

# Home Energy Ratings and Green Buildings

## US Green Building Council's LEED-H Program

March 2, 2005



# Overview

## 1. RESNET and USGBC's MOU

*Richard Faesy, VEIC*

## 2. LEED-H Background and Update

*Jay Hall, Building Knowledge*

## 3. LEED-H Specifications and Verification Procedures

*Jay Hall, Building Knowledge*

## 4. How Home Energy Raters Can Get Involved?

*Kristin Shewfelt, E-Star Colorado*

# **RESNET and USGBC's Memorandum of Understanding**

- 1. What is USGBC?**
- 2. What is a Green Home?**
- 3. The RESNET / USGBC MOU**

# US Green Building Council (USGBC)

## Mission

*To promote the design and construction of buildings that are environmentally responsible, profitable, and healthy places to live and work.*

- The organization's activities...
  - *Integrate* building industry sectors
  - *Lead* market transformation
  - *Educate* owners and practitioners



# USGBC is...

- ✓ A national nonprofit organization
- ✓ A diverse membership of organizations
- ✓ Consensus-driven
- ✓ Committee-based product development
- ✓ Developer and administrator of the LEED® Green Building Rating System

# What is “Green” Design?

Design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants in five broad areas:

1. Energy efficiency and renewable energy
2. Indoor environmental quality
3. Sustainable site planning
4. Safeguarding water and water efficiency
5. Conservation of materials and resources

# Green Buildings Benefits

## Environmental benefits

- **Reduce the impacts of natural resource consumption**

## Economic benefits

- **Improve the bottom line**

## Health and safety benefits

- **Enhance occupant comfort and health**

## Community benefits

- **Minimize strain on local infrastructures and improve quality of life**

# Green Buildings

## More Benefits

Competitive first costs

- **Integrated design allows high benefit at low cost by achieving synergies between disciplines and between technologies**

Reduce operating costs

- **Lower utility costs significantly**

Optimize life-cycle economic performance

Reduce liability

- **Improve risk management**



# **RESNET and USGBC's**

## **Memorandum of Understanding**

### **Purpose: To Define**

1. The collaborative relationship between the US Green Building Council (USGBC) and the Residential Energy Services Network (RESNET).
2. The tasks, roles, and schedule, required to effectively deliver green rating services to the USGBC's LEED-H initiative.

### **Scope: Agreements to Support:**

1. LEED-H Program Providers and
2. LEED-H "Green Raters"

# Memorandum of Understanding

## **RESNET's Agreements**

1. Promote the advanced training of HERS Providers and Raters to enable them to qualify to become LEED-H Program Providers and LEED-H “Green Raters”.
2. Promote the accreditation of LEED-H Program Providers and LEED-H “Green Raters”.
3. Maintain data on LEED-H related trainings and accreditations, and to share that data with USGBC.
4. Work collaboratively to continually improve and update the LEED-H training.
5. Work collaboratively to continuously refine or improve the LEED-H initiative.
6. Use the Partnership and the LEED-H brand to promote sustainable home design and construction.
7. Promote adherence to the LEED-H Guidelines

# Memorandum of Understanding

## **USGBC's Agreements**

1. Provide current LEED-H policies, requirements, and training curriculum.
2. Work collaboratively to continually refine and improve LEED-H policies, accreditation requirements, and accreditation processes.
3. Work collaboratively to continually refine and improve LEED-H trainings (including both curriculum development and delivery mechanisms).
4. Work collaboratively to continuously refine or improve the LEED-H initiative.
5. Increase awareness of the LEED-H brand.
6. Provide RESNET with current LEED-H news, information, and reference documents.
7. Provide RESNET with public recognition.

# Memorandum of Understanding

## Next Steps

***Revenue:*** Sharing of revenues between the MOU Partners.

***Information:*** Sharing of information.

***Scheduling and Resources:*** Availability and commitment of resources need to meet proposed schedules.

***Market-Based Approach:*** Encourage market competition among LEED-H “Green Raters” in each market and include green home rating models currently in place

***Quality Assurance:*** Agreement on quality assurance policies and procedures, and ultimate responsibility for enforcement of them.



# **LEED-H**

## **Background and Status**

1. What is LEED?
2. What is LEED for Homes?
3. Development Process
4. Next Steps

# **LEED: Leadership in Energy & Environmental Design®**

## **Why Was LEED® Created?**

- Facilitate positive results for:
  - The environment,
  - Occupant health, and
  - Financial return
- Define “green” by providing a standard for measurement
  - Prevent “greenwashing” (false or exaggerated claims)

## Why Was LEED® Created? (cont'd)

- Recognize leaders
- Establish market value with recognizable national “brand”
- Raise consumer awareness
- **Transform the marketplace!**

# LEED® Products

## COMMERCIAL BUILDING PRODUCTS

**LEED-NC:** LEED for New Construction

Released in 2000

**LEED-EB:** LEED for Existing Buildings

Public release: Winter 2004

**LEED-CI:** LEED for Commercial Interiors

Public release: Winter 2004

**LEED-CS:** LEED for Core and Shell

Public release: 2005

## RESIDENTIAL BUILDING PRODUCTS

**LEED-H: LEED for Homes**

**Pilot: Spring 2005; Public release: 2006**

**LEED-ND:** LEED for Neighborhood Developments

Pilot: 2006



# LEED for Homes (LEED-H)

## **Vision:**

- A voluntary initiative
- To promote the transformation of the mainstream homebuilding industry towards more sustainable practices.
- A collaborative initiative that actively works with all sectors of the homebuilding industry.

## **Goal:**

- A consensus-based, national standards for “green” housing
- Target: the 25% of homes incorporating best-practice environmental features.

# The LEED-H Development Team

- Jim Hackler, Program Mgr
- Product Committee
  - Ann Edminster & Steven Winter, Co-Chairs
  - 16 other members (incl. Kristin and Richard)
- Jay Hall, Consultant
- LEED-H Technical Advisory Group
  - 5 separate groups,
- Builder Review Panel
- You!

# LEED for Homes

## The Basic Strategy

### Target Market

- ◆ The new home construction industry

### Target Audience

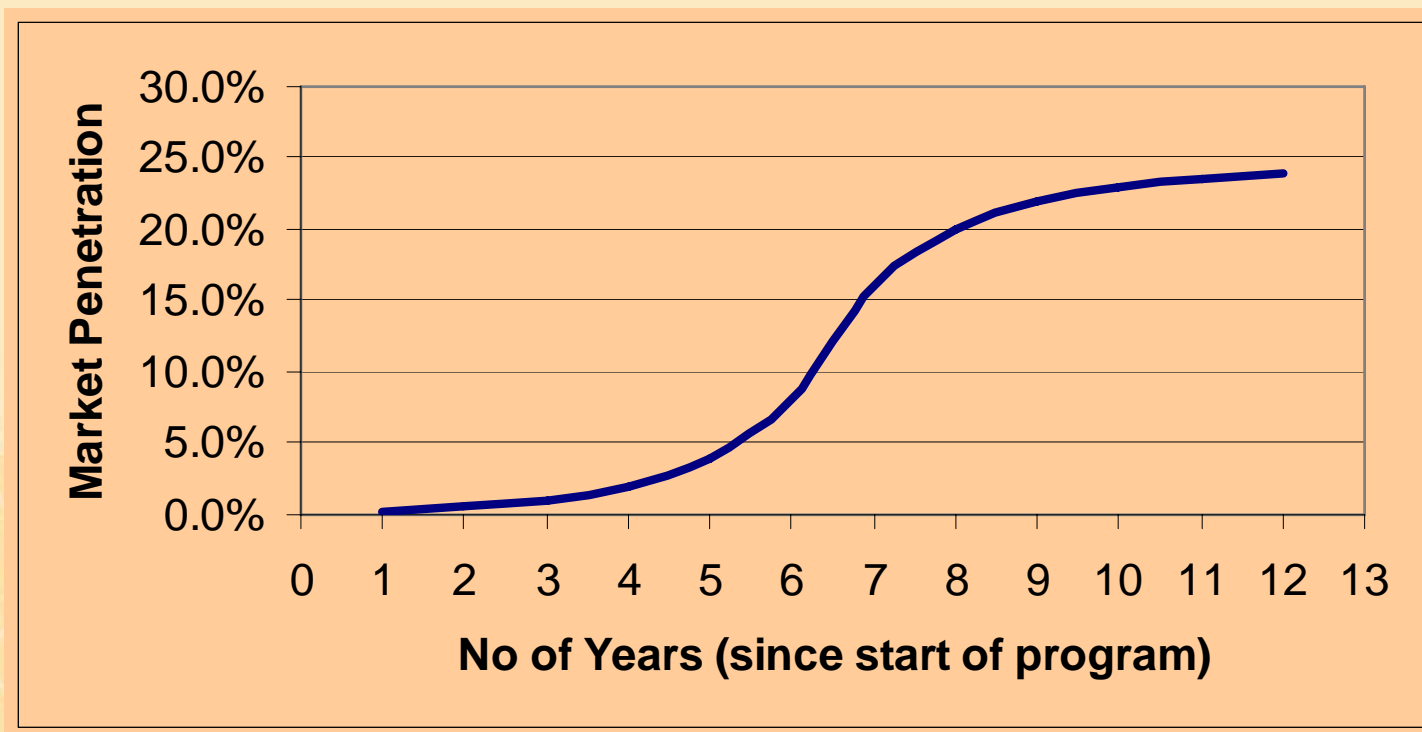
- ◆ Builders producing highest-quality “green” homes

### Other Key Stakeholders

- ◆ HERS raters and allied professionals
- ◆ Local and regional green building programs
- ◆ Finance industry - mortgage lenders, others
- ◆ Home buyers

# LEED for Homes

## Goal: Anticipated Market Penetration

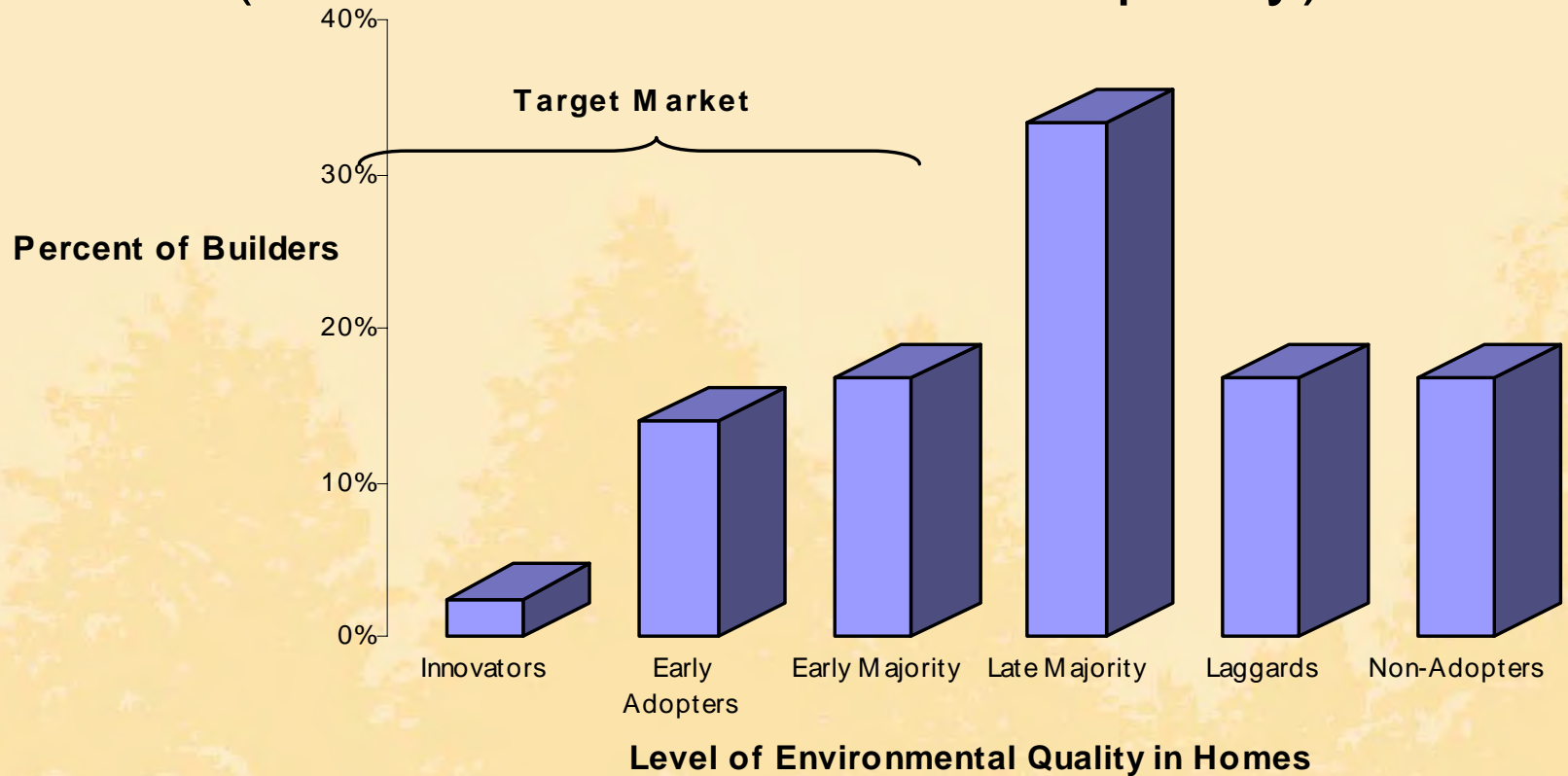




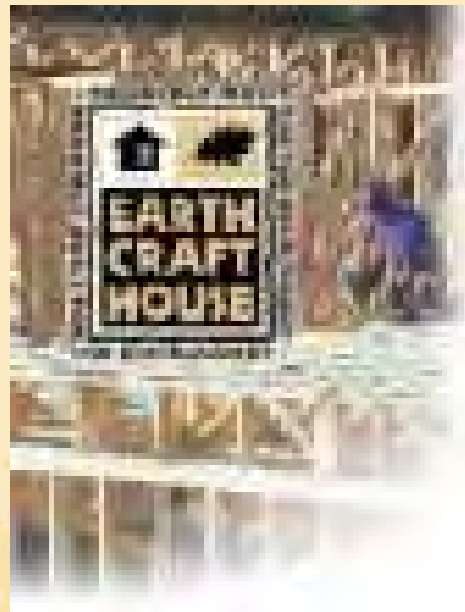
# LEED for Homes

## Top 25% of Builders

(in terms of environmental quality)



# Who's Who in GHB?



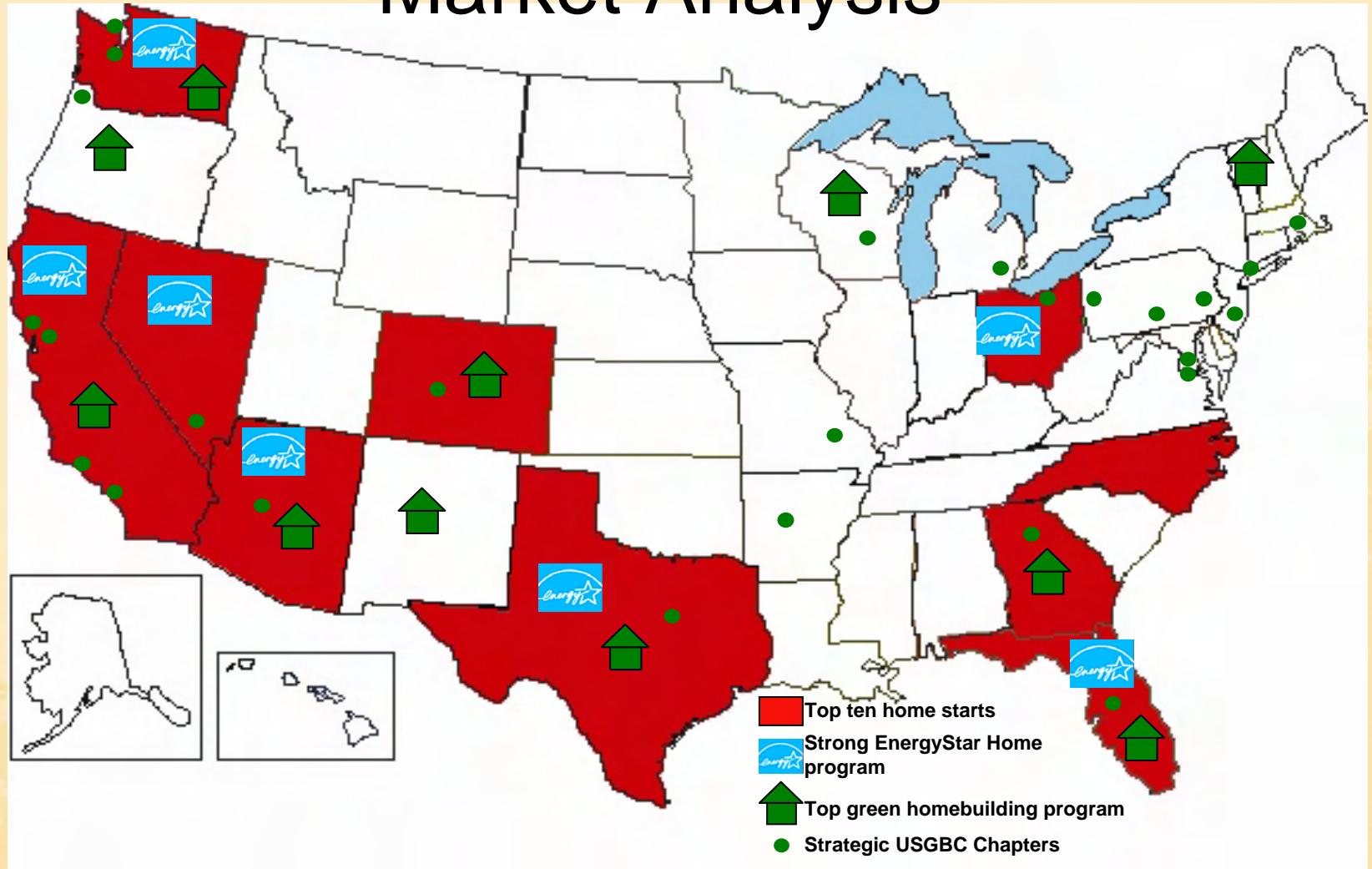
# Back to Drafting Criteria:

## Survey of Existing Programs

### 23 Most Active

State	No. of Programs	No. of Homes	Start-Up Date
TX	3	10,000	1990
CO	3	20,000	1995
CA	5	3,000	1995
WA	4	3,000	1997
AZ	3	400	1998
GA	1	2,000	1999
OR	2	3,000	1999
NM	2	2,000	2001

# LEED for Homes Market Analysis





# Local Green Building Programs

## Comparison of Requirements

	<u>Average</u>	<u>Max / Min</u>
• Checklist length (pages)	7	10 / 5
• No. of credits	195	297 / 65
• Points per credit	3.4	9 / 1
• No. of points	650	1800 / 65
• Distribution of points		
Energy	32%	48% / 20%
Materials	25%	34% / 13%
Indoor air	17%	13% / 18%
Sites	15%	10% / 28%
Water	9%	11% / 4%

# Overview of Existing GHB Programs

## The Facts:

- Numerous GHB programs exist  
& more are on the way
- They are very different.
- They are very difficult to compare.

## The Need:

- A market-friendly approach is needed.
- A national brand would be helpful.

# What is LEED-Homes?

## The Vision

- ✓ Builder Friendly
  - Easy to understand and participate
- ✓ Affordable
  - Net cost of ownership approx.: ***\$1 per day***
- ✓ Uses Proven Models & Infrastructure
  - Existing GHBs
  - Raters
- ✓ National Standard for True Green

# What is the Status of LEED-H?

## Completed Work...

- ✓ Draft Guideline / Checklist
- ✓ Draft Business Plan
- ✓ Draft Marketing Plans
- ✓ Draft Implementation Plan, and
- ✓ Draft Training Plan



# **LEED for Homes**

## **Value Proposition for Consumers**

### **Benefits of a LEED Home:**

- ✓ Improved comfort
- ✓ Healthier indoor air
- ✓ Lower utility bills
- ✓ Durability
- ✓ Resale value
- ✓ Respect for the environment

### **Cost to own a LEED Home:**

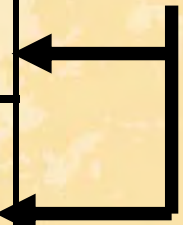
- ✓ Approx \$0.60 to \$1.50 per day

# LEED for Homes

## What will a LEED-H Home Cost?

Costs to Homebuyer	Performance Level		
	Certified	Silver / Gold	Platinum
<b>First Costs</b>			
LEED-H Measures	\$ 7,500	\$ 11,500	\$ 15,500
Certification Costs	\$ 1,000	\$ 1,500	\$ 2,000
USGBC Registration Fee	\$ 50	\$ 50	\$ 50
Total Costs (\$)	\$ 8,550	\$ 13,050	\$ 17,550
(\$/Mo.)	\$ 51	\$ 78	\$ 105
<b>Energy Savings</b>			
	20%	30%	40%
(\$/Yr)	\$ 300	\$ 450	\$ 600
(\$/Mo.)	\$ 25	\$ 38	\$ 50
<b>Net Cost of Ownership</b>			
w/o Sampling (\$/Mo.)	\$ 26	\$ 41	\$ 55
(\$/Day)	\$ 0.88	\$ 1.36	\$ 1.84
w/ Sampling	1:7	1:4	N/A
(\$/Mo.)	\$ 21	\$ 33	\$ 45
(\$/Day)	\$ 0.70	\$ 1.10	\$ 1.50

Approx.  
\$1 Per  
Day



# **LEED for Homes**

## **Value Proposition for Builders**

### **Recognition of Quality Buildings and Environmental Stewardship:**

- ✓ Market differentiation w/ LEED Brand
- ✓ Higher customer satisfaction, more referrals
- ✓ Third party validation of achievement - credibility
- ✓ Eligibility for growing array of state and local incentives
- ✓ Marketing exposure through USGBC website, case studies, media announcements

# LEED for Homes

## Roll-Out Plan

Roll-Out Plans	2005				2006	
	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr
1. Builder Review						
2. Pilot Program						
3. Public Review						
4. Full Program						





LEED-H

LEED for Homes (Version 1.1)  
Registered Project Checklist

Build green. Everyone profits.

Builder Name:

Address (Street/City/State):

Yes	?	No	Homeowner Awareness	2 Points
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1.1 <b>Guidance</b> Manual, Basic	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Manual, Comprehensive	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3 Manual, Comprehensive and Training at Final Walkthrough	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sub-Total	

Yes	?	No	Energy & Atmosphere	28 Points
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1 <b>Performance</b> Home is Certified as an ENERGY STAR Home	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 <b>Bundles</b> Exceeds ENERGY STAR Home, >= HERS 88, Third-Party Tested	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 (Must Skip Credits 2 - 9) Exceeds ENERGY STAR Home, >= HERS 90, Third-Party Tested	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3 Exceeds ENERGY STAR Home, >= HERS 92, Third-Party Tested	6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4 Exceeds ENERGY STAR Home, >= HERS 94, Third-Party Tested	6

Yes	?	No	Envelope	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 2.1 Insulation; Pre-Drywall Inspection	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.2 Insulation; Spray Applied Insulation	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.3 Insulation; Advanced Insulation Systems (Either 2x6 walls, SIP Walls or ICFs)	2

# Specifications and Verification Procedures

Yes	?	No	Renewable Energy	10 Points
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 9.1 <b>Renewable Energy</b> Passive Solar Design, Basic Features Installed	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 9.2 Passive Solar Design, Advanced Features Installed	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 10.1 <b>Sources</b> PV System, Rough-In Only	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 10.2 PV System, >= 2.0 kW Installed	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 11.1 <b>Lighting</b> Ext. Controls, Motion Sensors	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 12.1 Int. Fixtures, At least 4 ENERGY STAR Fixtures	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 12.2 Int. Fixtures, ENERGY STAR Advanced Lighting Package (or equivalent)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 13.1 <b>Appliances</b> ENERGY STAR Refrigerator	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sub-Total	

Yes	?	No	Sustainable Sites	11 Points
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 <b>Location</b> Locate Home in a LEED-ND Certified Development (Bonus Points)	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.1 <b>Siting of Home</b> Select Appropriate Site; Avoid Environmentally "Sensitive" Areas	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.2 Use Site Appropriately; Orient Home to Optimize Natural Resources	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.3 Improve Site; Install Landscape Features to Improve Site	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 3.1 <b>Storm Water Control</b> Basic; Soil and Erosion Control Plan for Construction Site	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.3 Comprehensive; Permanent Soil and Erosion Improvement Plan for Site	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.4 Comprehensive with QA Audit;	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1 <b>Ecosystem Protection</b> Basic; Tree / Open Space Protection Plan, No Disruption to 25% of Lot	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2 Comprehensive; Includes Site Rehabilitation Plan	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3 Comprehensive with QA Auditing	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.1 <b>Poison Management</b> Basic; Poison (and Pest) Management Plan	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.2 Comprehensive; Poison (and Pest) Management Plan	1
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LEED for Homes (Version 1.1)  
Registered Project Checklist

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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2 <b>Water Efficient Fixtures</b> ENERGY STAR Advanced Lighting Package (or equivalent)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3 <b>Water Efficient Fixtures</b> ENERGY STAR Refrigerator	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sub-Total	

Yes	?	No	Water Efficiency	10 Points
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 4.1 <b>Water Efficient Fixtures</b> At least 4 ENERGY STAR Fixtures	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2 <b>Water Efficient Fixtures</b> ENERGY STAR Advanced Lighting Package (or equivalent)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3 <b>Water Efficient Fixtures</b> ENERGY STAR Refrigerator	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sub-Total	

# LEED-H for Homes

## “Draft”

- The LEED for Homes program is a work in progress.
- Based on lessons learned the LEED-H specs. and procedures will evolve!

# LEED for Homes

## Proposed LEED-H Standard

- ❑ Pre-Requisites: 20
- ❑ Maximum Score: 100 Points
  - Energy 28 ( 5 Pre-requisites)
  - Sites 11 ( 1 Pre-requisite)
  - Materials 22 ( 3 Pre-requisites)
  - IEQ 19 ( 9 Pre-requisites)
  - Water 18 ( 1 Pre-requisites)
  - Homeowner Awareness 2 ( 1 Pre-requisites)
- ❑ Certified LEED-Home: 40 Points

# LEED for Homes

## Proposed Performance Levels

Certified LEED-H  $\geq 40$  / 100 Points

Silver  $\geq 55$  / 100 Points

Gold  $\geq 70$  / 100 Points

Platinum  $\geq 85$  / 100 Points



# **LEED for Homes**

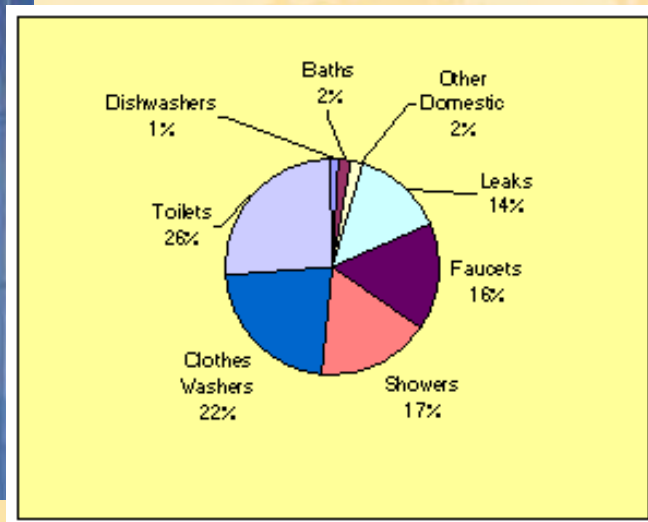
## **Proposed Resource Categories**

1. Energy and Atmosphere
  2. Indoor Environmental Quality
- And ....

# LEED-H: Water Efficiency

## Outdoor Use

- Water Budgeting
- Landscaping Plan



## Indoor Use

- 40% Use Reduction

# LEED-H: Sustainable Sites

## Site Planning

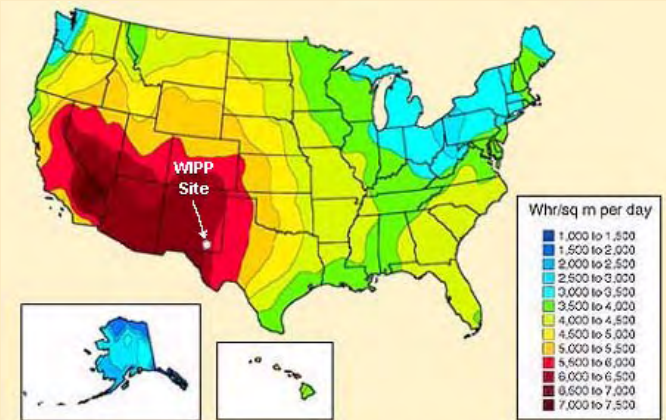
- Access to solar
- Access to transportation

## Storm Water Management

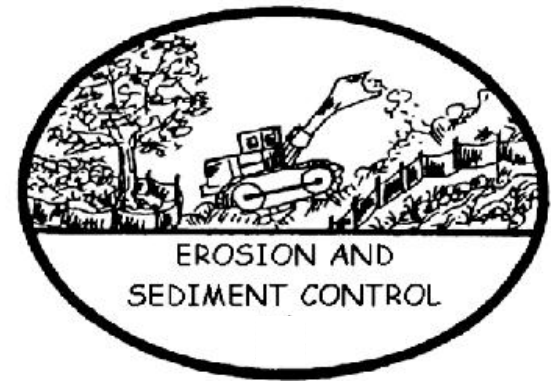
- Erosion and sediment control
- Rainwater control
- Reduced hard-scapes

## Ecosystem Protection

- Trees and open spaces



Solar resource for a concentrating collector



Copyright 2000, Center for Watershed Protection



# LEED-H Sustainable Materials

## Resource Efficiency

- Engineered lumber products
- Optimum value engineering
- 20% use reduction



## Local Sourcing

- Local sourcing of bulk materials



## Durability

- Comprehensive durability plan

## Improved Products and Methods

- Certified wood
- Recycled materials



## Waste Management

- Waste management plan



# A Material Intensive Business

Thousands of components!





# LEED for Homes

## Participation Roadmap

Step 1. Join LEED for Homes

**Step 2. Design Review**

Step 3. Build Home

**Step 4. Certify Home**

Step 5. Sell Homes

# LEED for Homes

## Verification Procedures

### Step 2 Design Review

- Selection of LEED-H Measures
- Calc. Preliminary LEED-H Score
- Decide on Target LEED-D Performance Level

### Step 4 Certify Home

- Pre-Drywall Inspection
- On-Site Performance **Testing**
- **Inspections** of LEED-H Features
- Compile **Documentation** of Features

# Testing Procedures

Type of Testing Required	Desired Level of Performance		
	"Certified"	"Silver/Gold"	"Platinum"
<b>Homeowner Awareness</b>			
Commissioning			<input checked="" type="checkbox"/>
<b>Energy</b>			
Enevelope Leakage Test	<input checked="" type="checkbox"/>		
Duct Leakage Test	<input checked="" type="checkbox"/>		
<b>IEQ</b>			
Combustion Air Safety Test	<input checked="" type="checkbox"/>		
Whole House Ventilation Test			
Total Air Flow	<input checked="" type="checkbox"/>		
Room-By-Room			<input checked="" type="checkbox"/>
Spot Ventilation Test			
Flow Rate	<input checked="" type="checkbox"/>		
Garage Sealing	<input checked="" type="checkbox"/>		
Radon Testing	<input checked="" type="checkbox"/>		

# LEED for Homes

## Inspections Required

Type of Inspection Required	Desired Level of Performance		
	"Certified"	"Silver/Gold"	"Platinum"
<b>Homeowner Awareness</b>			
O&M Walkthrough / Training		<input checked="" type="checkbox"/>	
<b>Energy</b>			
Pre-Drywall Inspection	<input checked="" type="checkbox"/>		
Passive Solar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Quality</b>			
Water Management Inspection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Contaminant Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Water Efficiency</b>			
Efficient Landscaping	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

# LEED for Homes

## Inspections Required (cont'd)

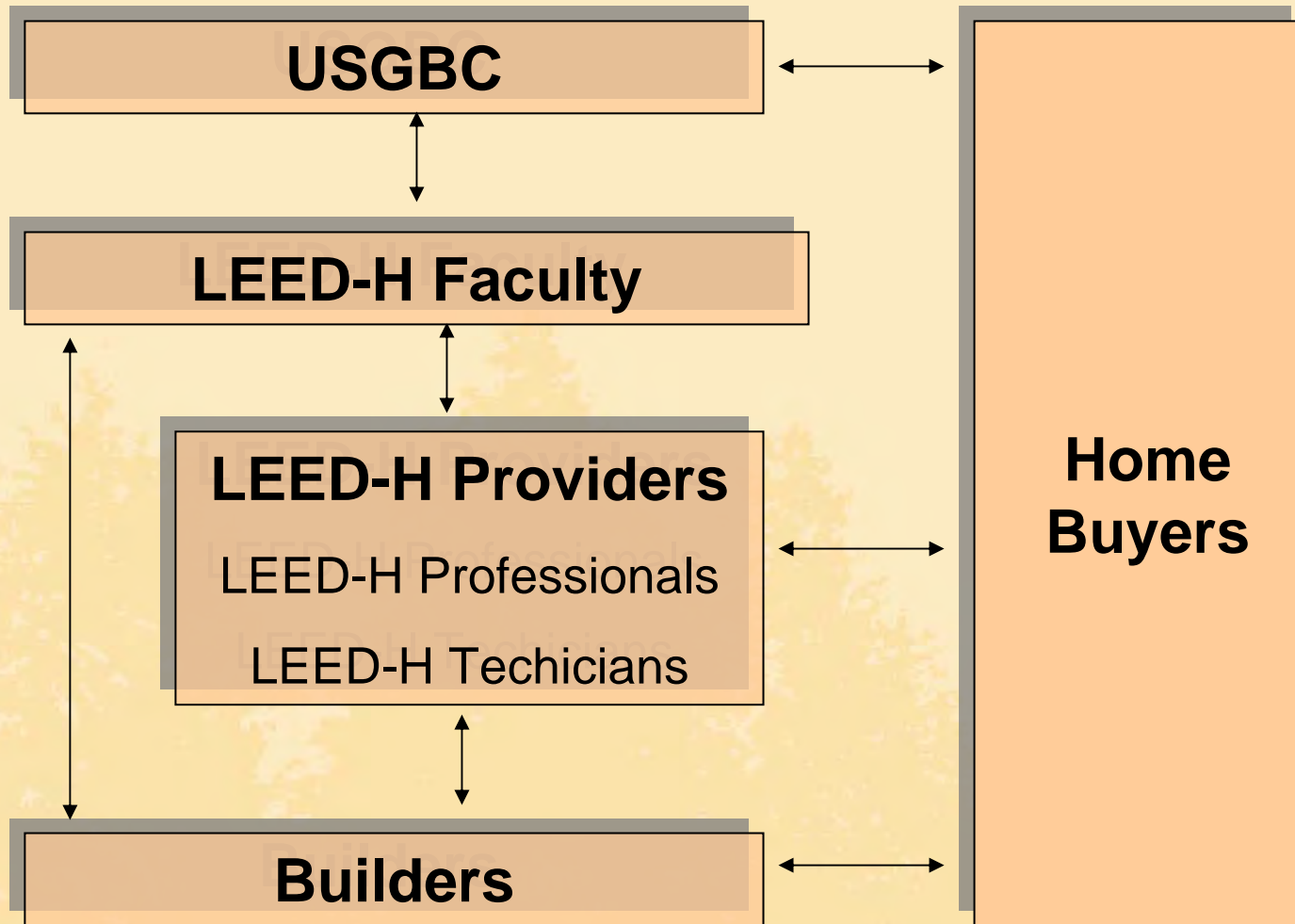
Type of Inspection Required	Desired Level of Performance		
	"Certified"	"Silver/Gold"	"Platinum"
<b>Sustainable Sites</b>			
Stormwater Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Ecosystem Protection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Poison Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Materials and Resources</b>			
Local Sources	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Durability	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Improved Products	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Waste Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	



# How Can Home Energy Raters Get Involved?

1. Critical Relationships
2. Roles & Responsibilities
3. Trainings

# Critical Stakeholder Relationships



# Critical Stakeholder Roles

Type of Stakeholder	Suggested Role		
	LEED-H Technician	LEED-H Professional	LEED-H Faculty
Builder & Trades	○	○	
Marketing & Sales Staff		○	
<b>HERS Rater</b>	●	●	
Technical Consultant		○	○
Trainer		○	○

# LEED for Homes

## Proposed Responsibilities

***LEED-H Provider*** – an organization that contracts with USGBC to provide full service support to the LEED-H program and oversee the activities of LEED-H Professionals and Technicians and the delivery of certification services to builders.

***LEED-H Technician*** – an individual who provides specific in-field verification of installation of LEED-H measures and performance testing.

RESNET Certified Energy Raters will need to pass LEED-H Technician exam within approximately 2 years (i.e. by the end of CY 2006).



***LEED-H Professional*** (LEED-HP) – an individual who provides documentation and scoring of all of the LEED-H measures installed by the builder on behalf of the authorized LEED-H Provider.

The LEED-HP may also provide the services of the LEED-H Technician.

***LEED-H Faculty*** – an individual who contracts with USGBC to provide training and program development services to LEED-H Professionals, Providers, and Technicians.

LEED-H Faculty may also provide the services of the LEED-HP

# LEED for Homes Trainings

1. Courses on LEED-H
2. Courses on General Green Home Building Technologies and Practices

***“You must learn from the mistakes  
of others. You can’t possibly live  
long enough to make them all  
yourself.”***

***Sam Levenson***

# LEED for Homes Trainings

## Courses on LEED-H

### LEED-H Priorities Include:

1. ***Intro to LEED-H*** – targeted at all LEED-H service providers as well as builders and trades, product manufacturers, distributors, marketing and sales staff, realtors, and lenders.
2. ***LEED-H Technician Preparation.***
3. ***LEED-H Professional Preparation.***
4. ***LEED-H Faculty Preparation.***



Course Content	Content Level For Each Course			
	Course #1 Intro to LEED-H	Course #2 LH Technician Preparation	Course #3 LH Professional Preparation	Course #4 LH Faculty Preparation
<b>LEED-H Technologies and Construction Practices</b>				
Basic Awareness	●	●		
Intermediate understanding			●	
Advance understanding				●
<b>LEED-H Verification &amp; Certification Procedures</b>				
Basic Awareness	●			
Intermediate Understanding		●		
Advanced Understanding			●	●
<b>Marketing and Sales Strategies for LEED-H</b>				
Basic Awareness	●	●		
Intermediate Understanding			●	
Advanced Understanding				●
<b>Program Administration: LEED-H Policies and Procedures</b>				
Basic Awareness	●	●		
Intermediate Understanding			●	
Advanced Understanding				●

# LEED for Homes

## Trainings

### Courses on General Green Home Building Technologies and Practices

- ☐ Not a LEED-H Priority (at this time).
- ☐ Current green home building trainings offered by others are encouraged.
- ☐ In the future, green homebuilding training will be actively promoted by USGBC.

# LEED for Homes

## Schedule for Proposed Trainings

Course		Schedule							
		1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr
#1 Intro to LEED-H	Requirements Curriculum Delivery	■	■	■	■				
#2 LEED-H Technician	Requirements Curriculum Infrastructure Delivery	■	■	■	■				
#3 LEED-H Professional	Requirements Curriculum Infrastructure Delivery	■	■	■	■				
#4 LEED-H Faculty	Requirements Curriculum Delivery	■		■	■				

***“When we build let us think that we build forever. Let it not be for present delight nor present use alone. Let it be such work as our descendants will thank us for...”***

John Ruskin 1820-1905

# Summary

Consumer Expectations Are Changing:

**Why Planet  
Friendly  
Homes?**

- ☐ Greater interest regarding safety & health
- ☐ Performance issues of comfort & affordability
- ☐ Long lasting quality
- ☐ Resale value
- ☐ Environmental sensitivity

**Please Join Us!**



# Thank You!

**For Additional Info:**

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# Questions and Answers