine whether the building is operating at the standard to which it was originally designed and certified and report its findings to the Office of Administration and the respective state department(s) occupying the facility. The report must include, but is not limited to, the facility's savings on energy and water, the level of its indoor air quality, the existing system's function and performance, problems with the system, and whether the system's performance meets the facility's requirements
- All major state-funded renovation projects involving more than 50% of the square footage or occupancy displacement; or state-funded commercial interior tenant fit-out project that is larger than 7,500 square feet of leasable area must pursue certification at a LEED Silver or a two Globe standard or better or must submit a life cycle cost analysis

50 for 50 Green Schools Caucus

- Nationwide effort to encourage and support the formation of a green schools caucus in every state legislature in the country within three years
- 20% of America goes to school every day
- If a green school saved \$100,000 per year in operational costs, that's roughly enough to hire two new teachers, buy 200 new computers or purchase 5,000 new textbooks.
- Caucus is meant to serve as catalyst for legislators to coordinate, education and reach out to colleagues and constituents about benefits of green schools (construction, renovation, operations & maintenance and curriculum)
- Caucus chairs in Missouri House of Representatives are Margo McNeil (D-78) and Shane Schoeller (R-139)

Residential Green Building

- Tax credit for homes built to LEED for Homes or National Association of Home Builders green residential standards. Credit ranges from 45 cents to \$1.15 per square foot depending on the level of certification achieved. The credit is not refundable, but can be transferred. (HB 978 passed House in 2009)