



NAHB NATIONAL GREEN BUILDING PROGRAM™

NAHB & LEED Comparison



LEED FOR HOMES

Rob Wisniewski
Sustainable Design Consultant
MaGrann Associates



Green Building Programs

- 80-100 existing green building programs nationally
- Builders are & have been sampling a variety of local and regional green certifications for a decade or more
- Time for a single national consensus or room for two programs??



“As of 2006, **50% of builders** are focusing their attention on green building issues.”
Source: GreenSource Building Industry, WBCI March 2006

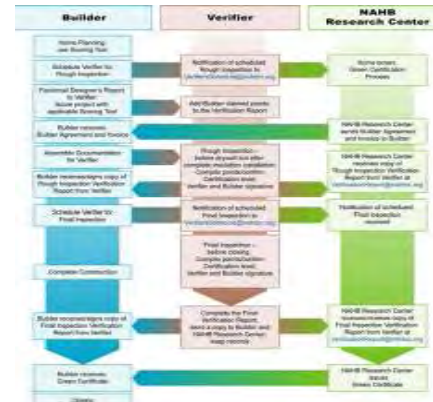
“Between **40% and 50% of the homes** built in 2010 are expected to be green.”
Source: GreenSource, Forecast for 2010 WBCI March 2006



- The certification program is based on the NAHB Model Green Home Building Guidelines, published in 2005.
- Development of program included limited oversight by NAHB of regional & local HBA implementation and evaluation with two public comment periods.
- In late 2008, homes certified under the national program will also have the option of being certified based on the National Green Building Standard (ICC 700-2008), ICC & ANSI Standards
- Applicable and available to single family and low rise home projects.
- NAHB Research Center currently integral component in certification process.



NAHB Certification Process



- Consensus based development of standards
- 2 year pilot period
- Fully chartered beginning of 2008

The Rating System: Simple & Streamlined

3 documents

136 points

45-point entry

Program Status

30 providers

12,000 registered homes

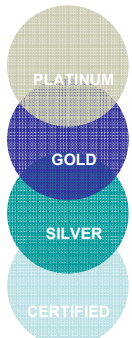
490 certified homes




Consensus-Based Standards

USGBC has four levels of LEED:

- PLATINUM > 90 Points
- GOLD > 75 Points
- SILVER > 60 Points
- CERTIFIED > 45 Points



Applicable Building Types



LEED for Homes Alliances

National Programs

-  
- 
- 

Local and Regional Programs

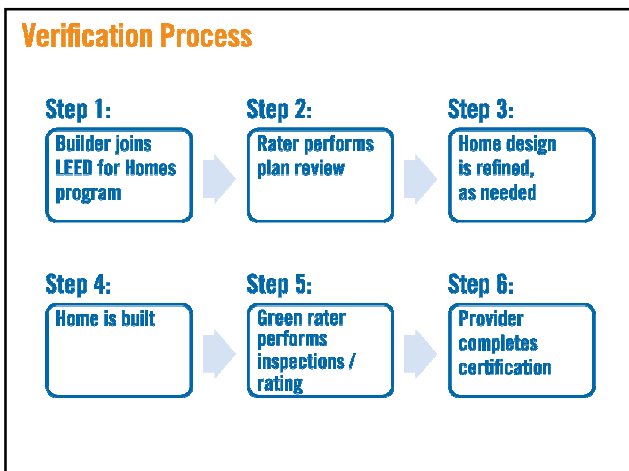
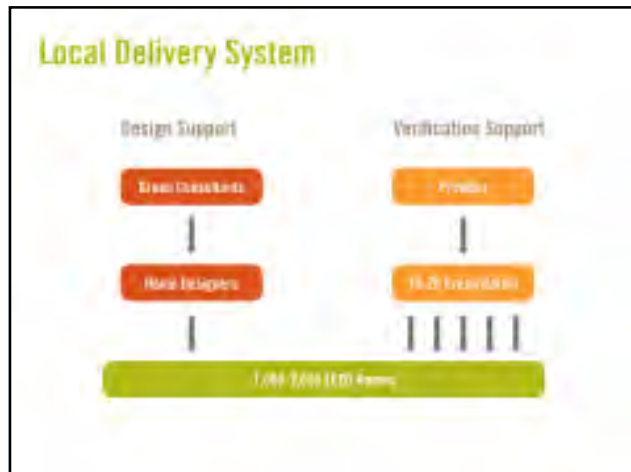
-  
-  
-   
-  

Participation is Voluntary....

Accreditation by ANSI signifies that the procedures used by the standards body in connection with the development of American National Standards meet the Institute's essential requirements for openness, balance, consensus and due process.

Voluntary refers only to the manner in which the document was developed; it does not necessarily refer to whether compliance to the standard is optional or whether a government entity or market sector has endorsed the document for mandatory use.



Development of LEED for Homes & NAHB GBP was consensus based and participation for both LEED For Homes & NAHB is voluntary...







Verification Process

Preconstruction : Builder pays fees to meet with rater for plan review & to register project w/ USGBC & LEED for Homes Provider.	Preconstruction : Builder possibly completes scoring tool without outside input
Rough Inspection : Rater to verify incorporated strategies as discussed in preliminary meeting.	Rough Inspection : NAHB Certified Verifier to identify compliance with scoring tool.
Final Inspection : Confirm all strategies have been met with optional HVAC testing.	Final Inspection : Similar

	
8 Sustainable Categories 1. Innovation & Design Process 2. Location & Linkages 3. Sustainable Sites 4. Water Efficiency 5. Energy & Atmosphere 6. Materials & Resources 7. Indoor Environmental Quality 8. Awareness & Education	7 Green Building Guiding Principles 1. Lot Design, Preparation Development 2. Resource Efficiency 3. Energy Efficiency 4. Water Efficiency 5. Indoor Environmental Quality 6. Operation, Maintenance & Homeowner Education 7. Global Impact
4 Certification Levels Certified, Silver, Gold, Platinum 18 prerequisites distributed throughout Minimum requirements in most categories 136 Total Available Points Home Size Adjustment	3 Certification Levels Bronze, Silver, Gold 3 Prerequisites in Energy Category Minimum points required in each category 600-900 available points Points awarded for smaller square footage

	
Prerequisites	
Innovation and Design Process	Resource Efficiency / IEQ
Preliminary Rating	N/A
Detailed Durability Plan w/ Quality Management	Points awarded (68-100) available for perimeter drain, drip edge, vapor barrier, ice flashing, etc
Wet Room Measures	Points Awarded in IEQ
Sustainable Sites	Lot Design
Site Stewardship – Erosion Controls (During Construction)	Points awarded
Landscaping – No Invasive Plants	N/A
Materials and Resources	Resource Efficiency
Material Efficient Framing – Overall Framing Waste Factor no more than 10%	N/A
Tropical Hardwoods – If Used, Must be FSC Certified	Points awarded for multiple certifying bodies
Waste Management- Document Overall Rate of Diversion	Points awarded

	
Prerequisites	
Indoor Environmental Quality	Indoor Environmental Quality
Combustion Venting – Space Heating & DHW Equip with Closed/Power-Exhaust	Points Awarded
Outdoor Air Ventilation Meets ASHRAE Std 62.2	Points awarded, 10 max.
Local Exhaust – Meets ASHRAE Std. 62.2	Points Awarded in IEQ
Room by Room Load Calculations - per ACCA Manual J&D	Points awarded
MERV 8 Filters in all Air Handlers	Points awarded for MERV 9
Radon Protection in EPA Zone 1	Points awarded
Garage Pollutant Protection – No HVAC in Garage	N/A

	
Prerequisites	
Energy & Atmosphere	Energy & Atmosphere
Energy Star Homes – Meet Performance Requirement	Equivalent to IECC 2003 or local energy code, whichever more stringent, Manual J, & third party code review/compliance.
Ensure Proper Refrigerant Charge	Points Awarded
Awareness & Education	O & M and Homeowner Education
Homeowner's Manual & Walkthrough	Points Awarded

NAHB point evaluation of LEED for Homes Prerequisites

Category	Bronze	Silver	Gold	LEED Prerequisites
Lot Design, Preparation & Development	8	10	12	11
Resource Efficiency	44	60	77	68-80
Energy Efficiency	37	62	100	37-100 +
Water Efficiency	6	13	19	N/A
Indoor Environmental Quality	32	54	72	42
Operation, Maintenance & Homeowner Education	7	7	9	18
Global Impact	3	5	6	N/A
Additional Points	100	100	100	
Total Points	237	311	395	176-251

Effort & Time Associated with Program Verification

First Time Builder	
Preliminary rating, documentation, in field inspection & testing, documentation review and certification = 15 - 40 hours +	Infield inspections & documentation review = 4-8 hours, in best case scenario. Highly unlikely...
Experienced or Production Builder	
Aforementioned services = 8 hours or less with sampling possible	Similar

How Much Does a LEED Home Cost?
An Example

Comparison Criteria	Code Home	LEED Home	Difference	
			15 Months	(\$/Day)
Sticker Price	\$200,000	\$200,500		
Mortgage Payment	\$1,000	\$1,045	+ \$45	+ \$1.00
Energy Bill	\$150	\$105	- \$45	- \$1.50
Water Bill	\$20	\$20	-\$10	-\$0.30
Net Cost of Ownership	\$2,070	\$2,010	-\$60	-\$0

- Program Similarities
- Development of program consensus based and builder participation is voluntary
 - Third Party verified, though slightly different process
 - Program requirements typical of general green building practices
 - Address Home Size, although slightly different
 - Two energy pathways
 - Paperwork and amount of time & effort to certify is roughly equivalent
 - Both are flexible systems that provide opportunity for innovation
 - Enough technical overlap to pursue dual certification, if desired. Although certification levels may not be equivalent.



Program Differences



- Third Party Verification & Process: NAHB Verifier vs. LEED H Providers
- Where certification process begins
- Applicability to Mid Rise Multi Family
- LEED checklist is more streamlined
- LEED Prerequisites are generally entry level certification for NAHB
 - NAHB point categories for minimum bronze certification level are soft in terms of encouraging innovative green strategies.
- Energy Star equivalent not required by NAHB
- NAHB point categories for minimum bronze certification level are soft in terms of encouraging innovative green strategies.

Good luck working together to promote sustainable building practices.

Thanks!

Questions?

We Help You Build a Better Green Home

