

Excerpts from:

**2006 Residential GREEN Building
“SmartMarket” Report**

McGraw-Hill Construction
NAHB (National Association of
Home Builders)

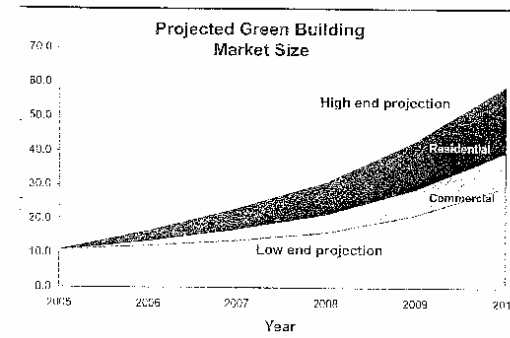
Market Involvement

- 31% in 2005 “more than moderately involved
- 90% of builders report “participation” in green building activities
- More builders becoming involved in “voluntary” efforts at both local and national levels

Market Trends/Outlook

- In 2005, green building comprised appx 2% of residential new construction market.
- By 2010, between 5-10% of new construction starts will be green projects
- This translates to a market worth between \$19 – 38 **billion**
- ***This does NOT include the residential remodel market***

Percent of All Builders Engaged in the Following Green Home Building Activities



Market Drivers

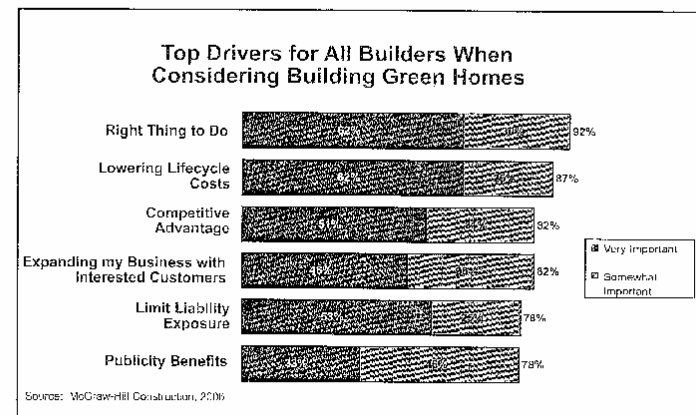
- 92% of builders in market are motivated “to do the right thing”
- 87% of builders are motivated “to lower life-cycle construction costs”

Triggers:

- Energy cost increases
- Consumer demand
- Superior performance of homes

Obstacles:

- Perceived higher 1st costs
- Consumers not willing to pay more up-front
- Lack of consumer education on green building
- Codes and regulations



Products & Practices

“Top 3 List” of important practices:

- Energy efficient techniques used in during construction (82%)
- Better Indoor Air Quality (66%)
- Water conservation (66%)

Most Important Features:

- Energy efficient technology (i.e. low-e windows) 82%
- Environmentally friendly materials (i.e. OSB) 80%
- Open space preservation & minimal vegetation disruption (67%)

Products:

- Brand recognition important (i.e. house wrap, doors/windows, insulation)

Green Home Advantages/Features

- Energy efficiency
- Indoor Air Quality
- Water conservation/efficiency
- Resource usage and efficiency
- Construction process

NAHB/LEED/Build-it-Green have all developed building guidelines that incorporate the above features into green home construction.

Advantages/Challenges of Green Construction

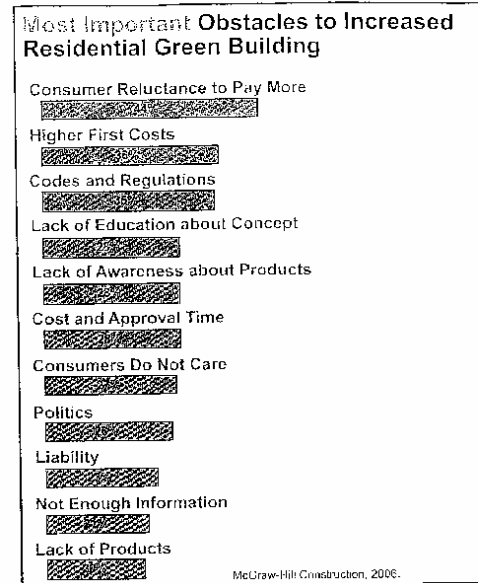
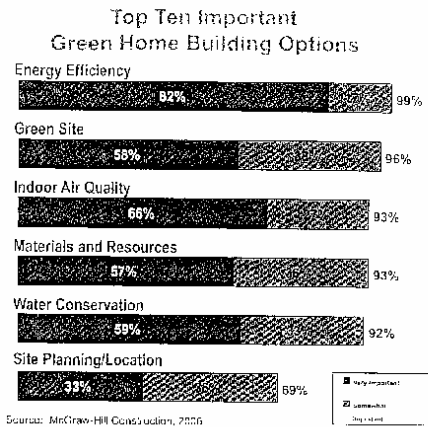
Advantages:

- Lower operating costs
- Tax Incentives/Rebates
 - PG & E programs
 - Federal Tax Credits (Energy Policy ACT of 2005)
- Increased Health and Comfort
- Better sense of “doing the right thing”

Challenges:

- Understanding how to maintain home and more complex systems is critical!
- Coordination and communication between home-owner, builder, product manufacturers, retailers and building officials.

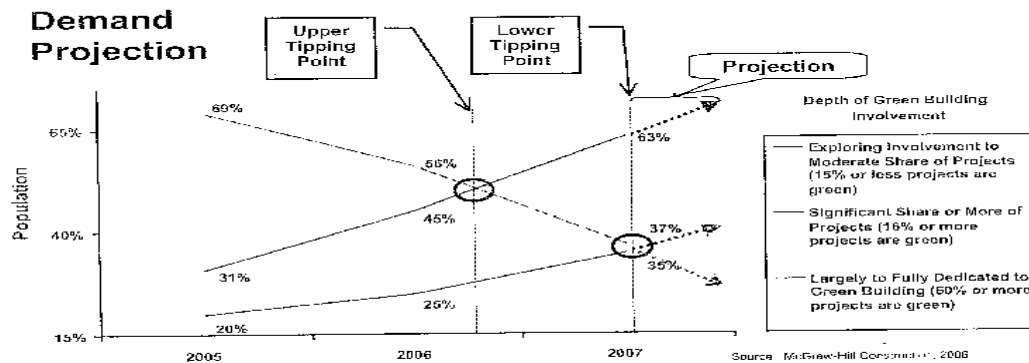
Advantages/Obstacles of “Green”



“Tipping Point/Critical Mass”

Tipping point- point where builder population turns from “less involved” to “more involved” in green building.

This was estimated to occur in 2006/2007...CRITICAL MASS has been realized!!!



Cost of Building Green??

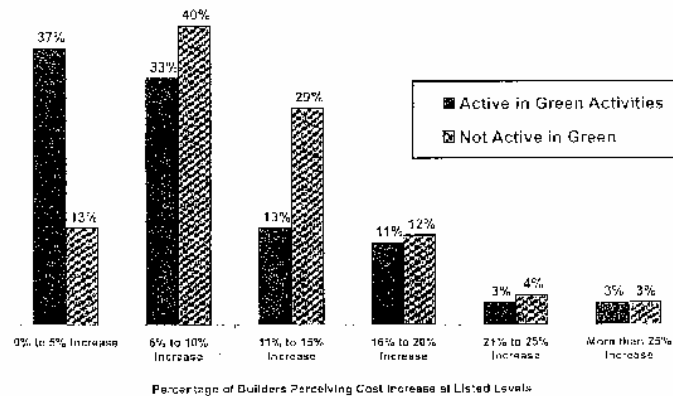
More than half of the builders surveyed claim buyers are willing to pay more for green building elements...how much more??

- Builders active in green construction: + 8.7%
- Builders not-active: + 11.1%
- Some builders claim + 2 - 5%

REMEMBER these are only 1st COSTS !!

Cost of Building Green

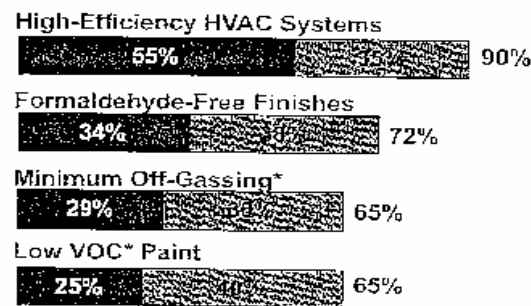
Degree of Cost Increases For Green Homes:
Perceptions of Home Builders



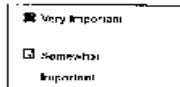
Source: McGraw-Hill Construction, 2003

Energy Efficiency/IAQ Green ideas

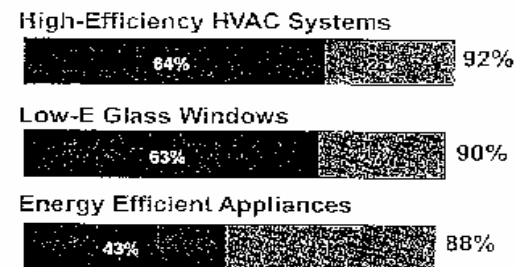
Indoor Air Quality*



Source: McGraw-Hill Construction, 2006



Energy Efficiency



Source: McGraw-Hill Construction, 2006

