

Benefits of Green Building

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Buildings are responsible for an enormous amount of global energy use, resource consumption and greenhouse gas emissions. As the demand for more sustainable building options increases, green construction is becoming increasingly profitable and desirable within the international construction market.

In the United States alone, buildings account for almost 40 percent of national CO2 emissions and out-consume both the industrial and transportation sectors, but LEED-certified buildings have 34 percent lower CO2 emissions, consume 25 percent less energy and 11 percent less water, and have diverted more than 80 million tons of waste from landfills. ¹

The market is responding to these cost savings and environmental benefits at a dramatic rate. According to a [Dodge Data & Analytics World Green Building Trends 2016 SmartMarket Report](#), the global green building sector continues to double every three years, with survey respondents from 70 countries reporting 60 percent of their projects will be green by 2018. ²

Green building is cost-effective

- **Upfront investment in green building makes properties more valuable** with an average expected increase in value of 4 percent. By virtue of lowered maintenance and energy costs the return on investment from green building is rapid: green retrofit projects are generally expected to pay for itself in just seven years. ³
- **Green buildings reduce day-to-day costs year-over-year.** LEED buildings report almost 20 percent lower maintenance costs than typical commercial buildings, and green building retrofit projects typically decrease operation costs by almost 10 percent in just one year. ^{4, 5}
- Between 2015 and 2018, LEED-certified buildings in the United States are estimated to have \$1.2 billion in energy savings, \$149.5 million in water savings, \$715.2 million in maintenance savings and \$54.2 million in waste savings. ⁶

The benefits of green building are expanding the market and breaking records

- **The green building sector is outpacing overall construction growth in the United States and will continue to rise** By 2018, green construction will directly contribute 1.1 million jobs and \$75.6 billion in wages by 2018 in the United States. The industry's direct contribution to U.S. Gross Domestic Product (GDP) is also expected to reach \$303.5 billion from 2015-2018. LEED building construction projects are estimated contribute 386,000 jobs and \$26.2 billion in wages by 2018. ⁷
- As of October 2017, more than 19.3 billion square feet of building space is LEED-certified worldwide and an approximately 2.2 million square feet achieves LEED certification each day.

LEED buildings perform better and are internationally acclaimed

- LEED is the international standard of excellence in green building, with more than 91,700 LEED projects in 167 countries and territories.
- **LEED projects** are getting results across the board, scoring an average **ENERGY STAR** score of 89 points out of a possible 100. In a study of 7,100 certified construction projects, more than 90 percent were improving energy performance by at least 10 percent.

Green buildings use natural resources efficiently, lowering both utility bills and impact on the environment

- Buildings are positioned to have an enormous impact on the environment and climate change. At 41 percent of total U.S. energy consumption, buildings out-consume the industrial (30

percent) and transportation (29 percent) sectors. ⁹

Buildings use about 14 percent of all potable water (15 trillion gallons per year), but water-efficiency efforts in green buildings are expected to reduce water use by 15 percent and save more than 10 percent in operating costs. ^{9,10} Retrofitting one out of every 100 American homes with water-efficient fixtures could avoid about 80,000 tons of greenhouse gas emissions, which is the equivalent of removing 15,000 cars from the road for one year. ¹¹

Standard building practices use and waste millions of tons of materials each year; green building uses fewer resources and minimizes waste. LEED projects are responsible for diverting more than 80 million tons of waste from landfills, and by 2030 that number is expected to grow to 540 million tons. ¹²

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¹ U.S. Department of Energy (2011). [Re-Assessing Green Building Performance: A Post Occupancy Evaluation of 22 Buildings.](#)

² Dodge Research and Analytics (2016). [World Green Building Trends 2016 SmartMarket Report.](#)

³ McGraw Hill Construction (2012). [World Green Buildings Trends: Business Benefits Driving New and Retrofit Market Opportunities In Over 60 Countries](#)

⁴ U.S. Department of Energy (2011). [Re-Assessing Green Building Performance: A Post Occupancy Evaluation of 22 Buildings.](#)

⁵ McGraw-Hill Construction (2012). [World Green Buildings Study.](#) Accessed Nov. 29, 2012.

⁶ Booz Allen Hamilton and the U.S. Green Building Council (2015). [2015 Green Building Economic Impact Study.](#)

⁷ IBID.

⁸ National Trust for Historic Preservation (2011). [The Greenest Building: Quantifying the Environmental Value of Building Reuse.](#)

⁹ U.S. Geological Survey (2000). 2000 data.

¹⁰ McGraw Hill Construction (2010). [Green Outlook 2011: Green Trends Driving Growth.](#)

¹¹ U.S. Environmental Protection Agency. [Green Building, Green Homes, Conserving Water. Water Use and Energy.](#)

¹² Watson, Rob. Greenbiz Group (2011). [Green Building and Market Impact Report.](#)

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