



# Focus on the Environment!

*Building a Green Future*

## Green Home Mortgage

*2009*



# Green Building Background



# Definition

## What is Green Home Building?

The careful design, construction, operation, and reuse or removal of the built environment in an environmentally, energy-efficient, and sustainable manner



# Definition

## What is Green Home Building?

Green homes contain common elements:

- ★ Energy efficiency
- ★ Indoor air quality
- ★ Water conservation
- ★ Resource efficiency
- ★ Construction process



# Why Green?

## U.S. Impact of Buildings On Resources Today

- ★ 40% of Total Energy Use
- ★ 71% of Electricity
- ★ 38% Carbon Dioxide Emissions
- ★ 36% of all Greenhouse Gas Emissions
- ★ 30% of Raw Materials Use
- ★ 30% of Waste Output
- ★ 12% of Potable Water Consumption



# Green Building Principles

- ★ Depending on your location, a green building program will follow one or more of these principles:
- ★ *Energy efficiency*: Energy efficiency covers the building, mechanical equipment and appliances.
- ★ *Water efficiency*: This indoor/outdoor element includes native, drought-tolerant landscaping, low-flow fixtures and water-saving appliances.
- ★ *Passive design*: Orientation of the house on the site, cross ventilation and roof overhang designs.



# Green Building Principles

- ★ *Materials:* Durable, low maintenance, recycled, renewable and sustainable all come into play here.
- ★ *Construction process:* Limiting construction waste and preserving nature by limiting rainwater runoff and clear cutting.
- ★ *Indoor environmental quality:* Thermal comfort, moisture control and lighting play a role.
- ★ *Site and landscape:* Native plants, animal habitats and erosion control.



# Green Building

- ★ Green Building Certification programs
- ★ LEED for Homes: From the US Green Building Council. Builders score points for things like solar panels and energy efficient appliances.
- ★ National Green Building Standard: The National Association of Homebuilders developed standards that are flexible depending on the region.
- ★ Energy Star: A federal government program. Homes must be at least 15% more efficient than homes built to the 2004 residential code.

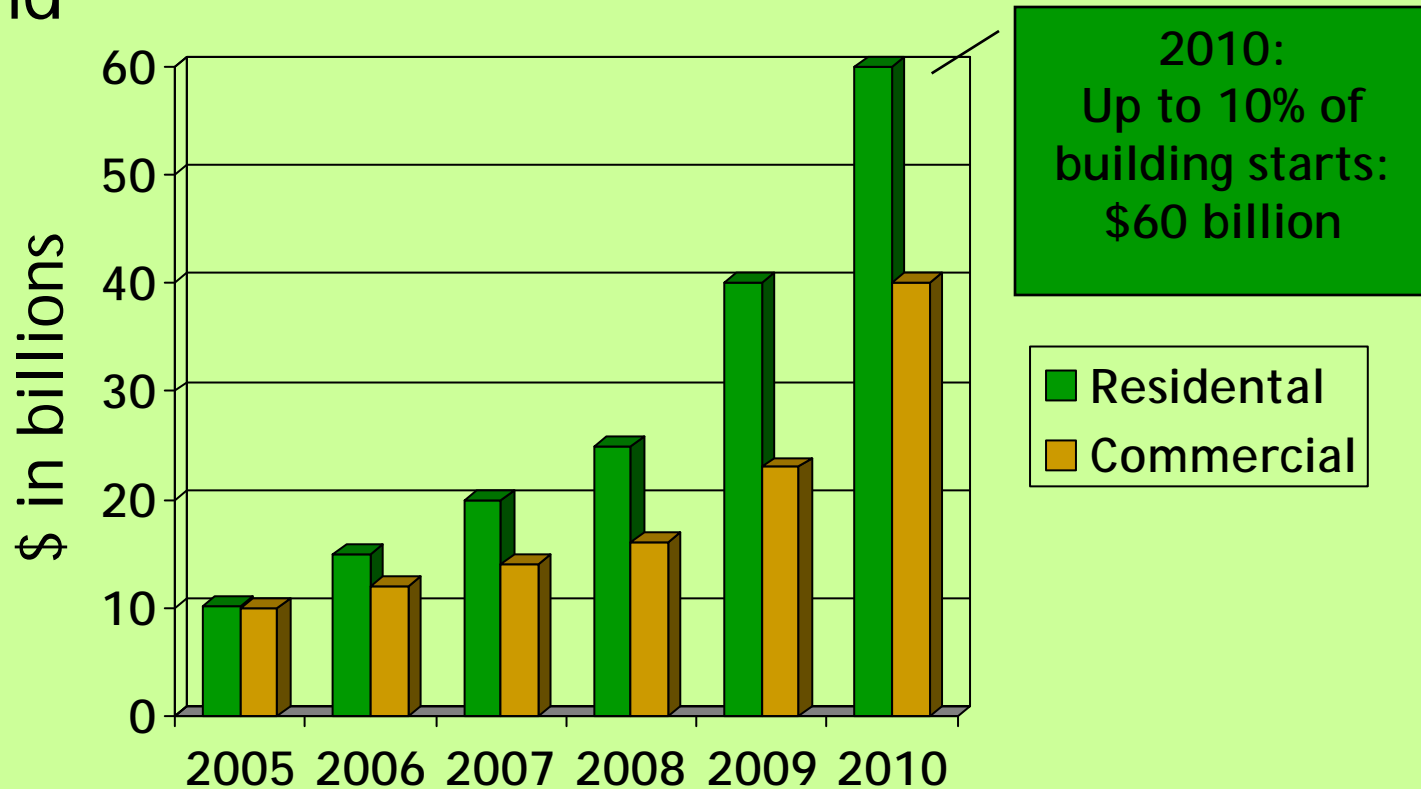


# Green Building Marketplace



# Green Home Marketplace

Green building is not a fad—it's an industry trend



McGraw-Hill Construction Survey Results, 2006

# Green Home Marketplace

## Estimated Size of Green Home Market

Total number of newly constructed homes in 2004-2006 (Source: U.S. Census Bureau)	6 million
Incidence rate of Green Home construction (based on the survey data)	0.3%
<b>TOTAL NUMBER OF GREEN HOMES BUILT (2004-2006)</b>	17,655
Average price of a newly constructed home in 2004-2006 (Source: U.S. Census Bureau)	\$292,100
Average premium buyers were willing to pay for a green home in 2004-2006 (based on the survey data)	\$ 18,500
<b>AVERAGE PRICE OF A NEW GREEN HOME (2004-2006)</b>	\$310,600
<b>TOTAL VALUE OF GREEN HOMES BUILT (2004-2006)</b>	\$5.5 billion
<b>AVERAGE YEARLY VALUE OF GREEN HOMES</b>	\$1.8 billion



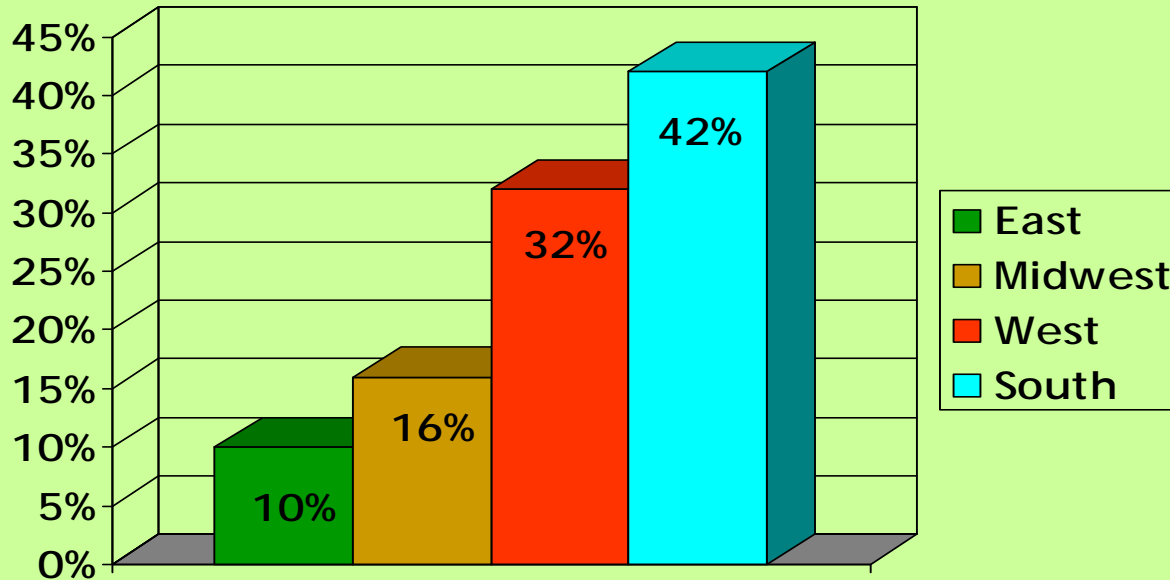
# Green Home Market - Who is Buying

- Average age of 45
- Married couples
- 79% college educated
- Located in South & West
- Nearly 2/3 have annual incomes over \$50,000

McGraw-Hill Construction Survey Results, 2006



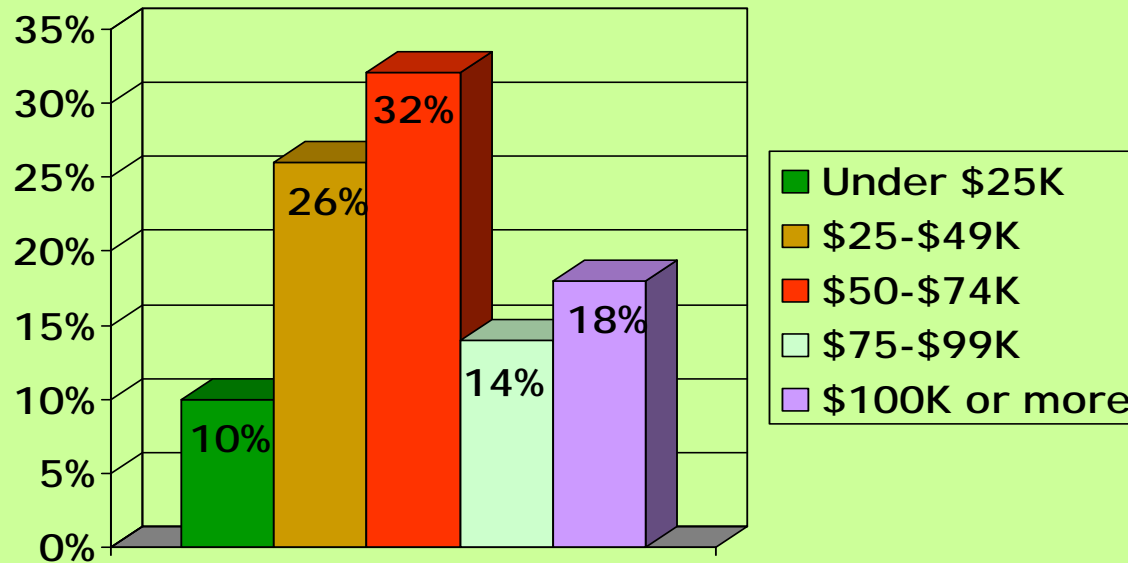
# Green Home Market - Region



McGraw-Hill Construction Survey Results, 2006

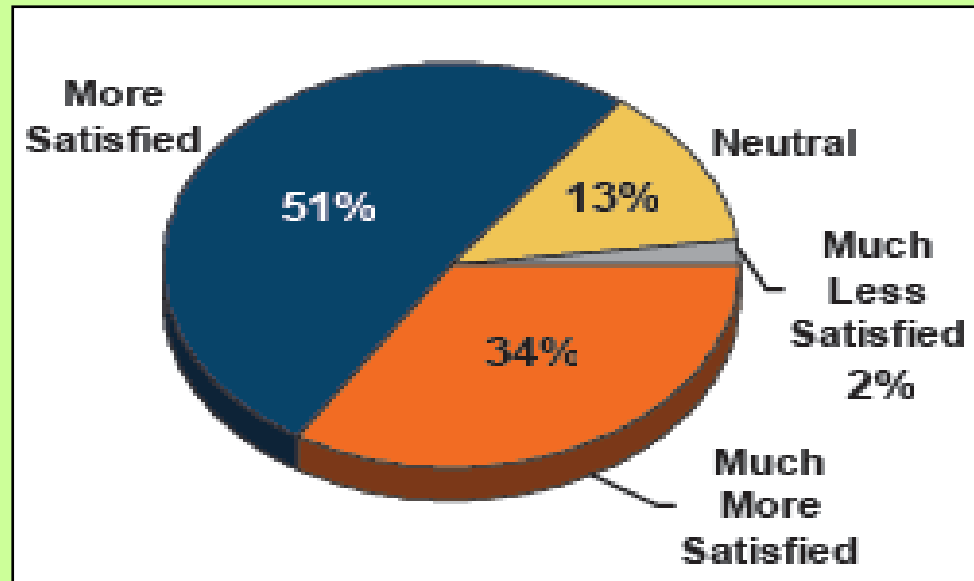


# Green Home Market – Income Level



McGraw-Hill Construction Survey Results, 2006

# Green Home Market - Customer Satisfaction



McGraw-Hill Construction Survey Results, 2006

# Green Home Builders



# Green Home Builders

## Who is building green?

Builders with under 10 units per year

- 2005: 35% of builders with at least 15% of projects green
- 2006: 50% of builders with at least 15% of projects green
- 2007: 66% of builders with at least 15% of projects green



# Green Home Builders

## Who is building green?

Builders with at least 10 units per year

- 2005: 27% of builders with at least 15% of projects green
- 2006: 39% of builders with at least 15% of projects green
- 2007: 59% of builders with at least 15% of projects green



# Green Home Builders

Most cited triggers to increased residential green building

- Energy cost increases
- Publicity benefits
- Consumer demand
- Codes and regulations



# Green Home Builders

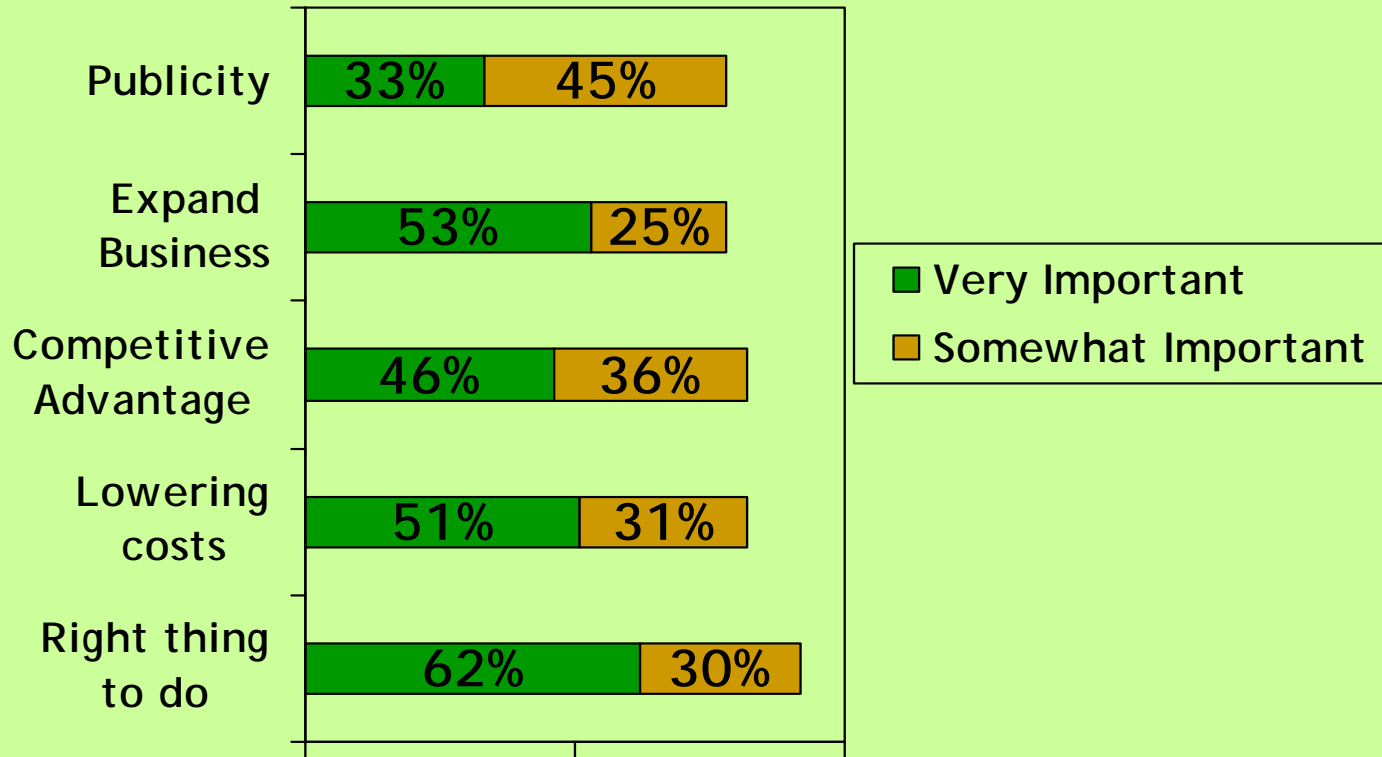
Most cited obstacles to increased residential green building

- Higher costs
- Consumer willingness to pay
- Lack of education
- Codes and regulations



# Green Home Builders

Top reasons to build green homes according to home builders



# The Greening of America



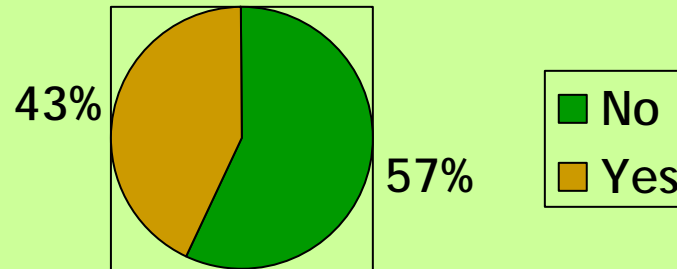
# Corporate Going Green

## Green as Part of Corporate Growth Strategy

By 2009, 80% of corporate America is expected to be engaged in green at least 15% of the time.

20% will be engaged in green 60% of the time.

Is Green a Part of Company's Growth Strategy



Survey respondents:

190 total, creating a representative sample

61% from companies with \$1 billion + revenue

# Corporate Going Green

## Fortune 500 Companies

- \* Chevron Corp., BP and other oil companies are spending billions of dollars to develop alternatives to petroleum-based fuels.
- \* Auto companies, led by Toyota, are selling tens of thousands of almost emission-free hybrids and are developing plug-in hybrids.
- \* Wal-Mart has embarked on a \$500-million-a-year campaign to save energy in all of its U.S. stores and distribution centers.
- \* DuPont estimates that it has saved \$3 billion from a nearly two-decade effort to dramatically reduce carbon emissions.
- \* Both FedEx and UPS have made investments in vehicles that run at least partly on alternative fuels.
- \* GE has doubled research and development budget to \$1.5 billion into technology to reduce energy consumption and waste products.
- \* Electronics makers including Dell and Hewlett-Packard are encouraging more recycling amid mounting concerns about the environmental effects of dumping electronics into landfills.



# Corporate Going Green

## Financial Services Companies

- \* Citi announced that it will direct \$50 billion over the next 10 years to address global climate change through investments, financings and related activities to support the commercialization and growth of alternative energy and clean technology.
- \* As part of its \$20 billion, 10- year environmental initiative, Bank of America is launching the first of its environmentally sustainable products, an innovative donation program for new home equity customers. Customers who open a new Home Equity Line of Credit, register for the program, and use their equity line Visa® access card for combined purchases of \$2,500 or more, will be eligible to direct a one-time \$100 donation to Conservation International.
- \* The Goldman Sachs Group has invested more than \$1.5 billion in alternative and clean energy including solar and wind power, and also is establishing a business dealing in carbon-emission credits.



# Recap

- ★ Green industry expected to grow to \$6 billion by 2010
- ★ 59% of large builders have at least 15% of projects designated green
- ★ A major trigger for builders to go green in publicity benefits
- ★ One of the major obstacles stopping builders from building green is a lack of education
- ★ 2/3 of Green homebuyers have incomes over \$50K
- ★ Consumers are willing to pay \$18,500 more on average for green home
- ★ 89% of tomorrow's homebuyer are likely to switch brands to support a cause
- ★ By 2009, 80% of corporate America is expected to be engaged in green at least 15% of the time.
- ★ Wells Fargo has built and solidified a respected green reputation



# What's Next?



# Green Home Mortgage?

- ★ HUD has implemented an FHA Energy Efficient Mortgage (EEM) Program.
- ★ An inspection by a Home Energy Ratings System (HERS) or energy consultant is used to determine the energy improvements/savings.
- ★ The energy improvements must be over and above those required for compliance with current FHA energy conservation standards.
- ★ Presently, these standards are those of CABO 1992 Model Energy Code (MEC).



# Green Home Mortgage?

- ★ FNMA and FHLMC currently does not offer a true green mortgage product or program.
- ★ Secondary market challenges
- ★ No seasoned data on green home buyers
- ★ Appraisal challenges
- ★ Difficulty tracking green home sales in MLS



# Lender incentives

- ★ **B of A:** \$1,000 credit toward closing fees on new homes that meet efficiency requirements by Energy Star program.
- ★ **Citigroup:** \$1,000 off closing costs.
- ★ **Chase:** Offering Expanded Energy Conservation Mortgages in some markets - \$500 off closing costs.
- ★ **Countrywide:** Offering between a  $\frac{1}{2}$  point to  $\frac{3}{4}$  point incentive for homes that meet the Built Green designation.



Questions?

