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Why Green Buildings are Good for You, Not Just the Environment

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Green buildings are typically 25-30% more energy efficient than traditional buildings, use less water, generate less construction waste, and are built out of more durable materials. These factors clearly offer significant environmental benefits. Lower energy consumption leads to lower levels of greenhouse gas emissions, as well as lower emissions of the chemicals that help create smog and acid rain. Less waste means a reduced burden on already overflowing landfills, and less water means that fewer aquifers and reservoirs are being drained dry. However, despite all of these benefits to the environment, most of the benefits of a green building go to you, if you are the person who lives or works in one.

First, the efficient use of energy and water means that the bills that arrive each month will be considerably lower than they would be for a traditional structure. Also, more durable construction materials keep the building from needing as many major repairs and add considerably to the building's useful life. However, the greatest benefit of living in a green home, or working in a green building is the improved Indoor Environmental Quality.

The US Environmental Protection Agency estimates that indoor levels of pollutants are often 2-5 times, and occasionally more than 100 times, higher than outdoor levels of pollutants. The source of these indoor air pollutants is most often the very materials that make up the building. Carpeting, paint, varnishes, adhesives, and treated wood all emit volatile organic compounds (VOC's), many of which have been found to be carcinogenic or have other negative health effects.

Synthetic, wall-to-wall carpeting is one of the most toxic floor covering choices available. New carpeting can release as many 100 different chemicals into the air. Another major area of concern are the "wet" products such as paints, varnishes, adhesives, and caulking, all of which release a variety of VOCs when first applied, although they are much safer once dry. Veneered plywood and particleboard are another common building material that could contain large quantities of urea-formaldehyde glue, and are almost always coated with a VOC emitting clear finish.

Green buildings are generally constructed with materials that contain low or no VOC's, as well as having better fresh air circulation and more daylight. These benefits of green building are difficult to quantify but have



been reported by many residents, employees, and employers. People who moved from traditional affordable housing to green affordable housing have reported their children's asthma clearing up, and corporate managers have reported decreases in absenteeism and increases in productivity among their employees. William Pape, the cofounder of VeriFone, reported that eighteen months after VeriFone employees began working in a building retrofitted to cut indoor pollutants and improve indoor environmental quality, absenteeism rates were down 40% and productivity was up by more than 5%. Similarly, Gary Jay Saulson, the Senior VP of PNC Realty Services, reported that two business units experienced 83% and 57% reductions in voluntary terminations after moving into the new, green Firstside facility (Kats, 2003).

It is important to remember that while green buildings do provide benefits to the environment and may help to protect future generations, these buildings also provide important benefits now. Not only will you pay less for energy, water, and repairs, but you will also be safeguarding the health of your family and employees. Green buildings offer considerable benefits to the environment, but they also offer important benefits to you and those close to you.

Sources:

Bower, John. (1994). Healthy Construction Recommendations for Healthy People (Building a Generically Healthy House). Presented at the Energy Efficient Building Association Excellence in Housing Conference in Dallas Texas. Available at <http://www.hhinst.com/Artgeneric.html>

Bradshaw, W. et al. (2005). *The Costs and Benefits of Green Affordable Housing*. New Ecology.

EPA (2005). Indoor Air Quality (IAQ) Tools for Schools Kit. EPA. Available at <http://www.epa.gov/iaq/schools/toolkit.html>

Fisk, William J. and Satish Kumar. (2002). "The Role of Emerging Energy Efficient Technology in Promoting Workplace Productivity and Health: Final Report," Available at: <http://www.library.lbl.gov/docs/LBNL/497/06/PDF/LBNL-49706.pdf>.

Kats, Gregory, H. (2003). *Green Building Costs and Financial Benefits*. Massachusetts Technology Collaborative. Available at http://www.barrfoundation.org/usr_doc/Green_building_costs_and_financial_benefits.pdf

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